

EDITED BY SVETLA MARINOVA,  
JORMA LARIMO, AND  
NIINA NUMMELA

**VALUE  
CREATION IN  
INTERNATIONAL  
BUSINESS**

Volume 2:  
An SME Perspective



# Value Creation in International Business



Svetla Marinova • Jorma Larimo • Niina Nummela  
Editors

# Value Creation in International Business

Volume 2: An SME Perspective

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*Editors*

Svetla Marinova  
Department of Business and Management  
Aalborg University  
Aalborg, Denmark

Niina Nummela  
Turku School of Economics  
University of Turku  
Turku, Finland

Jorma Larimo  
Department of Marketing  
University of Vaasa  
Vaasa, Finland

ISBN 978-3-319-39368-1      ISBN 978-3-319-39369-8 (eBook)  
DOI 10.1007/978-3-319-39369-8

Library of Congress Control Number: 2016948085

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# Contents

|   |     |
|---|-----|
| <b>1 Value Creation in the Internationalization of SMEs</b>   | 1   |
| Svetla Marinova, Niina Nummela, and Jorma Larimo  |     |
| <b>2 Value Creation in Globalizing SMEs</b>   | 17  |
| Tõnu Roolah   |     |
| <b>3 International Opportunities and Value Creation in International Entrepreneurship</b>   | 55  |
| Tuija Mainela, Vesa Puhakka, and Ingrid Wakkee  |     |
| <b>4 Growth and Value Creation Through Diversified Exporting</b>  | 81  |
| Andreja Jaklič, Anže Burger, Aljaž Kunčič, and Desislava Dikova   |     |
| <b>5 Value Creation During Different Development Stages: What Changes When an Entrepreneurial Firm Transforms into a Multinational Corporation?</b> | 109 |
| Peter Zettinig, Birgitta Sandberg, and Sascha Fuerst  |     |

- 6 A Service-Ecosystem Perspective on Value Creation: Implications for International Business** 131  
Valtteri Kaartemo, Melissa Archpru Akaka, and Stephen L. Vargo
- 7 More Than Just One Middleman: On the Value of Different Entry Modes by SMEs in Foreign Markets** 151  
Mette Vedel and Per Servais
- 8 Value Chain Management Capability in International SMEs** 171  
Taina Eriksson, Niina Nummela, Liisa-Maija Sainio, and Sami Saarenketo
- 9 The Value of Knowledge, Network Relationships and Governmental Support for Chinese Firms' Early Internationalization: Survey Evidence** 195  
Tiia Vissak, Tatyana Tsukanova, and Xiaotian Zhang
- 10 Intelligence Creation and Born-Global Patterns of Small Engineering Firms in Emerging Markets** 219  
Zizah Che Senik, Rosmah Mat Isa, Khairul Akmaliah Adham, and Ridzuan Md Sham
- 11 Does Being a Member of the Cluster Matter in the Process of Value Creation Through Internationalization?** 245  
Vesna Sedoglavich and Marina Dabić

|  |     |
|--|-----|
| <b>12 The Internet's Influence on Market Commitment, Uncertainty and Risk in the Internationalization Process of SMEs</b>    | 271 |
| Jonas Eduardsen and Reimer Ivang   |     |
| <b>13 Industry 4.0 and SMEs in the Northern Jutland Region</b>   | 309 |
| Arnim Decker   |     |
| <b>14 Value Creation in an SME from a Traditional Industry: It All Adds Up</b>   | 337 |
| Svetla Marinova and Marin Marinov  |     |
| <b>15 Sustainability and Corporate Social Responsibility in Internationally Operating SMEs: Implications for Performance</b> | 359 |
| Lasse Torkkeli, Sami Saarenketo, Hanna Salojärvi, and Liisa-Maija Sainio   |     |
| <b>Index</b>   | 375 |





# Contributors

**Khairul Akmaliah Adham** is an associate professor at the Universiti Sains Islam, Malaysia. She received her BBA from the International Islamic University Malaysia as well as her MBA and PhD in Innovation Management from Rensselaer Polytechnic Institute in New York. She has co-authored and edited several books on Innovation and Entrepreneurship, Islamic Perspective on Management and Services Marketing. Her current research interests include the challenges in developing new-technology based ventures and the general conditions that foster technological innovation and entrepreneurship in business and industry. She teaches Organizational Theory and is actively involved in producing case studies for teaching and learning.

**Melissa Archpru Akaka** is Assistant Professor of Marketing at the Daniels College of Business at the University of Denver. She earned her PhD, MBA and BBA in marketing from the University of Hawaii at Manoa. Prior to her graduate studies, Akaka spent several years working in the retail and travel industries, as well as the not-for-profit sector. Her research interests include value and value co-creation, innovation and market (re)formation. She has published articles in journals such as *Marketing Theory*, *Journal of International Marketing*, *Industrial Marketing Management*, *International Journal of Advertising and European Management Journal*.

**Anže Burger** is Assistant Professor of International Economics at University of Ljubljana, Faculty of Social Sciences and a researcher at the Centre of International Relations at the Faculty of Social Sciences. His research topics include international

trade, international business, international factor movements, and industrial policy. He has published six books and more than 20 articles in a variety of international journals, such as *Journal of World Business*, *The Service Industries Journal*, and *Eastern European Economics and Post-Communist Economies*. He has participated in several EU and international research projects. Apart from academic teaching and research, Dr Burger carried out several consulting projects and worked for the Ministry of Finance of the Republic of Slovenia.

**Marina Dabić** is Professor of Entrepreneurship and International Business at University of Zagreb, Faculty of Economics & Business, Croatia and Nottingham Business School, NTU, UK. She has edited five book series published in Poland, Slovenia, Croatia, and the UK. The book by Dabić, Švarc, and González-Loureiro: *Entrepreneurial University in Innovation Seeking Countries, Challenges and Opportunities* is published by Palgrave Macmillan. Dr Dabić has edited several special issues on innovation, HRM, internationalization in CEE, and transfer technology. She has published more than 80 papers in a wide variety of international journals, including *Journal of International Business Studies*, *Journal of World Business*, *Journal of Business Ethics*, *International Marketing Review*, *The International Journal of Human Resource Management*, *European Management Journal*, *Thunderbird Business Review*, *The International Journal of Physical Distribution & Logistics Management*, and *Management International Review*, among others. She has worked on numerous European projects as a project lead or partner and acts as reviewer for EC Horizon 2020 projects.

**Arnim Decker** is an assistant professor at Aalborg University in Denmark. He holds a Master's degree in Business Administration (Dipl.–Kaufmann) from Cologne University and a Doctoral Degree in Finance from Complutense University of Madrid in Spain. With a history of having run his own business, Dr Decker's research interests are directed towards entrepreneurship with an emphasis on the diversities of entrepreneurial internationalization, including aspects related to technology management and transnationalism. Currently, he is working on the impact of digitalization on the internationalization of small and medium-sized firms, including patterns of new business model development.

**Desislava Dikova** is Professor of International Business at Vienna University of Economics & Business in Austria. Previously, she held positions at the University of Groningen, the Netherlands and King's College London, UK. She earned her doctorate degree from the University of Groningen, the Netherlands. Desislava Dikova is the Editor-in-Chief of the *Journal of East West Business*, an area editor for the *International Journal of Emerging Markets* and a member of the editorial

boards of the *Journal of International Business Studies*, *Journal of International Marketing*, and *Management and Organization Review*. Dikova's research is focused on the international behaviour of multinational companies from developed and emerging markets, their foreign market entry mode choices and the subsequent performance of foreign subsidiaries, the competitive behaviour of firms with respect to the types of innovation investments and their cross-border merger and acquisition activity. She has published in the *Journal of International Business Studies*, *Journal of Management Studies*, *Journal of World Business*, *International Business Review*, *Management International Review*, *Journal of International Marketing*, and *Schmalenbach Business Review*, among others.

**Jonas Eduardsen** is currently a research assistant at the Department of Business and Management, Aalborg University. He was recently awarded a PhD in International Business from Aalborg University, where he also received his MSc in International Business Economics. His current research interests centres on the internationalization of small and medium-sized enterprises with a specific focus on digitalization and on SME decision-makers' perceptions of risks.

**Taina Eriksson** is Project Manager at the Centre for Collaborative Research at University of Turku, School of Economics, Finland. She holds a PhD in international business. She has published in international journals, including *Journal of International Management*, *Baltic Journal of Management*, *Scandinavian Journal of Management*, *International Business Review* and *Journal of Small Business and Enterprise Development*. Her research interests revolve around highly international SMEs, capabilities (particularly dynamic capabilities) in an organization, business models and business model innovations.

**Sascha Fuerst** is an associate professor at the Department of Organization and Management at Universidad EAFIT in Medellin, Colombia, and doctoral candidate at the University of Turku School of Economics in Finland. He teaches international entrepreneurship on the Master of International Business programme at Universidad EAFIT where he led the MBA and MIB programmes and the Department of International Business. Prior to joining academia, he was working as International Business Consultant at Global Entrepreneurs AS in Bogota, Project Manager at AccessCAPITAL LLC in Bangkok (Thailand), and Project Coordinator International Marketing at GeoVision Software Inc. in Jaipur (India). His research interests are in international entrepreneurship and small firm internationalization. His research has been published in *European Business Review*, *Cuadernos de Administración*, and *AD-Minister* and by Cambridge University Press, the Case Centre, and UNCTAD.

**Rosmah Mat Isa** is an associate professor at the Faculty of Economics and Management, Universiti Kebangsaan, Malaysia. She received her BBA from the International Islamic University in Malaysia, her MSc in Business Information Technology Systems from Strathclyde University, UK, and her PhD from Aston Business School, UK. Her current research interests include knowledge management, social capital and international business, in particular SME internationalization. She has been teaching postgraduate courses on qualitative methodology, business research method and management information systems. She is also involved in producing case studies for teaching and learning.

**Reimer Ivang** is Associate Professor of International Marketing and New Media at Aalborg University, Denmark. He holds a PhD degree in Marketing and Strategy from Aalborg University. He has taught in both Denmark and China and published several papers in scholarly journals. His research interests include digitalization of business relationships, digital customer–supplier interaction, digitalization strategy and inter-organizational information systems strategies. His research has been recognized several times, most recently when his co-authored paper was awarded the 2012 outstanding paper award by the Emerald Literati Network.

**Andreja Jaklič** is Professor of International Economics and International Business, Research Fellow and Managing Director of the Centre of International Relations at the Faculty of Social Sciences, University of Ljubljana. Her teaching areas include International Economics, International Business, International Business Environment, EU in a Global Economy and Research Seminar. As a visiting scholar and researcher, Andreja Jaklič co-operates with the Vienna Faculty of Economic and Business Administration (Austria), Trento University (joint PhD programme for Comparative Local Development), Centre for Markets in Transition at Aalto University (Helsinki), Hubei University (Wuhan), Corvinus University (Budapest), and Polytechnic University (Milan). Her research projects and consultancy work has focused on competitiveness, international business environment, internationalization strategy, international trade, foreign direct investment, multinational enterprises and performance, in particular internationalization and creation of multinational enterprises in the former transition economies, and value creation through international growth. Her publications include over 30 articles in scientific journals such as *Journal of World Business*, *Services Industries Journal*, *Eastern European Economics*, *Post-Communist Economies*, *Transnational Corporations*, *Economics and Business Review*, among others, a monograph titled *Enhanced Transition through*

*Outward Internationalization* (Ashgate, 2003), several book chapters in books published and e-books (CIR-Analysis).

**Valteri Kaartemo** is a university lecturer at Turku School of Economics, University of Turku, Finland. His doctoral dissertation 'Network development process of international new ventures in internet-enabled markets: service ecosystems approach' introduced the service ecosystem perspective in *International Entrepreneurship* in 2013. Kaartemo is a co-author of several books, book chapters, conference papers, and peer-reviewed articles. His research interests are market shaping, service research, innovation management, international entrepreneurship, value co-creation, and particularly various processes in and around these phenomena. Apart from his research activities, he has practical experience of working with internationally operating small and medium-sized enterprises. He has founded two companies, and is still running one of them as its CEO. In addition, he advises a smart energy company primarily focusing on the Middle East and North Africa. Recently, Kaartemo has also been collaborating with a large multinational enterprise within FIMECC's REBUS programme, which has given him a good understanding of value co-creation from a wider service ecosystem perspective.

**Aljaž Kunčič** graduated from the Faculty of Economics, University of Ljubljana. He holds an MSc degree from the University of Oxford and Advanced Studies Certificate from the postgraduate Advanced Studies Program in International Economic Policy Research at Kiel Institute for the World Economy. He completed his PhD in Economics at the University of Ljubljana, where he is Assistant Professor of Economics. His research is in the field of new institutional economics and international economics and has published in international journals and books. He is currently with the Economic Development and Poverty Section at the Economic Development and Integration Division of the United Nations Economic and Social Commission for Western Asia (UN ESCWA), and also serves as a part-time faculty at Lebanese American University in Beirut, Lebanon.

**Jorma Larimo** is Professor of International Marketing at the Faculty of Business Studies, University of Vaasa, Finland. He is the Vice Dean of the Faculty of Business Studies and Director of the Graduate School of the University of Vaasa. His main research areas are: internationalization of SMEs, acquisition and international joint venture strategies and performance, and entry and marketing strategies in CEE countries. He is an active member of several academic associations and his research has been published in several edited books and international

journals, including *Journal of Business Research*, *Journal of International Business Studies*, *Journal of International Marketing*, *Journal of World Business*, *International Business Review*, *Management International Review*, and *Journal of Global Marketing*.

**Tuija Mainela** is Professor of International Business at the University of Oulu Business School, Finland. Her main research interests relate to dynamics of business networks, roles of social relationships in business, networking in internationalization of firms and international entrepreneurship. On these topics, she has published in *International Journal of Management Reviews*, *Industrial Marketing Management*, *Scandinavian Journal of Management*, *Management Decision*, *Journal of Service Management* and *Journal of International Entrepreneurship*.

**Marin Marinov** is Professor of International Business at Aalborg University, Denmark. His research encompasses internationalization of business, multinational corporations and business development in emerging economies, as well as business policy and strategy. Professor Marinov has consulted numerous firms on country and firm-specific strategies in the process of their internationalization. He is on the editorial board of numerous academic journals and periodicals, including *Organization Studies*, *Journal of Islamic Marketing*, and *Journal of Euromarketing*. He has published 13 books, many book chapters and more than 90 articles in academic journals.

**Svetla Marinova** holds a PhD degree from Copenhagen Business School in Denmark. She is Associate Professor of International Business at Aalborg University in Denmark. Her research interests include company internationalization and the role of institutions, strategy of multinational firms from emerging economies, and the management of firms undergoing intensive internationalization processes. She has published more than 70 papers in scholarly journals, including *International Marketing Review*, *Management and Organization Review*, *Research in Marketing*, *European Journal of Marketing*, *Thunderbird International Business Review*, *Journal of East-west Business* among others. Svetla has edited and co-edited seven books with Palgrave Macmillan exploring institutions and internationalization, corporate foresight and internationalization of emerging economies and firms.

**Niina Nummela** is Professor of International Business at the Turku School of Economics at the University of Turku, Finland and a Visiting Professor at the University of Tartu, Estonia. Her areas of expertise include international

entrepreneurship, cross-border acquisitions, and research methods. She has published widely in academic journals, and contributed to several internationally published books. She serves on the Editorial Review Board of *Journal of International Business Studies* and on the Editorial Board of *International Small Business Journal*. A special issue on the internationalization process co-edited with Catherine Welch and Peter Liesch is forthcoming in *Management International Review*.

**Vesa Puhakka** is Professor of Management at the University of Oulu Business School, Finland. His research is in international entrepreneurship, opportunity creation processes, growth generating mechanisms, and strategy practices of new ventures. His latest research on international entrepreneurship has been published in *International Journal of Management Reviews* and *Journal of International Entrepreneurship*. The Academy of Management and the NFIB Education Foundation rewarded his doctoral dissertation for outstanding research in the fields of entrepreneurship and independent business in 2003.

**Tõnu Roolaht** is an associate professor at the Chair of International Business and Innovation of the University of Tartu, Faculty of Economics and Business Administration in Estonia. He is the author of over 50 scientific articles, 20 books or book chapters, and 15 other pieces. He has been teaching international business subjects since 1996. He is the executive editor of the University of Tartu Faculty of Economics and Business Administration Working Paper Series as well as reviewer for *International Business Review* and *Baltic Journal of Management*. His research interests are in relational and intra-corporate networks, industry clusters, demand-oriented innovation policy, innovation management, intellectual property rights, foreign-owned companies, and holistic internationalization approaches. He also teaches in supply chain management and operations management subjects.

**Sami Saarenketo** is a professor at the School of Business and Management, Lappeenranta University of Technology, Finland. His primary areas of research interest include international entrepreneurship, international marketing, and internationalization of SMEs. He has written on these issues in *Journal of World Business*, *International Business Review*, *Management International Review*, *European Journal of Marketing*, and *Journal of International Entrepreneurship*, among others.

**Liisa-Maija Sainio** is Professor of International Marketing at the School of Business, Lappeenranta University of Technology, Finland. Her research interests



include business models, different types of innovation and their effects on firm strategy, and customer knowledge processing. She has published in *Technological Forecasting and Social Change*, *R&D Management*, *Industrial Marketing Management*, and *Technovation*, among others.

**Hanna Salojärvi** is an associate professor at the School of Business and Management, Lappeenranta University of Technology, Finland. Her research interests include customer relationship management, customer knowledge processing, innovation management, and strategic orientations. She has published on these issues in *Industrial Marketing Management*, *European Journal of Marketing*, and *Journal of Business & Industrial Marketing*, among others.

**Birgitta Sandberg** is a university research fellow at the Department of Marketing and International Business, Turku School of Economics, University of Turku. Her main research interests include the development and marketing of radical innovations, entrepreneurial innovators, and the role of emotions in innovation processes. Her publications include a book entitled *Managing and Marketing Radical Innovations, Marketing New Technology* (2008), and articles in books and journals, such as *Industrial Marketing Management*, *Journal of Business Research*, *Creativity and Innovation Management*, and *Technovation*.

**Vesna Sedoglavich** is Senior Lecturer in International Business at the College of Business and Economics of the Australian National University. Dr Sedoglavich has been teaching undergraduate and postgraduate courses in international business, after acquiring extensive real-world experience in her previous career. She has been using a leading edge award winning multi-media technology in her teaching. Her research has focused on international business and strategy, and the development of local and global business networks. Her specialist research are SMEs' internationalization, high-tech clusters, technology transfer, absorptive capacity, international strategies in the EU, and mixed methods research.

**Zizah Che Senik** is an associate professor at the Faculty of Economic and Management, Universiti Kebangsaan in Malaysia. She received her BSc from the University of Alabama, USA, her MBA from the Universiti Kebangsaan in Malaysia, and her PhD from Murdoch University, Australia. She obtained a Post-Doctorate Diploma in Entrepreneurship from Cambridge University, UK. Her research interests are International Entrepreneurship, particularly in SME internationalization, born global and networking. She has been teaching postgraduate and undergraduate courses in International Business, Strategic

Management, Entrepreneurship, and Qualitative Methodology. She also writes case studies on Strategic Management and International Business issues for teaching and learning.

**Per Servais** is Associate Professor of Marketing at the University of Southern Denmark. He has been with the Department of Marketing and Management for a few decades as a researcher and Head of Studies in International Marketing. His research interests are in international entrepreneurship, the formation and growth of international new ventures, industrial firms' international purchasing and sourcing activities, branding on industrial markets, outsourcing activities in industrial firms, and relationships and de-internationalization in small firms. He has published a large number of book chapters and articles in *Industrial Marketing Management*, *International Marketing Review*, *Journal of International Marketing*, *Advances in International Marketing*, and *International Business Review*, among others.

**Ridzuan Md Sham** is a senior lecturer at the Malaysia-France Institute, Universiti Kuala Lumpur, Malaysia. He received his degree in Industrial Engineering from the University of Alabama, USA, and a Master of Science degree in Quality Management from the Universiti Kebangsaan Malaysia. He had 15 years of practical experience with SONY Corporation Malaysia. He is a certified business coach and has been conducting training and coaching at several government ministries and industries. He is member of Malaysia Society of Engineering and Technology, a global member of American Society and Engineering Education and a senior member of Institute of Industrial Engineer. His research interests include topics in Quality Management, Robotics and SME internationalization.

**Lasse Torkkeli** is a post-doctoral researcher at the School of Business and Management, Lappeenranta University of Technology, Finland. His PhD dissertation, completed in 2013, examined the concept of network competence in internationally operating small and medium-sized enterprises (SMEs), in particular its development and influence on internationalization outcomes of Finnish and Russian SMEs. His current research interests relate to SME internationalization, dynamic capabilities in the context of international business, business networks and networking, and cultural aspects in international business, particularly in business-to-business interaction. His articles have appeared in journals, including *Journal of International Entrepreneurship* and *European Management Journal*.

**Tatyana Tsukanova** is an assistant professor at the Strategic and International Management Department of St. Petersburg University Graduate School of Management, Russia. She teaches courses on Change Management, Entrepreneurship and Business Planning. Her research interests include internationalization, small business, entrepreneurship, institutional environment, and emerging markets. She is also a researcher at the Centre for Entrepreneurship and is involved in multiple research projects.

**Stephen L. Vargo** is Shidler Distinguished Professor and Professor of Marketing at the University of Hawai'i at Manoa. He has held visiting positions at the Judge Business School at the University of Cambridge, the University of Warwick, Karlstad University, the University of Maryland, College Park, and other major universities. He has articles published in the *Journal of Marketing*, *Journal of the Academy of Marketing Science*, *Journal of Service Research*, *MIS Quarterly*, and other top-ranked journals. Professor Vargo has been awarded the Harold H. Maynard Award and the AMA/Sheth Foundation Award for his contributions to marketing theory. Thomson-Reuters recently put him on its 'Highly Cited Researchers' list (top 1%) and has identified him as one of the World's Most Influential Scientific Minds in economics and business for a second, consecutive year.

**Mette Vedel** has been an assistant professor at the Department of Marketing and Management since 2012. She gained her PhD at Copenhagen Business School (CBS) in 2010. Her research has focused on business triads and intermediation. Her research interests are industrial marketing, network theory, value of connected relationships, intermediation, and business networks. She has published in the area of business triads and intermediation. Mette Vedel has spent more than 20 years in industry working with import and export in SMEs and with regional business development.

**Tiiu Vissak** is a senior researcher at the University of Tartu, Estonia. Her main research interests are internationalization processes (especially, exits and re-entries but also factors and actors affecting them), business networks, transition and emerging economies. She has published in *International Business Review*, *Journal of International Entrepreneurship*, *Journal of East European Management Studies*, *Transformations in Business and Economics*, *Journal of East-west Business*, and other journals and in several books. She has contributed to editing two books and a special issue of the *Baltic Journal of Management*. She is currently leading a research grant PUT1003 'A holistic process perspective of export patterns: theory development and empirical evidence' financed by the Estonian Research Council.

**Ingrid Wakkee** is Professor of Entrepreneurship at the Amsterdam University of Applied Sciences as of the summer of 2016; previously she was an associate professor at the Vrije Universiteit Amsterdam. Her research interests include the role of networks and social capital in the entrepreneurial process. In her research Ingrid has focused on processes of entrepreneurial internationalization as well as on processes of entrepreneurial failure and recovery. She has published in a large number of journals and edited volumes including *International Entrepreneurship and Management Journal*, *International Review of Entrepreneurship*, and *International Small Business Journal*.

**Peter Zettinig** is a university research fellow at the Turku School of Economics (International Business), University of Turku in Finland. Peter holds a PhD degree from the University of Turku. A curiosity in change phenomena drives his main research interests which relate to different levels of organizational transformations in international business and strategy. He has published in *European Management Journal*, *Organizational Dynamics*, *International Journal of Cross-Cultural Management*, *Competitiveness Review* and *Thunderbird International Business Review* – among others his research examines the multinational corporation, global virtual teams and their development trajectories, international entrepreneurship, and cluster transformations.

**Xiaotian Zhang's** research focuses on the internationalization processes of firms from the emerging markets. He is currently conducting his research at the University of Southern Denmark and Oulu Business School. In addition, Xiaotian Zhang is a Guest Research Associate in the Emerging Markets Cross-Cultural Research Group at Stockholm University. As an entrepreneur, he is the founder of Baltic China Group and Baltic China Annual Business Conference.



# List of Figures

|          |  |     |
|----------|--|-----|
| Fig. 2.1 | Framework of dynamic value creation in globalizing SMEs  | 21  |
| Fig. 2.2 | The value creation process and its dynamics at Fortumo   | 36  |
| Fig. 3.1 | Different conceptualizations of value-creating international opportunities   | 68  |
| Fig. 4.1 | Total merchandise exports, absolute and relative   | 87  |
| Fig. 4.2 | Integration into global value chains, by countries, 2009   | 88  |
| Fig. 4.3 | Geographical distribution of Slovenian export volume in 1995 and 2010  | 89  |
| Fig. 4.4 | Geographical distribution of the number of Slovenian exporters in 1995 and 2010                                    | 90  |
| Fig. 4.5 | Geographical distribution of the number of first-time exporters in 1995 and 2010                                   | 90  |
| Fig. 4.6 | Geographical distribution of the number of exporters exiting a market in 1995 and 2010                             | 91  |
| Fig. 4.7 | Geographical distribution of the number of new exported product varieties of first-time exporters in 1995 and 2010 | 92  |
| Fig. 4.8 | Geographical distribution of the number of exported product varieties exiting a market in 1995 and 2010            | 92  |
| Fig. 4.9 | Value added and number of product markets  | 102 |

**xxii**      **List of Figures**

|           |   |     |
|-----------|---|-----|
| Fig. 5.1  | Framework of prediction and control   | 111 |
| Fig. 7.1  | The open triad formed by the triadic entry node<br>(the intermediary) and two counterparts        | 159 |
| Fig. 7.2  | Two different network structures  | 162 |
| Fig. 8.1  | Theory-based framework of value chain<br>management capability                                    | 177 |
| Fig. 8.2  | Proposed model of value chain management capability   | 187 |
| Fig. 10.1 | Internationalization creation of small engineering<br>born-global firms                           | 236 |
| Fig. 12.1 | Overview of the Internet's influence on the<br>amount of risk in the internationalization process | 282 |

# List of Tables

|            |   |     |
|------------|---|-----|
| Table 2.1  | Comparison of value creation in Fortumo, ZeroTurnaround and Click & Grow  | 30  |
| Table 4.1  | Comparison of absolute characteristics of successful and unsuccessful new exporters in the period 1994–2010 (pooled)  | 95  |
| Table 4.2  | Performance of successful and unsuccessful new exporters relative to the three-digit industry average in the periods before and after the start of exporting, 1994–2010 | 97  |
| Table 4.3  | Performance of successful and unsuccessful new exporters relative to 3-digit industry average in the periods before and after the start of exporting, 1994–2010 (cont.) | 99  |
| Table 4.4  | Top markets in 2010   | 100 |
| Table 4.5  | Summary statistics of extensive export dynamics for the entire sample   | 100 |
| Table 9.1  | Sources of knowledge  | 199 |
| Table 10.1 | Characteristics of the firms and their founders   | 228 |
| Table 10.2 | Types of intelligence in the internationalization process   | 233 |
| Table 10.3 | Dimensions of internationalization  | 234 |
| Table 11.1 | Internationalization strategies of the firms in STC   | 259 |
| Table 12.1 | Sources of uncertainty when doing business in foreign markets   | 276 |



**xxiv**      **List of Tables**

|            |   |     |
|------------|---|-----|
| Table 12.2 | Overview of case companies  | 284 |
| Table 13.1 | Fransgard Maskinfabrik A/S  | 319 |
| Table 13.2 | Teksam ApS  | 322 |
| Table 13.3 | Reo-Pack A/S  | 324 |
| Table 13.4 | Dansk Varmepumpe Industri A/S   | 326 |
| Table 13.5 | Jydsk Løfte- og Maskinteknik ApS                                      | 328 |
| Table 13.6 | Nordmark Maskinfabrik A/S   | 330 |
| Table 15.1 | The results of the PCA for the CSR scale                              | 366 |
| Table 15.2 | The correlation table of the variables used in the analysis           | 367 |
| Table 15.3 | Results of the hypotheses testing applying linear regression analysis | 368 |

# 1

## Value Creation in the Internationalization of SMEs

Svetla Marinova, Niina Nummela, and Jorma Larimo

### Meanings and Interpretation of Value

When discussing the role of value creation in international business, the meanings and interpretations of *value* are essential in understanding its contextual manifestations. Somehow, it seems we know what *value* means, but if you try to use it in different processes and contexts, in relation to diverse actors, one might be surprised by the various interpretations given to it. Some equate value with the monetary equivalence of what people do or buy; others interpret it in a much broader sense as merit or worth, which can be either tangible or intangible, yet hard to define. Often, authors assume that either the reader knows what value

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S. Marinova (✉)  
Aalborg University, Cheltenham, Denmark

N. Nummela  
University of Turku, Turku, Finland

J. Larimo  
University of Vaasa, Vaasa, Finland

is and discuss what affects it or how it is created, or simply explore it in a specific setting. Economics, accounting, strategic management, marketing, sociology, and various other academic disciplines have developed their specific interpretations and models of value that are embedded in the perceptions of the worth of subject matter (for a review of conceptualizations of value in relevant disciplines see Ahen 2015: 83–86).

Generally, the concept of *value* is associated with the usefulness and merit of something, be it an activity or its output. Thus, value is about what is important, whether in life in general, in human action or in the operations of an organization, and as such it can be associated with judgement. Consequently, value attains a universalist and a relativist meaning. The most common universal meaning of value is benefit or worth. Yet, benefit always suggests a perspective, a direction, a beneficiary – someone, be it an actor, a party, an individual or a group of individuals of a sort, and as such value becomes relative, being dependent on the nature, resources and assets, bargaining power, interactions and interdependencies of that actor with others. This makes value actor-dependent and context-specific.

In its narrow meaning, *value* is ordinarily related to a process in which it is either created or co-created. Most commonly, this is the process of exchange of tangible and intangible goods and services and this has formed a view that value can be seen as synonymous to gain and profit. This interpretation of *value* is rooted in Adam Smith's 'An Inquiry into the Nature and Causes of the Wealth of Nations' (1776), in which he explored the importance of *exchange value* as he argued that the national wealth depends on the production and exchange (export) of surplus tangible products. In doing so, Smith used exchange value to provide a commonsense universal measure of wealth and in that logic as a proxy for the overall benefit to a party, i.e. *the value-in-use* or *real value*. Subsequently, economic thought developed on the foundations of this interpretation of value and only later on attempted to recall *real value* by introducing the concept of utility (Say 1821). Nevertheless, *exchange value* has become institutionalized in economics meaning that every product or service has a utility and power to be voluntarily exchanged for other goods, services or money.

The exchange process itself, though, brings forward the requirement that a party should perceive a product or service worthy, beneficial to

acquire (i.e. of value), meeting the needs, wants and preferences of that party, generally a customer, who would be willing to enter into exchange for that benefit. This is the traditional production-consumption view of value where one actor produces it and another actor utilizes it. More recently, it has been widely recognized that an actor, who finds a product or service valuable, may also participate in creating and enhancing its value and consequently, co-create value in a value producing continuous and iterative process based on relational exchanges.

## Value Creation

When value is studied at firm level, two major positions are evident. One is looking at value that is at the foundation, the central pillar of the business model of any company and the other – at value embedded in products and services delivered to the customers, i.e. exchange value and value-in-use (Vargo et al. 2010).

Early studies on value creation focused on organizational resources as a source of value creation in firms (Schumpeter 1934; Teece 1987). According to Schumpeter (1934), the combination of technology and resources lead to new products and production techniques that form the basis of value creation in firms. The above viewpoint is embedded in the resource-based view in which interdependent bundles of organizational resources are viewed as a source of value creation and competitive advantage (Barney 1991). The same view was upheld by Penrose (1959), who stated that value creation is a result of the way in which an organization manages its resources in the production of goods and services. In understanding how organizational resources transform into value, some researchers draw inspiration from the work of Kaplan and Norton (2004) by mapping the causal relationship between organizational resources and value creation.

Porter's (1985) Value Chain framework has influenced our understanding of value and the way in which different primary and secondary firm-level activities contribute to value creation. However, the globalization of markets and production has posed serious challenges to the application of this framework to globalized firms. This has called for greater

attention to the firm specific buyer-supplier relationships; to partners and networks which participate in value creation. Thus, the value configuration perspective (Christensen et al. 2009; Stabell and Fjeldstad 1998) has emerged focusing on the way in which internal company activities are structured and organized to fit external relational attachments. For example, Stabell and Fjeldstads (1998) argue that Porter's Value Chain analysis may not apply to all firms and propose the network configuration of company value creation that may better describe the value creation activities in diverse firms. Hall (1989) has added to this debate by arguing that the organizational resources critical to value creation in a firm are the asset value drivers, including intellectual and knowledge assets. Thus, value creation is not limited to shareholders but is related to stakeholders due to the dynamic interaction of organizational human and physical assets that are interdependent (Roos and Roos 1997).

Value creation by firms is seen as an output and a process. The International Integrated Reporting Council (IIRC) (2013) suggests that value creation is a process that takes inputs of organizational resources and capital, combining and applying them to produce outputs that may have positive and negative effect on individuals, the organization, and environment. As such, the value creation process enabling firms to outperform rivals takes place within a certain organizational context that is embedded in a wider environmental (regional, national, and international) setting and thus should be studied as value-in-context (Vargo et al. 2010).

The question that still remains is how a focal firm creates value. While the above studies on value creation in firms have focused entirely on organizational resources, other studies, as indicated above, have outlined the importance of strategic networks and relationships as essential to value creation (Katz and Shapiro 1985; Gulati et al. 2000). Strategic networks allow firms to gain access to tangible and intangible resources that they would not have possessed without interactions with other firms. They allow firms to tap into capabilities and information of their partners and intermediaries, enabling access to technologies and markets. Value creation activities in networks include shortening time to market, enhanced transaction efficiency, reduced asymmetries of information, and improved coordination of firms in alliances (Gulati et al. 2000; Kogut 2000).

Furthermore, supporting the above view of strategic networks as a source of value creation is that firms create value through and in relationships. Following this perspective in buyer-supplier relationships, Kim and Choi (2015) argue that value creation can occur at two levels: the supplier and the collective level. At the supplier level, value is created when the buyer receives greater benefits from information on new technology, higher quality products, or cutting edge production (Benner and Tushman 2003) than what it would receive from other rival suppliers. In the long run, such activities might result in synergies that can enhance the benefit for both parties (Heide and John 1990; Schumpeter 1934). The latter may depend on the relational and structural dimensions of the relationship ties (Krackhardt 1992), i.e. on how firms interact and on the extent to which firms are mutually trusting, supporting, and reciprocating (Hansen 1999). Similarly, Sainio et al. (2011) identify organizational relationships and interactions as value creating activities for a company that should also reflect novelty, complementarity, efficiency, and customer lock-in as primary drivers of value creation (Keupp and Gassmann 2009). Last, but not least, relationships allow firms to gain and share information, and access, share and develop new resources through synergies (Hakansson and Snehota 1989).

## Value Creation in the Internationalization of Small and Medium-Sized Firms

Small and medium-sized enterprises (SMEs) are of great importance to national economies and global markets as they constitute a large part of the productive activities in nation states and substantially contribute to national GDP, economic growth, technological development, innovation, and employment (Fernández and Nieto 2006). The importance of SMEs has become more pronounced with the development of the Internet and new technologies, as well as with the introduction of diverse entrepreneurship support programmes, global production networks and global value chains. As SMEs are key players in the industrial and commercial infrastructure of most countries (Deros et al. 2006), Schröder (2006) argues that the wealth of nations and economic growth depend

on SME performance. The latter has been enhanced by the internationalization opportunities created by the fall of trade barriers and the export supporting activities for SME internationalization and integration in the global economic linkages.

In spite of their prominent growth, SMEs encounter internal and external constrictions in their internationalization. These include financial and resource restrictions, lack of knowledge and skills in defining internationalization strategies, insufficient institutional provision, and limited understanding of diverse institutional settings (Peng et al. 2008).

Nevertheless, well-networked and innovative SMEs create value in the process of their internationalization that is contextualized in their interactions with foreign suppliers and customers, and which leads to their increased competitiveness in their home and foreign markets.

The extant perspectives of analysing SME internationalization show that scholars adopt a different starting position to examine the ways in which SMEs create value in and through their international activities. This is unlike the more uniform view of innovation studies, where it is a generally accepted axiom that innovation creates value for the firm. Internationalization literature is more diverse in its approaches and conceptual point of departure when examining the relationship between internationalization and value creation. Yet, supposedly, it agrees on the fundamental notion that internationalization ensures access to customers beyond national markets and thus serves as a platform for value creation. In this regard, it is obvious that if SMEs engage in international activities and the benefits exceed the costs, they create value. Yet, arguably, de-internationalization or foreign market withdrawal may also create value for the firm as then an action for which the costs exceed the benefits is stopped. In addition, internationalization may not only be explored as a platform that may create value, but it may offer mechanisms that can lead to value creation. For example, the process perspective and the network perspective of SME internationalization suggest that SMEs can create value through and in the international networks they are part of, or they can create more or less value through employing different operational modes in foreign markets. The resource-based view (RBV) when applied to internationalization of SMEs suggests that value is created by enhancing the internal and external, tangible and intangible resources and capabilities of these firms, which allow them to improve their competitiveness.

Value creation in SMEs is often associated with their participation in global value chains that enhance their internationalization and growth. When SMEs are part of a global value chain, they gain access to foreign markets at a lower cost than other SMEs that operate independently because of the intermediating role of a contractor. It is then easier for such SMEs to create value in their international activities and enjoy a more secure market position. This is very much the case with specialized supplier SMEs in the global value chains, but the value created by such SMEs apparently depends on their proximity to the contractor, or more so, the high value parts of the value chain.

SMEs can create value by international outsourcing or insourcing, which allows them to achieve a much greater focus on core activities and processes as they can optimize the allocation of otherwise scarce resource. Such an approach to value creation allows SMEs to engage more actively in design and product/service innovation, which can subsequently enhance their unique capabilities and improve their global market position. The inherent flexibility can be better accommodated in a structurally fluid organization, which is flexible enough to bring together individuals across global markets in a creative network that is agile and responsive to changing global customer requirements in real time.

## The Current Volume

This volume is a concerted attempt by international business and management scholars to explore not only what value SMEs create when they internationalize, but more so to understand how value is created, what mechanisms and inputs for value creation are needed to produce *exchange value*, *value-in-use*, and *value-in-context*.

The book incorporates chapters that examine value creation in the internationalized SMEs from the position of inputs, mechanisms, and outputs.

Chapter 2 by Tõnu Roolahit provides a qualitative framework in conjunction with preliminary case-study evidence of the combined role of technological advances and organizational arrangements in the evolution of value creation processes in globalizing SMEs. The case evidence is based on three Estonian-born globalizing SMEs. These firms do not



have abundant financial resources; instead, they have to leverage their knowledge resources, innovative ideas, and networking skills in order to expand, while the value of their proposition to large partners and customers might depend on the scale of their activities. The case-study companies operate in a dynamic business environment, which is characterized by regional variations in business opportunities (level of competition), customer habits, partnership opportunities, as well as changes in technological platforms (e.g. emergence of mobile applications). All these aspects contribute to the sophisticated process of value creation in the internationalization process of such SMEs.

Chapter 3 by Tuija Mainela, Vesa Puhakka and Ingrid Wakkee builds upon extant research on entrepreneurial opportunities in entrepreneurship literature, which has emerged at the intersection of internationalization and entrepreneurship theories. International opportunity actualization associated with value creation and competitive imperfections in international exchange is explored. With a view that international opportunities take many forms and are generated in various entrepreneurial processes, the chapter develops a theory-driven conceptualization of international opportunities for future empirical probing. It proposes four conceptualizations of value creating international opportunities differentiating venture and market type opportunities and opportunities of an objective and subjective nature. The chapter discusses the implications of the different conceptualizations of international opportunities as different modes of value creation.

Chapter 4 by Andreja Jaklič, Anže Burger, Aljaž Kunčič and Desislava Dikova argues that exporting is a vital source of growth for Central and Eastern European emerging economies. Market liberalization at home and the rapidly changing global business environment have forced small and medium emerging-market firms to radically change their growth strategies by focusing on internationalization. As a consequence, the number of first-time exporters originating from European emerging markets has increased. The authors study changes in internationalization patterns by examining the strategies of new exporters from a small European emerging market. The chapter explores how successful new exporters differ from unsuccessful ones by focusing on firms' foreign market export destinations and exported product varieties. The analysis of firm-level data

for Slovenian first-time exporters over the period 1994–2010 reveals that successful international growth is related to an increased diversification in internationalization. By intensifying both geographical and product diversification, first-time emerging-market exporters increase the probability of survival in export markets. Considering the predicaments of the Uppsala model of gradual (less risky) internationalization, the authors propose that successful first-time exporters are more risk prone as they tend to follow more diversified internationalization strategies. A step-wise approach to internationalization by following a more focused exporting strategy diminishes emerging-market firms' survival chances.

Chapter 5 by Peter Zettinig, Birgitta Sandberg and Sascha Fuerst analyses the transformations of an entrepreneurial firm during its internationalization. The authors design a prediction/control framework to explain how an entrepreneurial firm gradually changes into a multinational corporation. During the processes of expansion the firm deploys different behaviours that indicate shifting mindsets – from approaches that can be characterized as entrepreneurial to behaviours considered as managerial. Following a firm's development from inception to its end as independent entity the chapter discusses how the cross-roads between Entrepreneurship and International Business disciplines might create synergies beyond their own confines by developing further international entrepreneurship research.

In Chap. 6, Valtteri Kaartemo, Melissa Archpru Akaka and Stephen L. Vargo adopt a service-ecosystem perspective in order to explore the ways in which context affects and is impacted by value creation in international business. The chapter discusses the relationship between international businesses and the environment within which firms operate. The authors contribute to the discussion on value creation in international business by proposing that a service-ecosystem view can help advance the understanding of value creation beyond the conceptualization of a value chain and suggests that value creation can be interpreted as a part of a complex context.

Chapter 7 by Mette Vedel and Per Servais focuses on a network approach to internationalization. Setting off from the triadic entry nodes concept, the authors highlight the value offered to small firms in the internationalization process by intermediaries operating as network informants,

integrators, and coordinators. The chapter challenges the viewpoint that foreign market entry is a monadic relationship between one producer and one foreign party; rather, it demonstrates that intermediaries are key for value creation in the process of firm internationalization.

Chapter 8 by Taina Eriksson, Niina Nummela, Liisa-Maija Sainio and Sami Saarenketo argues that extant literature on SME internationalization often ignores that internationalization is a process that involves the whole value producing chain of activities. This study takes a holistic view of the internationalization of an SME by examining the firm's capabilities to manage the value chain. Therefore, it makes an important contribution to organizational capabilities, value chain management and international business literatures. The qualitative case study captures the capabilities needed to manage the value chain in a higher-level construct of value chain management capability. The value chain management capability is found to consist of international orientation, network capability, market orientation, technological capability, and teamwork management capability.

In Chap. 9, Tiia Vissak, Tatyana Tsukanova and Xiaotian Zhang place value creating in a country context by exploring how born global and non-born global firms from several Chinese regions assess the value of knowledge, network relationships, and governmental support for their early internationalization stages and how they evaluate the impact of other factors. The study is based on a survey of 712 Chinese firms and data show that most of these companies enter the US market first, while expectations were that such firms should have entered Asian markets first. Factors such as the Chinese local governments' substantial export promotion and intermediary approach seem to have supported the internationalization of the studied firms. Thus, the lack of foreign market knowledge did not have a detrimental effect on the companies as the drive to internationalize to large markets with high purchasing power was motivating the firms.

Chapter 10 by Zizah Che Senik, Rosmah Mat Isa, Khairul Akmaliah Adham, and Ridzuan Md Sham focuses on the role of intelligence in value creation in SMEs. It brings insights into how SMEs from an emerging market create intelligence in venturing out at a faster pace via the born-global patterns. The authors argue that SMEs need to acquire, manage,

evaluate, and exploit the internationalization intelligence to penetrate foreign markets. The authors develop the proposition that the types of intelligence created during the process of internationalization are associated with the characteristics of the firms such as ownership, founder's qualification, types of products, and academic background. Moreover, the chapter finds that the exploitation of a wide-range of networks by the founders/owners or CEO/key personnel in building international relations is key to speeding up internationalization. Thus, technology and know-how activities are mechanisms for value creation that allow firms to compete internationally. The characteristics of the firms differentiate the types of intelligence created during the process of internationalization, which in turn determines the patterns of born-global such as born-global, rapid born-global, and born-global again.

Chapter 11 by Vesna Sedoglavich and Marina Dabić explores how the international activities of SMEs within a cluster help value creation. Using a case study method, it investigates small technology-intensive firms in a multiple-industries cluster located in Australia. The results reveal that boundaries exist in terms of the effects of the cluster on the international activities: (1) a firm's attitude towards international activities is determined by its overall strategy; (2) cluster firms use two modes of informal knowledge sharing – relation- and collaboration-oriented; (3) cluster externalities could have had more impact on the internationalization process of firms, had the firms been aware of the advantages that could come with being a member of the cluster; and (4) all firms rely on networks, although not necessarily on the networks built within the cluster.

Chapter 12 by Jonas Eduardsen and Reimer Ivang analyses 10 case studies and concludes that the Internet can add value as a driver of internationalization in SMEs by reducing the uncertainties accompanying internationalization through increasing the exposure of decision-makers to foreign market knowledge through accidental discovery or deliberate search. The Internet reduces competitive uncertainties related to the unpredictability of the actions of existing and potential competitors by improving SMEs' competitive scanning capacity. The authors also claim that the Internet is central to reducing the costs of doing business in foreign markets such as information search costs, costs related to finding

export intermediaries and suppliers, and marketing costs, The Internet is also seen as a coping mechanism for reducing the risks accompanying internationalization, enabling SMEs to commit to internationalization and increase involvement in foreign markets.

Chapter 13 by Arnim Decker takes a more practical view of value creation in relation to the concept of Industry 4.0, which refers to the notion that a fourth industrial revolution is underway, in which value creation processes at the horizontal and vertical level will lead to new modes of end-to-end configurations of global value chains and creation of new inter-firm value networks. The author claims that such changes will be driven by technical innovations, which are characterized by the Internet of Things, Integrated Manufacturing, or Cloud Computing, and increased interconnectivity that will lead to new ways of interactions between humans and machines, thereby changing the nature of networks and impacting the future of work processes within and between firms. Consequently, the argument is that such changes create a blurring of existing industrial boundaries and contribute to the convergence of now still distinct industries, for example industrial manufacturing and the information technology sector. The chapter explores how these new challenges will affect the value creation processes in the business strategies and operations of six studied firms.

Chapter 14 by Svetla Marinova and Marin Marinov examines how a clothing company with high value-added activities creates value with its network attachments. The chapter uses an information-rich case of an SME from a developed market economy. The authors argue that the internationalization of a focal SME with high value-added activities in an international network represents a complex phenomenon in which network attachments work together to co-create the emotional, social, spiritual and utilitarian value communicated through the brand to global customers, who also participate in value creation. Value creation is not stifled or limited by the network; instead, it can be empowered by the orchestration capabilities of the focal firm of a fluid open network of strong and weak ties that are globally dispersed and supported by a multiplicity of internationalization formats.

In Chap. 15, Lasse Torkkeli, Sami Saarenketo, Hanna Salojärvi and Liisa-Maija Sainio examine how the relationship between corporate social

responsibility (CSR) and sustainability related practices creates value to the firm and contributes to its successful internationalization. Both of these areas are increasingly relevant for companies, particularly for those originating from and operating in international markets where environmental awareness and good corporate behaviour is increasingly demanded by consumers and organizational buyers. Extant studies on other contexts have indicated that the relevance and impact of corporate sustainability and CSR may in the SME context be ambiguous and unique compared to larger firms. Therefore, the authors aim to shed further light on the phenomenon in the context of SME internationalization and international entrepreneurship. The findings indicate that CSR, rather than sustainability-related practices, is positively linked to the increased international performance of SMEs. Moreover, CSR related to society has the largest positive impact on performance, overriding even that of CSR towards customers.

**Acknowledgement** Jorma Larimo and Niina Nummela gratefully acknowledge the financial support of the Academy of Finland to their research project on 'Value Creation in International Growth' (Project number: 250613).

The editors would like to thank all the authors for their contribution to this book.

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# 2

## Value Creation in Globalizing SMEs

Tõnu Roolah

### Introduction

Value and value creation are both subjective terms with a broader and narrower meaning. In the narrow sense, value creation refers to the increase in value of shareholders' equity. This chapter adopts a much broader meaning. Bowman and Ambrosini (2000) make a distinction between perceived use value and exchange value. Use value is highly subjective and defined by customers according to their perception of the usefulness of the product or service. Exchange value is realized in the sales process. According to Priem (2007), value creation involves innovation that establishes or increases the consumer's valuation of the benefit of

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This chapter has been prepared with financial support received from the Estonian Research Council (IUT20- 49) and from the European Social Foundation (ESF) through the Research and Innovation Policy Monitoring Programme (1.2.0103.11-0005).

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T. Roolah  
Faculty of Economics and Business Administration,  
University of Tartu, Tartu, Estonia

© The Editor(s) (if applicable) and the Author(s) 2017  
S. Marinova et al. (eds.), *Value Creation in International Business*,  
DOI 10.1007/978-3-319-39369-8\_2

consumption. Sheth and Uslay (2007) argue, however, that the value creation paradigm allows us to even look beyond value in use (e.g. value in disposal). In this study, the value creation perspective is extended towards the service dominant logic by Vargo and Lusch (2004), who claim that various actors actually co-create value by interacting through mutual service provision (see also Bettencourt et al. 2014). From this perspective, value creation is no longer perceived to reside within the firm, but value is co-created among various actors within the networked market (Nenonen and Storbacka 2010). Such networked value creation is likely to involve various supply chain partners and interconnectivity between business-to-business (B2B) and business-to-consumer (B2C) relations. Daxböck (2013) shows that value co-creation is an important precondition in service business models. Therefore, extending the value concept by Hsieh et al. (2012), value in this study is seen as the difference between the benefits enjoyed by international customers and partners of a smaller company and its cost of provision and delivery.

Globalizing small and medium sized enterprises (SMEs) are defined in this chapter as SMEs whose vision is to become global in terms of market reach. Global means being represented all over the world. The term globalizing SMEs is used in this study to stress the global aspirations of these SMEs. The more common terms ‘born global’ and ‘international new ventures’ are indeed closely related, but stress more the speed than the reach of internationalization. The word globalizing also has a more dynamic and process related connotation than simply global or international.

Value creation in the internationalization process often requires innovative adjustments to the business model in order to make the value proposition more suitable in the changing business environment. The dynamic nature of internationalization is a characteristic of SMEs that intend to become global. Due to their smallness, these enterprises tend to have limited capital for expansion. Griffith (2007) argues that scarcity of material resources in the context of small economies can be compensated for by having superior knowledge resources. This is also true for SMEs. Globalizing SMEs can use their specialist knowledge and networking skills to facilitate international expansion despite the limited availability of other resources.

The specialist knowledge and capabilities might involve, for example, the agile incorporation of new technological platforms into their business

model and subsequent new value propositions either to large partners or to customers. Such extensions across various platforms serve to increase the appeal of the globalizing SME as a potential partner for network cooperation and joint expansions. This is just one indication of how interwoven the internationalization and innovation processes of SMEs often are. Networking skills are equally important in boosting the global expansion process. Regions differ considerably in terms of their cultures, development levels, and other socio-economic characteristics. The value proposition to local customers also has to be adjusted according to legal restrictions. Therefore, several knowledge-based global SMEs seek to find a balance between building a global brand image for cross-border partnerships and the localization of the services according to regional opportunities.

The value proposition for larger global or regional partners could depend on the scale of activities as well. Large companies tend to seek trustworthy network partners that could provide value adding support services not only in a few target markets, but at least a wider region. Therefore, as globalizing SMEs expand, they gradually become more attractive as partners for larger multinational enterprises.

The aim of this chapter is to provide a qualitative framework in conjunction with preliminary case-study evidence about the combined role of technological advances and organizational arrangements in the evolution of value creation processes in globalizing SMEs. How do the value creation processes of globalizing SMEs evolve over time on the basis of structured technological and organizational developments? That is the research question this study seeks to answer. In this respect, Estonia, as a small open economy, offers several interesting cases of knowledge-based global expansion of SMEs based on innovative value propositions. The case-study evidence will be based on three cases of unique solutions offered by globalizing SMEs. This diverse comparison of globalizing value creation processes should make it easier to generalize the results.

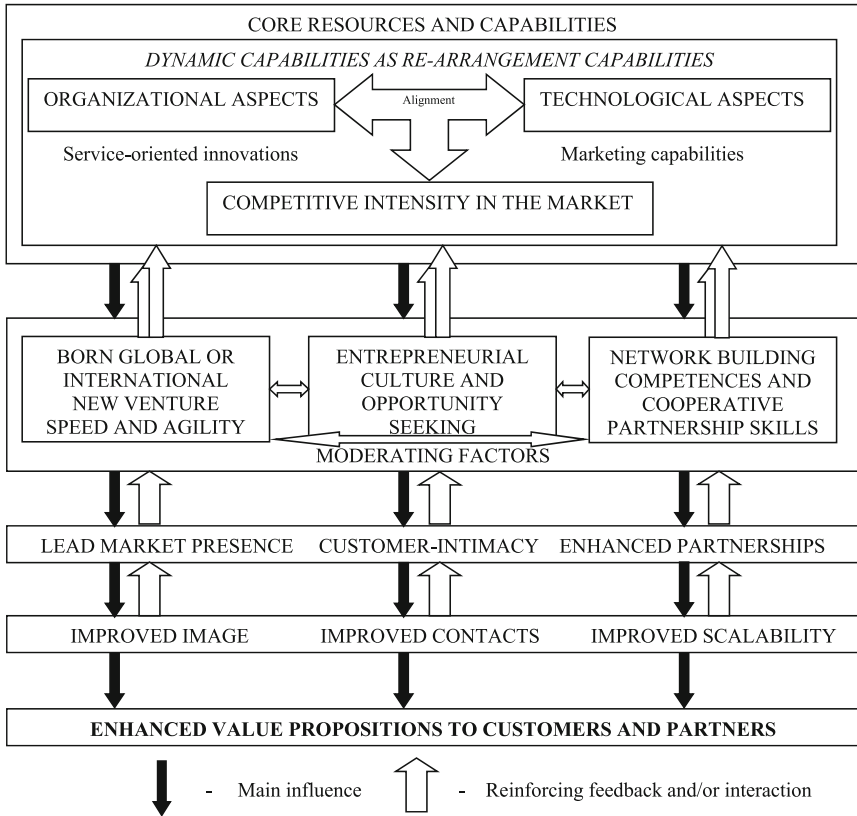
The novelty of this contribution is in the establishment of a qualitative framework for the analysis of value creation dynamics in globalizing SMEs. This framework is aimed at using case evidence to identify the generalizable patterns in the establishment of unique dynamic value propositions during the globalization process. The proposed framework seeks to link technological and resource-based aspects with organizational

efforts that leverage co-operation and networking to create more value. Thus, it builds upon knowledge from various discourses in a novel way to focus specifically on value provision to consumers and to network partners. The agile nature of the modern globalization of smaller companies prescribes the development of suitable knowledge resources and dynamic capabilities that allow using very flexible strategies and that tolerate sudden disruptions in business model conceptualization. This low path dependency of globalizing SMEs is also a relatively novel value creation perspective in international business discourse. This chapter shows how the internationalization process in globalizing small companies is simultaneously an element of evolving value creation by supporting technological and organisational changes, which enhance value propositions to the partners and customers of such companies. This makes it possible to seek a better connection between discourses of international business and innovation management in smaller companies.

The chapter starts with a discussion of theoretical considerations and earlier research, predominantly about value creation in dynamic new ventures (including born globals). A framework of value creation dynamics in the globalization setting is established on the basis of this theoretical analysis. The section continues with an explanation of the research methodology used for the empirical analysis and the case data. This is followed by the case-study analysis and comparison of three Estonian SMEs in the context of their global expansion. A general discussion of the results from the perspective of earlier theoretical and empirical contributions will then follow, and the chapter will end with conclusions and implications for theory, policy and management practice.

## **Value Creation Framework for Globalizing SMEs**

The general properties of value creation were already explained at the very beginning of this chapter. In this section, the focus will first be on the various concepts often used in international business studies to explain the internationalization processes. However, here they will serve as building blocks for the establishment of a comprehensive theoretical



**Fig. 2.1** Framework of dynamic value creation in globalizing SMEs (Source: Based on the author's synthesis of various findings outlined in the literature)

framework. In this analysis, value creation serves initially as an implicit research context or somewhat tacit goal until it becomes explicit in terms of rendering enhanced value propositions to customers and partners, as reflected in Fig. 2.1. Such a research approach might seem peculiar. Yet, just as technologies are built upon various elements that initially may look unrelated, international business related concepts are similar elements of this exploratory view of the value creation dynamics. Furthermore, the internationalization process is seen in this study as an important element of value creation that makes it possible to establish

or increase various benefits to customers and/or partners, while improving the performance of a company. Relevant theoretical aspects can be found in various streams of literature. These include elements of the resource-based view (especially discussions of dynamic capabilities), the literature on 'born globals', the international new ventures approach as well as elements of the network approach. In addition, business model scalability will also be addressed.

The resource-based view of the firm outlines possible linkages between the learning aspect of gradual approaches, networks and the ownership aspect of the OLI (ownership, location, internalization) paradigm. The concept investigates a company as a collection of inimitable resources and capabilities. Differences in competitiveness result from the unique abilities a company may possess in order to accumulate, develop, and deploy resources and capabilities. They use these abilities to formulate and implement value-enhancing strategies. Jacobsen (2013) traces the origin of the resource-based view back to E. A. G. Robinson's work in 1931. Therefore, as with entrepreneurship, the core ideas of the concept were developed long ago.

Barney (1991) argues that these valuable, rare, imperfectly imitable, and not substitutable resources and capabilities are sources for sustainable competitive advantage. Fiol (2001) somewhat opposes this view by indicating that the derivation of sustainable advantage from single inimitable core competencies is questionable. The modern business environment changes so rapidly that the skill and resources of organizations and how they are used must change to produce continuously changing advantages. The more contemporary idea of the increased environmental dynamics is shared by several authors, more recently by Andersén (2010) and Arend (2014). Barney's response to these claims is that the ability to be adaptive could itself be considered a (dynamic) capability and a source for competitive advantage, as long as it renders additional value from reacting properly to instabilities in the environment (Barney et al. 2001). Therefore, the resource-based view incorporates changes in the business environment without major changes in the underpinnings of the concept. However, Wu (2010) showed that in the context of environmental volatility, the dynamic capabilities view does offer better explanatory power than the traditional resource-based view, while both are useful concepts.

Wiengarten et al. (2013) combine the resource-based view with the use and development of information technology resources in companies. They conclude that in order to gain full support from IT improvements other organizational factors have to be aligned with that technological advancement. Similar contingency theory aspects of the resource-based view that interpret organizational structure as a valuable resource are discussed by Pertusa-Ortega et al. (2010) and Wilden et al. (2013). Wilden et al. (2013) also analyse the external fit of dynamic capabilities with competitive intensity in the market. Zhuang and Lederer (2006) have shown earlier that the e-commerce performance of firms is determined by their business and e-commerce technology resources as well as by process redesign skills, but not by their human resources.

Kindström et al. (2013) outline the importance of dynamic capabilities in making the shift from product-centred management to a product and service view, which requires new capabilities for service innovation. Purposeful use of processes in order to build dynamic capabilities that support service innovations in project-oriented entrepreneurial service firms has been discussed by Salunke et al. (2011). Nath et al. (2010) found that the financial performance of firms is most influenced by marketing capabilities where firms should consider focus on a narrow product or services portfolio and a diverse geographical market. Therefore, market diversification is positive, while high product diversification might have an adverse influence on performance. Auh and Menguc (2009) show in addition that the use of marketing resources and capabilities also depends on institutional factors, including the potential unwillingness of managers to take some actions.

During recent decades, the concepts of 'born globals' (Rennie 1993; Knight and Cavusgil 1996) and 'international new ventures' (Oviatt and McDougall 1994 or recently Rasmussen et al. 2012) have become more important. Efrat and Shoham (2012) distinguish between the short-term and long-term performance of 'born globals'. They conclude that while short-term performance tends to be influenced predominantly by external environmental factors, the long-term performance and success depends more on internal factors, such as managerial capabilities, technological capabilities and marketing effectiveness. Sapienza et al. (2006) argue that early internationalization reduces the probability

of firm survival, but increases the probability of growth. This effect is moderated by managerial experience so that the earlier foreign experience of managers reduces the negative influence of internationalization on the firm's survival and increases the positive effect on growth. Very fungible resources have similar moderating effects. Li et al. (2012) show that firm size and experience tend to influence the firm's early internationalization of high-tech 'born globals' in the shape of an inverted U, whereas research and development (R&D) intensity matters as well. Early internationalization does, according to them, have a significant positive effect on performance. Interestingly, strategic alliances did not have a significant impact on the early internationalization of such firms.

Kalinic and Forza (2012) find the distinct strategic focus to be a key aspect that helps SMEs to succeed as rapidly internationalizing 'born globals'. Park and Rhee (2012) argue, however, that prior experience of managers in 'born globals' as well as networks influence the firm's knowledge building capability, where absorptive capacity has an important moderating role. The firm's knowledge competencies have in turn an impact on international performance. Fernhaber and Li (2013) indicate in terms of networking that older international new ventures benefit more from formal partnering within international strategic alliances and younger ventures from informal networking with geographically proximate firms. Freeman et al. (2010) indicate that in addition to prior knowledge, 'born globals' tend to use proactive advanced relationship-building capabilities to acquire new knowledge from useful partners, where technological experience is often more important than market or process experience. Technology allows them to seek and to transfer new knowledge quickly, while developing new links.

Melén and Nordman (2009) use the internationalization speed characteristic of 'born globals' to differentiate between low committers, incremental committers, and high committers. The first type of 'born globals' use only low commitment modes, incremental development here means a shift from low commitment modes to high commitment later on, and high committers use both types of entry modes from inception. According to Ripollés and Blesa (2012), the selection of high commitment entry modes might be determined by the firm's marketing capabilities. Kahiya (2013) concludes that a firm's internationalization path



depends on the perception of export barriers because gradual internationalizers feel strongly about their lack of skill and knowledge, while international new ventures (INVs) relate to positive managerial orientation. Uner et al. (2013) also support the argument that 'born globals' or INVs perceive export barriers differently from traditional, gradually internationalizing, firms.

Gabrielsson and Gabrielsson (2011) investigated the use of internet-based sales channels by 'born globals'. They found that the internet is often combined with more traditional channels and that internet-based multiple channels are more characteristic of already highly global firms than those in the early stages. The development of local channels and cooperative ties with multi-national corporations are still important even when internet-based channels are used extensively. Mort et al. (2012) identify four key elements of entrepreneurial marketing used by 'born global' firms. These include legitimacy, customer intimacy-based innovative products or services, opportunity creation and resource improvements. Advanced customer orientation is outlined by Kim et al. (2011) as an important source of innovations in 'born globals'. Therefore, an intimate knowledge of customers can give competitive advantages to small global firms. International entrepreneurial orientation and information intensity are the factors that support the development of information technologies in small 'born globals', while IT capabilities in turn support performance (Zhang et al. 2013).

Danish evidence by Rasmussen et al. (2012) suggests that international new ventures indeed take a more global business perspective, where international ventures are usually established by multiple partners, while domestic new ventures are often established by a single owner-manager. This shows that globalization efforts require diverse competencies. The entrepreneurial nature of international new ventures offers another relevant discourse.

Several researchers address the role of entrepreneurship in technological learning that takes place in foreign markets when high-tech industries internationalize. Entrepreneurship has been found to facilitate these learning processes, while also improving performance (Zahra et al. 2000). Entrepreneurial orientation as a determinant of early internationalization of small high-tech firms, sometimes even from its inception, has been

discussed by Jones (1999). In terms of internationalization, the entrepreneurial culture might in some cases be viewed as a sole engine driving the entire process. Eventually, Oviatt and McDougall (2005) have offered an even more holistic model of international entrepreneurship.

Dimitratos et al. (2012) offer a scale of international entrepreneurial culture that combines international dimensions of entrepreneurial orientation, market orientation, motivation, learning orientation, networking with competitors, and networking with non-competitors. These six-dimensions of international entrepreneurship should offer a more elaborate understanding than the one-dimensional constructs. Dimitratos et al. (2010) also propose the novel term 'global smaller firm' to denote a firm that develops considerable market presence in the leading international markets/countries in its industry. The leading locations feature differentiates this term from 'born globals' or international new ventures.

Fink et al. (2008) propose that the co-operative internationalization of entrepreneurial SMEs is facilitated by self-commitment to such cooperation, which is not supported by formal controls and sanctions. Zahra et al. (2005) stress the importance of the cognitive perspective in research into international entrepreneurship in order to identify the role of opportunity identification and the exploitation in global markets. O'Cass and Weerawardena (2009) found that international SMEs are characterized by an intensity of organizational innovations, which is in turn facilitated by the firm's size and by entrepreneurship. They actively seek novel ways to provide value.

International entrepreneurship is also closely linked with Sarasvathy's effectuation approach that suggests entrepreneurial risk-taking and tests of real host market situations instead of extensive reliance on experiences or market reports (see Sarasvathy 2001; Sarasvathy and Venkataraman 2011). Goel and Karri (2006) interpreted this as a situation of over-trust, where entrepreneurs have more trust in international markets than they should. Andersson (2011) argues that the effectuation approach is useful in explaining how entrepreneurs create opportunities together with local network partners, and therefore, are able to enter global markets fast. This indicates connections of effectuation with the network approach.

The network approach emerged from the criticism of sequential internationalization (see Turnbull 1987; Rao and Naidu 1992). The founders

of the sequential approach, Jan Johanson in particular, have investigated and acknowledged even further the importance of the multilateral or network aspect of the internationalization process (Johanson and Mattson 1988; Johanson and Vahlne 1990, 2003, 2009). They consider it an important improvement that transforms the initial incremental process in the direction of opportunity recognizing and relationship building.

Musteen et al. (2010) suggest, based on Czech evidence, that geographically extensive and diverse networks enhance performance, while an overly extensive reliance on personal networks might even be a barrier to the success of the international venture, especially if it is owners first. A shared language with network partners seems to increase the pace of internationalization. Hilmersson and Jansson (2012) propose that SMEs reduce their liability of being an outsider in relevant international networks by becoming insiders through three types or phases of networks. The initial exposure network serves the purpose of exposing the firm to many new relationships that might be weak. The formation network builds more relevant weak links into stronger ties, and finally the sustenance network means a focus on high-commitment entry modes within the framework of well-selected sustainable partnerships. While the classic network approach helps to avoid the concentration of administrative complexities that are characteristic of highly integrated hierarchies, it retains many elements of control and co-ordination. Therefore, networked operations help to achieve more effective and more competitive solutions on a higher level than intra-firm operations, while the specialization within a network helps to avoid organizational problems and to facilitate the changes needed in modern business environments.

Scalability is an important feature of computer systems that in general form refers to 'how well the solution to some problem will work when the size of the problem increases' (Macri 2004: 68). In the modern era, the term has been adopted in business and economics literature to denote the 'hockey stick' type company growth curve where returns increase faster than the costs of inputs. In economics, the scalability means increasingly positive returns to scale. This phenomenon is especially characteristic of e-commerce and high-tech fields dominated by R&D costs, which are fixed in nature and do not depend on the accumulative output provided.

Some venture capital based business ideas might not be well scalable without alliance support (Patel et al. 2011) and there are several scalability challenges (see for example Hallowell 2001; Kiple and Lewis 2009; Hosman 2011). Business model scalability can be achieved by market expansion, where the costs of entry grow slower than the returns from a more extensive market presence. Increasing returns in comparison to input costs implies that successful scalability has a strong connection to productivity growth and improved value creation. Scalability as a phenomenon is not risk free. In the case of unsuccessful market penetration, the input costs are likely to exceed the returns.

The elements from various streams of theoretical discussion allow us to propose the value creation framework depicted in Fig. 2.1. The dark arrows in the figure outline the main pattern of inputs, moderators, and various outcomes from top to bottom. The light horizontal arrows indicate the interaction of framework elements (including potential synergies) and the light vertical arrows indicate reinforcing feedback effects (e.g. the improved scalability of the business model could help to create even better partnerships, which in turn contribute to networking competencies). Some interim steps, like seeking lead market presence, customer-intimacy, and enhanced partnerships are represented within the same box because they are separable yet often highly interwoven elements. This is also so with the interim outcomes of improved image, contacts, and scalability.

This framework outlines the important role of intra-company resources and capabilities, which for value creation require alignment between organizational, technological, and market aspects. The focal elements in modern capability development are increased service-orientation and marketing capabilities. The value provision of dynamic capabilities is moderated by the speed and agility of being born global, entrepreneurial opportunity seeking, and networking skills. These moderators are highly integrated and interactive. They reinforce capabilities as well as their influence on value creating strategic choices, like lead market presence, customer intimacy using modern channels in combination with traditional channels, and various partnerships. Such strategies help to establish a company's good image, vital contacts and/or additional scale effects that enhance value creation processes.

## Research Methodology

This research discusses the management and networking processes that relate to global value creation using information and communication technologies or other modern technologies. The internal logic of such processes and related managerial perceptions can be revealed by using case-study analysis. This qualitative approach helps to gain elaborate insights into the motivations, beliefs, and experiences of managers, who have been responsible for the internationalization process in their companies. According to Yin (1992) a case study is an empirical inquiry that investigates a phenomenon within its real-life context when the borders between the phenomenon and its context are not evident and in which multiple sources of evidence are used. Chetty (1996) argues that the case-study method is an important and widely used method of research in social sciences and in management studies. Eisenhardt (1989) elaborates the idea that case-study research is a suitable tool also for theory building. Thus, the method is suitable for an exploratory study about the proposed value creation framework. Hillebrand et al. (2001) show in turn the usefulness of case studies for theory testing purposes. Piekari and Welch (2011) offer additional support to the idea that in international business research, case studies have several acceptable forms and purposes. This study incorporates framework building as well as the initial testing of that framework. In order to generalize from the results of inter-case analysis, the case data from companies are combined with data and information from other sources, including public data.

In this chapter, the phenomenon under investigation is value creation in the global expansion of SMEs. Thus, the research context is formed by intra-company and external factors. This study is an exploratory study attempting to determine the dynamics of value creation in the internationalization process of globalizing SMEs. Yin (1994) provides a detailed description of exploratory type case studies. This form of case study should have a purpose, but it might not have clearly defined research propositions because potential causalities are yet to be identified in the exploration process itself. It is a controversial method from the perspective of clarity. Exploration may follow intuitive research paths, which could be considered confusing by some readers.

In order to obtain both intra-case and inter-case evidence, the multiple case study analysis was selected as a sub-method. The intra-case narrative helps to highlight the specific features of the phenomenon in that particular unit of research (in this study a company), while inter-case evidence makes it possible to make some generalizations based on the common features of several case companies.

The case companies were selected on the basis of theoretical sampling (Eisenhardt 1989). The main considerations related to the goal of internationalization (companies that have clearly shown global business aspirations), company size (focus on SMEs), and current levels of foreign commitment (companies that are at somewhat various stages of becoming global). The case information was collected primarily from secondary sources, and in that sense the current study provides a meta-analytical view of developments. However, the desk research of several data sources has been reinforced by short interviews and informal contact with company managers. The focus on secondary data could be seen as a limitation, but it helps the author to obtain a more diversified understanding of the dynamics of processes over time because historic records show the timeline of paramount events. The intra-company views are represented not only in the form of short additional interviews, but also information from various public presentations and interviews. The cases are summarized in Table 2.1 after the case narratives because knowledge from the narratives makes it possible to provide a better overview.

**Table 2.1** Comparison of value creation in Fortumo, ZeroTurnaround and Click & Grow

|                 | Fortumo   | ZeroTurnaround   | Click & Grow   |
|-----------------|---|--|--|
| Market focus    | B2C and B2B   | B2B  | B2C  |
| Product/service | Mobile value-added services and platforms – <b>electronic service</b> | Java programming developer tools – <b>electronic product</b> | Intelligent flowerpots and herb selection pots – <b>physical product</b> |
| Business model  | Transaction service fees  | Licence sales  | Product sales  |
| Main markets    | USA, China, India   | USA, Western Europe  | USA, Russia  |

Table 2.1 (continued)

|   | Fortumo   | ZeroTurnaround   | Click & Grow  |
|---|---|--|---|
| Key partnerships                        | High-traffic content providers and telecoms<br><br><b>Mainly non-equity partnerships, one occasion of equity sale</b> | Experienced co-owner from USA and other Java dynamics developers<br><br><b>Equity based partnerships</b> | Tech-savvy plant grower communities around the world, Kickstarter<br><br><b>Non-equity based community creation</b> |
| Enhanced solutions                      | Focus on payments new in-app platforms  | LiveRebel Java updating tool as follow-up solution   | Smart Herb Garden as cheaper better solution for growing three herbs  |
| Main value proposition                  | Easy to use payment system for online products and services   | Enhanced productivity of Java programmers and updaters   | Easy and carefree plant-growing option for non-skilful or lazier people   |
| Year of establishment                   | 2007  | 2009   | 2009  |
| First year of exports                   | 2007  | 2009   | 2011  |
| Number of locations                     | 3 (Tartu (Estonia), California (USA), Beijing (China))  | 4 (Tallinn (Estonia), Tartu (Estonia), Prague (Czech Republic), Boston (USA))                            | 2 (Tartu (Estonia), California (USA))   |
| Number of employees (Employment growth) | <b>2014:</b> 55<br><b>2012:</b> 31 (55 %)<br><b>2011:</b> 20  | <b>2014:</b> 90+<br><b>2012:</b> 61 (321.1 %)<br><b>2011:</b> 19   | <b>2014:</b> 14 (planned 23)<br><b>2012:</b> –<br><b>2011:</b> 6  |
| Total sales (euros)                     | <b>2012:</b> 12,704,013<br><b>2011:</b> 8,569,945   | <b>2012:</b> 5,079,729<br><b>2011:</b> 1,748,624   | <b>2012:</b> ~640,000<br><b>2011:</b> 120,009   |
| Sales growth (2012/11)                  | 48.24 %   | 290.50 %   | ~533.29 %   |
| Sales within EU (euros)                 | <b>2012:</b> 8,350,837<br><b>2011:</b> 5,528,324  | <b>2012:</b> 2,156,061<br><b>2011:</b> 872,714   | <b>2012:</b> –<br><b>2011:</b> 111,660  |
| Sales outside EU (euros)                | <b>2012:</b> 4,353,176<br><b>2011:</b> 3,041,621  | <b>2012:</b> 2,923,668<br><b>2011:</b> 875,910 euros   | <b>2012:</b> –<br><b>2011:</b> 8,349 euros  |

Source: Based on the analysis of various public sources, including reports, interviews and press releases

Only full-time marketing and product development employees (production outsourced)

## Value Creation in Estonian Globalizing SMEs

### Fortumo's Partnerships and Adjustments to Their Value Proposition

Mobi Solutions, the predecessor and parent company of Fortumo, was founded in 2000 by students from the University of Tartu, who created the first SMS service as a course project. This company offers and develops mobile value-added services for various organizations (companies, public agencies) and private individuals. Mobi Solutions is best known as the developer of SMS-based entertainment, marketing, or public administration services, whose profit model relies on a small percentage from the price of each transaction message. This is about 2 %, which in comparison to the 43 % going to the mobile operator, and 55 % going to the web-service provider, is relatively minute. Mobile value-added services in general are services that mobile operators do not provide as their main services (main services being calling services, short messaging services, and internet connection services). This means that short messages or other applications themselves are not the core of Fortumo's business, but the additional value and functionality for the clients is (advertising, consumer voting and questionnaires, delivery tracking, recording of memos, match-making services, web-page access authorization, lottery, downloading of mobile sounds and other similar services) (Mobi Solutions 2013; Fortumo 2013).

Until 2005, Mobi Solutions was predominantly oriented towards the domestic market. In that year, the company founded subsidiaries in Latvia and Lithuania in order to increase growth through exports. Back then Mobi Solutions offered SMS payment solutions such as SMS-Gateway, mobile marketing campaigns, bulk delivery of SMS messages and Everybody's M-Business. The last being the newest service that represented around 10 % of its turnover in 2005. In addition, Mobi provides solutions for public administration such as M-Government and M-City. Everybody's M-Business meant offering a standardized platform for mobile payments that allowed all interested parties to create an SMS payment add-on for its web-page quickly and simply without any start-up costs or monthly fees (Rannu 2007).



In 2007, this service was re-branded as Fortumo, and Mobi Solutions established a new affiliate company aimed at the international provision of Fortumo's service offering. The international provision of that standardized mobile solution is complicated by regulatory differences across countries and regions. These differences and limitations require thorough preparations in order to make sure that the market entry process commences according to the rules (Fortumo 2013).

In essence, Fortumo's platform offers intermediation between web-based or mobile-based content providers and their clients. Consequently, international success is highly dependent on the attraction of high-traffic content providers (e.g. game producers) for the mobile payment solution. The fact that Fortumo's solution does not require any programming skills nor cause any cost unrelated to turnover is a valuable, but insufficient condition for gaining attention. Fortumo conducts targeted promotions of its service in various internet forums and other web-pages frequently visited by potential users. Over time, however, it has become evident that internet-based channels have to be used in combination with targeted participation in selected trade fairs, conferences and industry meetings to gain personal contacts with key representatives of companies that are potential partners (Kodres 2013).

Global expansion with Fortumo's service does not require a physical presence in each and every target market. There are larger markets, like the USA and China, where the company has chosen to make extra efforts. For example, on the US market software companies have clustered in Silicon Valley with at least representative offices. This includes content providers. Therefore, Fortumo has established an office in the US and employed some local professionals with a good portfolio of network contacts. The initial experience with US employees was, however, a failure because the personnel did not fully commit to the contact establishment tasks. Instead of extensive reliance on host country managers, the key executives at Fortumo now make extended trips to their offices in San Francisco and Beijing. This up close and personal approach is naturally more expensive than a virtual market presence. Yet, in the case of a very attractive target market, such additional effort might render considerable payoffs. US regulations on service number usage also make it more difficult to share resources between various users cost effectively just by

separating services not by number but by message keyword. In addition to the USA, special attention has been devoted to Asian markets first by recruiting experienced Taiwanese marketing people in order to support market penetration and sales in Asia. In this case, the marketing people worked initially in Estonia and not in the target region, but now their marketing efforts are focused in China and Fortumo has established a subsidiary in Beijing. Due to the developmental differences of various mobile and online services, the value proposition of Fortumo seems even more appealing in less developed Asian markets than in mature markets (Kodres 2013).

In addition to Scandinavia, Central and Eastern European countries, several Asian countries, and the US market, in 2010, Fortumo turned its attention towards South American markets. These markets have higher economic and political risks, but due to these complexities also a less competitive environment than in Europe. South American people use value-added mobile services actively. In technical matters Fortumo relies on local partners there (mainly mobile service operators), but the marketing side is still handled by the company. Due to regulatory considerations, entry into Argentina and Brazil proved to be more complicated. Therefore, Fortumo started its services first in Chile, Mexico, Columbia, and Venezuela. Now, the services are also available in Argentina and Brazil.

In total Fortumo solutions are now available in 75 countries and on several continents. Fortumo is global in terms of the availability of its services, but penetration of markets in terms of sales still requires considerable development. This is done through targeted marketing efforts oriented towards the establishment of partnerships with major telecoms and other network partners. Such efforts are reinforced in Asia and the USA by local offices, but highly mobile managers operate in other markets as well.

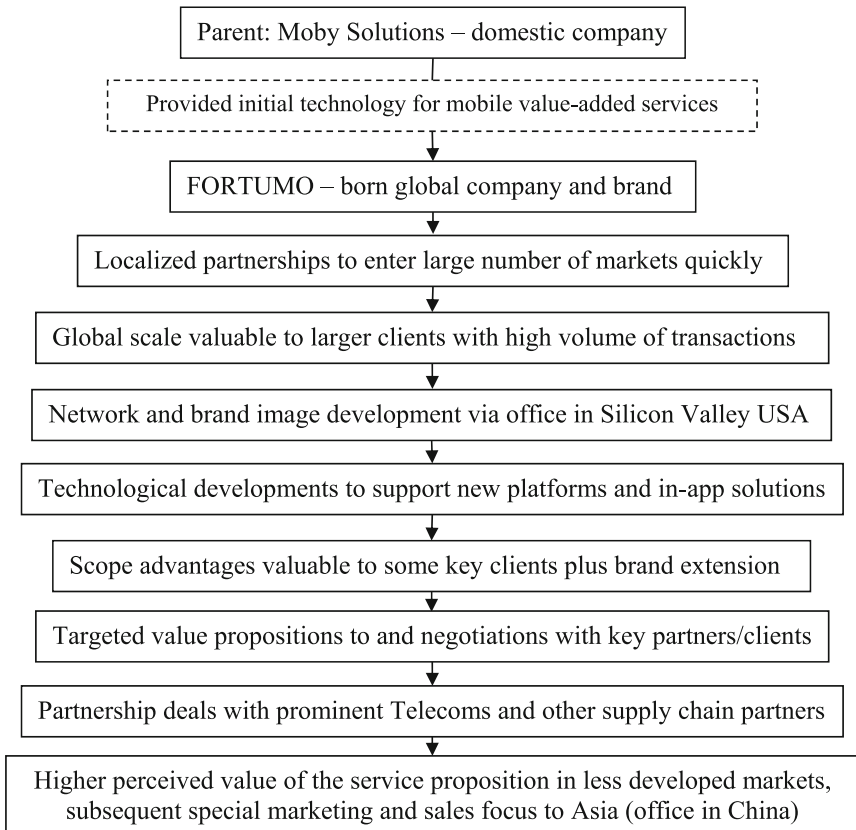
In general, the company has established an impressive global presence with its standardized service platforms during the last three to six years. Yet, the key issue seems to be the depth of market penetration in terms of attracting content providers who have high-traffic rather than large user numbers. However, the latter might serve as a useful stepping-stone towards more focused and profitable client portfolios. The trick seems to be in convincing high-volume users that even fast, simple and standardized solutions can serve most quality sensitive and somewhat specialized needs. Fortumo has started reference programme type advertising as well

in order to support deeper market penetration and brand development. The dynamics of Fortumo's value proposition to clients are represented by continuous development of new payment platforms, including in-app payments for Windows 8 and Nook as well as other adjustments to the smart phone era. Solely SMS-based services are therefore becoming replaced by modern applications, where the core nature of direct mobile billing without credit card or bank transfer remains the same.

Identity development means that in this sector the number of target countries covered by a value-added service provider makes the difference between being considered a partner or not. Therefore, large companies that provide web-based content monitor the coverage capabilities of support service companies like Fortumo. In this respect, internet-based solutions help Fortumo to grow fast and expand continuously. In this process, it builds identity as a global partner. In May 2013, this identity helped seal partnership deals with Norwegian Telenor and Spanish Telefonica, which are major telecoms in these markets. Fortumo has also partnered with mobile phone producer ZTE for app billing and in-app purchasing.

According to the Chief Revenue Officer at Fortumo, their larger clients are operating simultaneously in 20–25 target markets or more. Initially, Fortumo served users who operated in 2–5 markets. This means that internationalization has helped them obtain critical growth towards higher market coverage. This enables the company to serve international clients. To gain this access to larger multimarket clients was one of Fortumo's main aims because it makes it possible to replace the market-based approach, where clients have to be found on each local target market using a client-based approach. The latter is more cost effective, because some business functions can be centralized. Scaling growth together with clients means, in the interconnection with previous advantages, that sometimes when Fortumo enters a new target market, international clients are already there. This means additional income without considerable costs. Fast international expansion reduces the risks by balancing income flows between various target markets. This diversification makes the company less dependent on single-market developments because losses on one market can be compensated with profits from others. This shows that the managers at Fortumo view internet-based expansion predominantly as a cost-effective opportunity to build a global identity that is attractive to large-scale international clients. The technological aspects

seem in this respect far less important than the ability to expand rapidly and continuously. Although social networks are sometimes used as tools for making initial contacts with prospective international partners, the role of personal contacts and meetings remains high. Often, initial setbacks lead to adjusted value propositions, which are more in line with the business interests of client companies. This adaptive marketing has proven to be an important networking skill (Kodres 2013). Fortumo’s value creation process is depicted in Fig. 2.2. This figure offers a somewhat simplified sequence of value creation elements instead of replicating the entire framework of Fig. 2.1, because some aspects of the



**Fig. 2.2** The value creation process and its dynamics at Fortumo (Source: Author’s creation)

framework are much more rigorous or partially implicit empirically than they are in the generalized conceptual form. Therefore, the figure is aimed more at capturing the dynamics of Fortumo's value creation and not its entire complexity. The latter was explained in the case narrative. In this sequence, some steps take into account the results and feedback from earlier developments. Therefore, it is already an amalgam of the general dark arrow pattern and light arrow feedback loops of Fig. 2.1.

The location of Estonia is problematic because the particular industry is going through rapid changes, and in relatively peripheral Estonia, management would miss a lot of vital information clues, and ultimately would be unable to retain sufficient dynamism. The solution devised for this problem suggests that development work should stay in Estonia because offshoring it would considerably increase costs. However, the management team and selected business developers try to participate in key business events as much as possible and to spend around 5–6 months each year in the USA. This makes it possible to be closer to clients, to gain access to vital market information and to remain 'in the picture', which hopefully facilitates access to local communities. Such corporate management also leads to a split identity, where in Estonia Fortumo is perceived as a domestic company, whereas in the USA and Asia its portfolio of large clients and representation in Silicon Valley serve as better selling points. In a way, the Fortumo brand does not stress its Eastern European origin because at the stage of initial contacts with partners such considerations might even be slightly detrimental.

The Fortumo case highlights the importance of scale and scope effects in the globalizing SME that operates in the field of supportive solutions. It also indicates the importance of intra-community networking in the cluster core. This aspect in particular requires case multi-location management, which goes beyond the fly-by management style based on the short visits practised in modern multinationals. Stays in focal target markets have to be longer and more frequent in order to be identified as a quasi-local player and as a result accepted into the local community. This localization aspect of the value proposition is supported by the continuous development of technological platforms to serve the needs of various client communities. The following two short case examples are based on public sources. They are provided in order to generalize certain trends in the global development of high-tech SMEs from a post-socialist country.

## ZeroTurnaround in the Java Development Process

In 2006, the Java specialist Jevgeni Kabanov, then working as R&D manager for software development company Webmedia (now Nortal), and his colleague Toomas Römer, found a solution to the Java-based programming problem that code had to be uploaded to servers and re-run for testing. The JRebel software helps to check the code without time consuming breaks. This tool offers a considerable increase in the efficiency of Java programming and it was invented during intra-company development work. Soon it became apparent that within Webmedia the solution had too little potential for sufficient marketing exposure and sales efforts. In 2007, the development of this solution became the independent spin-off 'born global' company ZeroTurnaround, although it was officially registered as a separate company two years later in the third quarter of 2009. Webmedia invested around 192,000 euros in the development of JRebel, and then a further 237,000 euros jointly with Enterprise Estonia in the foreign market entry project in 2008. Smaller investors provided around 74,000 euros in addition. The company is led by the co-inventor Jevgeni Kabanov as the CEO. The other co-inventor and founder Toomas Römer works as Director of Engineering.

Initially, the former parent company, Webmedia Group, was instrumental as the venture capital investor, but in mid-2011, it sold its share in ZeroTurnaround to US company Bain Capital Ventures that has a global investments portfolio of 65 billion US dollars and has made more than 125 venture capital investments since 1984. It has offices in Boston, New York, and Palo Alto. In addition to the Webmedia shares, this company also acquired the shares of some smaller angel investors, who had invested in ZeroTurnaround at the early stage. The new co-owner from the USA has provided strong support and impetus to the success of the marketing and rapid growth of JRebel licence sales in the USA. The marketing division of ZeroTurnaround has been located in Boston since November 2011, and there are plans to increase the number of employees in that division from 47 to about 100 by 2014. The new investor has brought considerable growth and made the business model truly scalable. In 2012, sales increased 2.6 times to 5 million euros. This fast growth is expected to continue. About 99.5 % of sales are made outside the origin

market, Estonia. By 2010, around 50 % of sales came from the US and about 35–40 % from Western Europe. According to its managers, JRebel software was actively in use also in China, India and Russia, but these countries did not tend to pay for it, indicating software piracy problems. ZeroTurnaround solutions are used in about 80 countries around the world, but their target market is not so geographical, as focused on global corporate clients.

Since 2007, the company has grown into a company with close to 100 employees. As explained above, the commercial side of the business and marketing is now located in Boston, Massachusetts. This corporate entity employs predominantly US locals as marketing and sales managers. The software development units are still located in Estonia with offices in Tallinn and Tartu. The company now also has a subsidiary in Prague. In March 2013, ZeroTurnaround acquired Danish software development company Javeleon and all its patents. This company was established in 2012 as a spin-off from a Danish research institution in order to commercialize the research-based technology focusing on the dynamic updating of Java software. Danish scientists and the founders of Javeleon, Allan Gregersen and Michael Rasmussen, moved to Estonia and became part of ZeroTurnaround's development team. This acquisition shows ZeroTurnaround's ambition to become the leading provider of Java development tools.

The B2B software development tool JRebel increases the developer velocity in Java programming by about 40 %, saving about four weeks or one month in terms of development time per year. Therefore, the main value proposition is increased focus and productivity for programmers. ZeroTurnaround followed JRebel with a second developer tool, LiveRebel, which makes it easier to make live-app updates and eliminates server downtime during this process. These revolutionary software tools have been licensed by several large multinationals like Oracle, Apple, HP, eBay, Disney, Twitter, US Federal Reserve, and more than 3,500 other Java users. According to ZeroTurnaround's President and COO working in the Boston office, in the case of annual licensing contracts the JRebel tool costs a client company around one US dollar per programmer per day. The second support tool LiveRebel shows that this company is more than a 'one hit wonder'. The Java solution updating tool LiveRebel can be

interpreted as an enhancement to the initial value proposition because it solves an issue that is closely linked to Java development.

Founder and CEO of ZeroTurnaround, Jevgeni Kabanov, has stressed in several interviews with the Estonian media the importance of entrepreneurial ambition and dedication to progress as the core values in his team selection. According to him, Estonia is a great location for start-ups because as in the USA, people are ready to make serious entrepreneurial effort in order to learn, develop, and achieve results. It makes sense to start a company with only dedicated top professionals, who have a good skill set that they keep enhancing. Then later on, you can hire more and more similar people. Equally important is to know your own strengths and weaknesses well and to develop on the basis of that. Mr. Kabanov also believes that a good company should have constructive conflicts and discussion around development choices. Sometimes, the final word is his, but more often, he tries to reach mutual agreement with other managers. Jevgeni Kabanov likes product management tasks that make it possible to create new visions based on feedback from clients the most.

In terms of value proposition, the company's ideology is not to offer great value at low prices, but to ask from its customers as much as they find sensible to pay for solving these productivity problems. This helps to distribute the added value between the supplier and client more fairly, while offering sustainable profit margins and development opportunities. Often, start-ups from former socialist countries like Estonia, account for their lower labour and resource costs and try to compete with lower prices. ZeroTurnaround has clearly opted for a value-based over a costs-based pricing strategy, and it has been a successful choice. However, the software tool is so popular that some developing countries, as indicated above, tend to use pirate copies.

The CEO's own dedication to effort and progress is best illustrated by the fact that despite leading a fast growing global start-up, he managed in April 2013 to defend his PhD in IT on more productive methods of using Java ecosystems. ZeroTurnaround as a company is also actively engaged in scientific research and in supporting Java teaching at the university level. In June 2012, the company and the local University of Tartu signed a co-operation agreement concerning both research and teaching. This co-operation includes the development of the course



'Java Fundamentals' for a cohort of international students, offering topics that focus on combining theory with business practice for final dissertations, and stipends for students. The joint research activities produce patents, articles, and enhanced knowledge as a social by-product of the commercial value offerings. However, such close co-operation with the academic community also serves the purpose of finding talented new employees.

The similarity of ZeroTurnaround and Fortumo is that the value proposition is marketed to companies through the localization of this task in the US market, which is among the leading markets in the industry. Both companies sell software solutions, although this ZeroTurnaround is more oriented towards corporate clients than Fortumo. The strong partnerships have also played a crucial role in the globalization process. The co-ownership with Bain Capital Ventures since 2011 has been instrumental not only in terms of better funding, but in terms of shared knowledge, experience, and leading market contacts. This acquisition from the initial parent Webmedia gave the young Estonian company organizational tools and choices that helped scalable global marketing of great technological capabilities, retained and developed in Estonia, to the very competitive US market. The acquisition of Danish developer Javeleon tells another story of how the value creation improvements via a first partnership with Bain Capital Ventures led to new opportunities and business extensions. The introduction of LiveRebel shows that, much like Fortumo, ZeroTurnaround intends to keep up with market developments and the growing expectations of its global clients.

## **Click & Grow Moving Forward with High-Tech Plant Growing**

Around 2009, the advanced technologies for plant growing used by the US space agency NASA gave Estonian inventor and entrepreneur Mattias Lepp the idea of introducing these smart plant growing technologies to ordinary people, who liked to grow flowers or herbs, but did not have the skills, willingness, or patience to take care of these plants on a weekly basis. In autumn 2009, he entered the local competition for business ideas called 'Ajujaht' ('Brainhunt') sponsored by Enterprise Estonia and several private

companies. At first, it seemed that the judging panel of entrepreneurs, trainers, and financiers were sceptical about the concept, but by spring 2010, when the competition ended, the idea had become one of the leaders by also introducing a working prototype. Ultimately, the idea of a smart flowerpot won the competition and not only received the prize money, but also found its first investor during the mentoring process. A group of Estonian angel investors under the name WNB Project gave Click & Grow its first 250,000 euros allowing it to continue with more serious product development efforts. Mattias Lepp has said in public interviews that it proved to be an extremely difficult journey because every possible thing that could go wrong initially went wrong. They made numerous bad choices and took the wrong steps before getting it right.

Finally, Click & Grow started to produce smart flowerpots in 2011. The first shipment in autumn 2011 was acquired by a Swedish customer, who came to Estonia with cash in hand and demanded the product. Such a pull demand was possible because during the development period Mattias Lepp engaged in considerable public relations and marketing efforts by sending out press releases and making phone calls to the global technology media. Consequently, the Click & Grow smart flower pot idea received good global media exposure in *TechCrunch*, *Wired Magazine*, *Fast Company* and even the *New York Times*. Therefore, awareness among potential target customers was built in parallel with product development long before the first shipments were ready.

The initial value proposition of Click & Grow was a retail solution for high-tech hydroponic plant growing. The product is a square plastic flowerpot with a soil and seed cassette inside to which the user needs to add couple of AA batteries and some water. Then in around 2–3 weeks, the flower or herb (depending on the seeds) sprouts without additional care, reaching full size within 2–4 months. The Click & Grow flowerpot has been enthusiastically welcomed by home gardeners around the world. The market is inherently a global niche market of people who enjoy fresh flowers or herbs but are not skilful in nurturing plants. In the Nordic climate, however, the high-tech solution indicated the need for extra light, which is now made available through an LED-based low energy accessory that is sold separately for 49 US dollars, the pot with installed cassette costs around 79 US dollars.

To improve global marketing and sales, this start-up company also established an office in Palo Alto, California USA. Since autumn 2012, the smart flowerpot has been sold through US retail chain Brookstone in addition to using internet-based sales. This chain was established in 1973 and focuses on selling high-quality well-designed products that have not yet become widely available. In that segment, Brookstone is one of the leading retailers in the world. As such, it is a good channel for retailing such a novel product like the Click & Grow smart flowerpot. The flowerpot has now found owners in more than 40 countries. In 2012, the company sold around 90,000 flowerpots worldwide. The expected turnover of 6–6.9 million euros should also bring in the company's first profits, which are currently unknown.

The second-generation product has entered the global market as well. The Smart Herb Garden shipped in January 2014. This enhanced product has three different herb cassettes in one casing and comes with an eye-friendly LED-light as part of the product. It is also a comparatively cheaper solution than the initial flowerpot. For this product the company used the Kickstarter joint financing portal in the USA, and instead of the initial 75,000 US dollars for development works it raised 625,851 US dollars from 10,477 enthusiasts. In addition to the funding, this experience provided valuable feedback from future users in terms of consumer expectations of delivery options, product design, seeds, seedless cassette options and so on. According to interviews with Mattias Lepp, the market testing and customer feedback before starting the production were perhaps even the primary reasons for using Kickstarter. Indeed, in terms of raising funds for new product development, the company has already been able to get more than 1.5 million euros from various venture capital investors.

This second-generation solution represents an enhanced value proposition that has incorporated the lessons learned from the first product into a cheaper, more diverse, and technologically upgraded garden with three useful herbs or other plants. Such a solution is not entirely unique. There is, for example, the Herb:ie pot from the Finnish company Indoor Gardening that retails in Estonia for 100–150 euros and looks relatively similar in design. Mattias Lepp has explained that Click & Grow's Smart Herb Garden is easier and more economical to use in the home. Its advantage is

derived from the use of newer technology that is easier to handle, much less noisy, and has a considerable price advantage with prices at just 60 euros. At present, the Click & Grow products are produced in the origin market Estonia, but as the global sales volumes increase, outsourcing production to some less developed economy might be worth considering.

Click & Grow offers a physical product that has to be shipped, but there are similarities with Fortumo and ZeroTurnaround in terms of network building and marketing efforts in the USA. The US market is indeed one of the primary markets targeted by the company because it has a great number of potential customers with suitable purchasing power for high-tech design products. Once again, the Estonian origin is not exactly hidden in the process, but it is more about establishing a local presence in a vital consumer hotspot.

There is, however, a different marketing and sales experience from a secondary target market, Russia, where Click & Grow opted for door-to-door sales efforts to corporate clients by simply walking in with a product presentation. This strategy of the personal touch proved successful, but it is relatively costly to scale. Therefore, in comparison with door-to-door sales, solid co-operation with a well-known retailer or good availability via internet sales channels that indicate a growth trend, are still more promising outlets for building global sales. Yet in terms of serving corporate clients, the direct approach might still have potential if it initiates bulk purchasing. In general, the Click & Grow smart flowerpot or herb selection pot seems to be among those value propositions that are creating a lot of positive buzz and interest even among people who might not be the direct customers. Table 2.1 offers a comparison of value creation in all three case companies. The sales and employment data are provided mainly in order to illustrate the growth of these three companies. In terms of marketing-based value creation, they are merely indirect proxies of user value and/or partnership value that the companies provide.

The value creation processes reveal that all three companies have global aspirations with clear recognition that the US market, as the lead market for various technologies, is an important gateway to global customers. This does not have to be the final consumer, but can be the corporate customer, or even a combination of both. Despite the differences in their business models, all cases outline the importance of partnerships, com-

munity building, and product/service developments that enhance and fine-tune the value propositions to partners and customers. The three companies have devoted considerable effort to brand and awareness building. In light of the framework presented in Fig. 2.1, the comparative view of the case evidence suggests that technological knowledge needs to be supported by appropriate organizational arrangements and partnerships in order to achieve sufficient scalability and through that enhance value creation opportunities. Sometimes this requires equity sharing with new experienced partners, whereas on other occasions non-equity networking on the basis of mutual benefits will do.

## Discussion

The case evidence from Fortumo, ZeroTurnaround and Click & Grow indicates that the resources of ‘born globals’ have a significant role in the value creation process. Even in terms of the traditional resource-based view (Wernerfelt 1984; Barney 1991), the case companies have relied on unique, valuable and rare technological resources and capabilities. This is especially evident in the case of ZeroTurnaround, whose Java programming tools are so unique in the industry that several customers had to be convinced that such changes are technologically possible. The platforms of Fortumo and Click & Grow offer competitive advantages as well. The results are also in line with the discussion of dynamic capabilities because all three companies have leveraged their initial capabilities by offering additional or enhanced products and services on global markets, and these have required a certain amount of re-thinking the resource usage. In particular, Fortumo has also benefited from scale effects. This is in line with work by Arend (2014). All three globalizing SMEs have combined advances in information technology with organizational and marketing developments. This pattern is in accordance with earlier results by Wiengarten et al. (2013) and Pertusa-Ortega et al. (2010). The response to market considerations for the dynamic capabilities outlined by Wilden et al. (2013) can be identified as well. All three companies set great importance on the customer service considerations, which relate to dynamic capabilities according

to Kindström et al. (2013). The marketing capabilities, investigated earlier by Nath et al. (2010) and Auh and Menguc (2009), were of special focus for the managers in all three case companies, as were market diversification and a focused product portfolio, which also characterize all three SMEs. The customer base outlined by Westhead et al. (2001) proved to be a valuable resource for all the case companies.

All three can be described as 'born globals', but Fortumo and ZeroTurnaround have at present perhaps slightly more global reach than Click & Grow. In accordance with the results of Li et al. (2012) and Sapienza et al. (2006), early internationalization has indeed had a positive effect on the performance of Fortumo and ZeroTurnaround. In the case of Click & Grow, the period of operations has been too short to draw such a conclusion. All three companies have benefited from networking and technological knowledge without prior global experience in their particular industries. However, the distinct strategic focus stressed by Kalinic and Forza (2012) has had a key role as well. The proactive advanced relationship-building capabilities identified by Freeman et al. (2010) seem to have had an important role in the value creation process for Fortumo. Case evidence also supports the findings of Gabrielsson and Gabrielsson (2011), Mort et al. (2012), and Kim et al. (2011) in regard to the use of internet-based channels in combination with personal contacts, customer intimacy-based innovative products and services, and advanced customer orientation. In line with the results of Rasmussen et al. (2012), Fortumo has also diversified competencies by inviting Gerri Kodres, who has considerable marketing experience in Arab countries and Asia, into the company.

Evidence also reveals a strong entrepreneurial, market and learning orientation as well as intrinsic development motivation and networking interest in all the studied companies. This matches the dimensions in scale offered by Dimitratos et al. (2012). Fortumo, ZeroTurnaround and Click & Grow could be seen in accordance with Dimitratos et al. (2010) as 'global smaller firms' because the US market is indeed the leading market in their industries. The role of opportunity identification and exploitation in global markets, stressed by Zahra et al. (2005), has been clearly recognized in Fortumo as well as in other case companies. The relative lack of prior global experience in these companies suggests the possibility of the effectuation approach introduced by Sarasvathy (2001), the initial

negative experiences with Fortumo's manager in the USA point to this kind of risk-taking and trust pattern.

The experiences of Fortumo and Click & Grow show that being an insider in the relevant networks does indeed help reduce the liability of foreignness as was suggested by Hilmersson and Jansson (2012). In the case of Fortumo, extensive networking has already proved to be valuable in terms of enhanced performance, which is in line with results by Musteen et al. (2010). The network support has also reinforced the scalability of value creation processes, especially in Fortumo and in ZeroTurnaround. In the latter case, more intensive global sales efforts started only when experienced US venture capital became a strategic partner. Therefore, value creation processes are very intricate.

## Conclusions and Implications

The aim of this chapter was to provide a qualitative framework in conjunction with preliminary case-study evidence about the combined role of technological advances and organizational arrangements in the evolution of value creation processes in globalizing SMEs. The framework of this study focuses on the role of intra-company resources and capabilities, including dynamic capabilities. The value creation processes call for the alignment of organizational, technological, and market aspects. Focal developments relate to increased service-orientation and marketing capabilities. The company's value provision is moderated by the speed and agility of being born global, entrepreneurial opportunity seeking, and having networking skills. These moderators also reinforce the link between capabilities and value creating strategies, such as lead market presence, customer-intimacy, and various partnerships. These strategies facilitate the establishment of a good corporate image, vital contacts, and/or scale effects enhancing the value provision.

The case-study analysis of three high-tech globalizing SMEs shows that the value creation processes in such companies are based on the innovative use of resources and capabilities, including dynamic capabilities, in combination with organizational developments and entrepreneurial learning. Entrepreneurial marketing in such companies leverages

proactive relationship-building skills as well as the combination of key partnerships with the personal hands-on involvement of management personnel around the world. Global growth is induced by a strong combination of technological knowledge, marketing networking, and business model scalability with extended scope.

This contribution has certain limitations. The three cases presented here are perhaps somewhat insufficient for extensive inter-case comparison. The data collection based on written responses and public information does not offer good opportunities for additional clarification and might provide an overly narrow understanding of the intricate management issues. This is a qualitative study with inherently limited potential for generalizing the results. However, the approach allows us to investigate the phenomenon in detail and to gain an in-depth insight into the dynamics of value creation that globalizing SMEs face in the global expansion process. The incorporation of several cases increases the possibility of discussing the results in a more general context.

The implications for the theory suggest the need for additional research to focus on the dynamics of value creation processes in rapidly internationalizing small companies. This discourse could perhaps benefit most from the combination of dynamic capabilities literature with the network approach in an entrepreneurial context. There is considerable overlap between entrepreneurship research and the dynamic capabilities discussion within the framework of the resource-based view, while the discussion of motives and capabilities tends often to be detached from network and scale-scope considerations, which are also crucial.

In terms of implications for public policy, the governments of developing and post-socialist economies should devote more attention to building co-operative ties in business promotion with knowledge clusters in leading markets. These co-operative connections help start-ups to become insiders in key networks. In the long-term perspective, such close connections might help to improve the image of peripheral countries because of strong virtual cluster relations with leading global centres.

The management implications suggest that global value creation by internet-based or mobile channels cannot entirely replace personal face-to-face contacts. In the case of new market entry or office establishment abroad, managers have to build first-hand network contacts or transfer



knowledge by regular longer visits to key locations. Highly internet-based software industries and mobile solutions reinforce management supported by the frequent mobility of managers. However, even in the case of traditional material products, like the flowerpot of Click & Grow, internet-based sales channels and personal networking in lead market hotspots seem to gain importance.

Future research should address the origin aspect of ‘born globals’ in terms of its impact on performance in a more focused manner because the majority of high-tech start-ups from Estonia seem to relocate marketing and sales to leading markets not only because of the sales potential there, but also in order perhaps to gain a better brand image. The comparative study of low-tech and high-tech globalizing SMEs from emerging economies could also offer valuable knowledge about the relevance of technological knowledge in the rapid globalization of companies.

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# 3

## International Opportunities and Value Creation in International Entrepreneurship

Tuija Mainela, Vesa Puhakka, and Ingrid Wakkee

### Introduction

International Entrepreneurship (IE) is inherently a cross-disciplinary research field that combines international business and entrepreneurship (McDougall and Oviatt 2000; Jones et al. 2011). Along the conceptual developments in its root theories, international opportunities have been set in the core of the research field (Oviatt and McDougall 2005; Johanson and Vahlne 2006; Mainela et al. 2014). Still, in IE research, the concept of international opportunity is used in very diverse ways, as a concept in the theoretical frameworks, as a variable in questionnaires or a topic in interview guides, and in conceptualizing and modelling research results. Quite a number of variables, such as international, entrepreneurial and learning

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T. Mainela (✉) • V. Puhakka  
Oulu Business School, University of Oulu, Oulu, Finland

I. Wakkee  
Faculty of Social Sciences, VU University, Amsterdam, The Netherlands

orientations (Kropp et al. 2006; Jantunen et al. 2008), entrepreneurial cognition (Acedo and Jones 2005), networking (Coviello 2006; Sullivan Mort and Weerawardena 2006) and social ties (Ellis 2011; Kontinen and Ojala 2011), have been examined in relation to the establishment, growth and success of international new ventures or new international market entries. However, only a few explicit definitions of the concept of international opportunity are provided. Although opportunity focused activities are emphasized as central to IE, international opportunity as the subject of the activity is only elaborated to a limited extent. Therefore, we often end up wondering what actually is an international opportunity.

Entrepreneurship research generally agrees that opportunities are about value creation and competitive imperfections (Alvarez and Barney 2007; Ardichvili et al. 2003; Alvarez and Barney 2010; Venkataraman et al. 2012). Value is also a concept that has been for quite some time seen as the core of both services (Grönroos 2011; Kowalkowski 2011) and industrial marketing (Möller and Rajala 2007; Blocker 2011). International entrepreneurship research, in turn, seems to have focused less attention on the question of value creation in exchange relationships. We, therefore, suggest further attention needs to be focused on both the conceptualizations of international opportunities, in general, and to the concept of value in relation to international opportunities, in particular.

In the present study we approach international opportunities in international entrepreneurship with a focus on value creation activities. The often implicit conceptualizations of international opportunities provide, on the one hand, the possibility of accounting for a great variety of different kinds of opportunities but, on the other hand, also open up a danger in studying very different issues under one concept. The aim of the present study is to support the future development of international opportunity focused IE research by examining the origins and nature of international opportunities. On this basis we suggest conceptualizations of international opportunities for future empirical probing. The research question of the study asks: How are international opportunities actualized as a value-creating activity in cross-border contexts? This allows us to acknowledge the variety of approaches to studying international opportunities, which is important for the development of IE as



a field focused on international opportunities and opportunity-related activities. To facilitate that development we discuss features of entrepreneurial opportunities and value-creating activity in IE.

The contribution of the study is threefold. Firstly, we ground our conceptualizations of international opportunities on an analysis of the opportunity concept in entrepreneurship research. We believe it is a necessary basis for developing a theory-driven conceptualization of international opportunities for IE research. We, then, provide an overview of approaches to international opportunities in IE. Finally, we develop four conceptualizations of the value-creating activity in relation to international opportunities. We conclude with a discussion of the implications of the conceptualizations for the study of international opportunities in IE.

## Understanding International Opportunities

In an attempt to create a solid basis for research on international opportunities, we examine, firstly, the concept of opportunity in entrepreneurship research. This examination is the basis for our overview of the approaches to international opportunities in international entrepreneurship and on the following conceptualizations of value-creating international opportunities.

## Debates on Entrepreneurial Opportunities

Opportunities are at the heart of entrepreneurship research and it is the examination of how, by whom, and with what effects opportunities to create future goods and services are discovered, evaluated, and exploited (Venkataraman 1997) that delineates the domain of entrepreneurship research (Shane and Venkataraman 2000; Shane 2012; Venkataraman et al. 2012). Opportunities, in the broadest sense, can be defined as possibilities to meet a market need through the creative combination of resources that yield greater value than what exists at present (Schumpeter 1934; Kirzner 1973).

The debate on what constitutes an opportunity is not new as it is rooted in the contradicting viewpoints regarding the origins of opportunities that are presented in the classical works of Schumpeter (1934) and Kirzner (1973, 1979, 1997). According to Kirzner a market can never fully reach a status of equilibrium, and it is the presence of disequilibria in the form of market needs and/or under-utilized resources that leads to the rise of opportunities. When an alert individual discovers such a market gap before others do, he can create value by exploiting it and (temporarily) restore market equilibrium. Schumpeter, in contrast, argues that markets tend to be in a state of equilibrium and that disequilibria are created as a consequence of entrepreneurial acts (Schumpeter 1934). According to Schumpeter economies are characterized by continuous development as a result of technological and social changes causing a stream of information. By acting upon this information entrepreneurs innovate and thus create value by upsetting the market equilibrium. This process, which Schumpeter (1934, p. 83) labels as ‘Creative Destruction’, *‘incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one’*.

Besides disagreement on the nature of opportunities, scholars also have different views on who is able to recognize opportunities; three perspectives seem to dominate the debate (Shane 2000). The first perspective includes the neoclassical equilibrium theories (Kihlstrom and Laffont 1979) that assume that every individual could recognize every opportunity but that (stable) characteristics of individuals determine who becomes an entrepreneur to a greater extent than information about opportunities. The second perspective, which was developed from psychological theories, indicates that entrepreneurship is solely dependent on personal characteristics such as personality (McClelland 1965; Rauch and Frese 2007). This view devotes greater attention to the decision to exploit opportunities than to the actual recognition of specific opportunities. Yet, the psychological perspective does offer an explanation for the discovery of opportunities (Venkataraman 1997): the recognition of opportunities, according to this view, is dependent on relative differences between individuals in terms of their willingness and ability to search for and identify opportunities (Shane and Venkataraman 2000). The third, an Austrian perspective is based on the assumptions that not all individuals can recognize

opportunities, that information about opportunity rather than stable personal characteristics determine who becomes an entrepreneur, and that this process is dependent on factors other than willingness and the ability of individuals (Hayek 1945). As a whole, the debate on entrepreneurial opportunities originated either from economic equilibrium or disequilibrium and is recognized by certain types of individuals or the information about the opportunity to determine an entrepreneur has made us acknowledge the existence of different types of opportunities.

## Different Types of Opportunities

There are some definitions of entrepreneurial opportunities that have been relied on in IE research. Eckhardt and Shane (2003, p. 336) define entrepreneurial opportunities as '*situations in which new goods, services, raw materials, markets and organizing methods can be introduced through the formation of new means, ends, or means-ends relationships*'. Hence, different types of opportunities exist because opportunities occur as a result of changes in different parts of the value chain. Some opportunities stem from creation of new products or services, some from discovery of new geographical markets, some from new raw materials, new methods of production, or new ways of organizing. Sarasvathy et al. (2003), in turn, see an entrepreneurial opportunity as consisting primarily of a set of ideas, beliefs and actions providing conditions favourable to new value creation. The definitions being to such an extent different and quite abstract, the conceptual vagueness and the resulting measurement difficulties might be the reason for the scarcity of empirical research on the origins and nature of international opportunities. Here we differentiate firstly between opportunities according to whether they are centred on innovation or arbitrage (Andersson et al. 2005; Autio 2005; Anokhin et al. 2011) creating primarily Schumpeterian or Kirznerian opportunities.

Some approaches emphasize innovation opportunities opened up by the discovery of new means-ends relationships and others arbitrage types of opportunities created by market inefficiencies (see Eckhardt and Shane 2003; Zander 2007; Anokhin et al. 2011). The first type of opportunity focuses on value creation with an idea of a new venture that through

innovative bundling of resources brings new economic value (Davidsson 2003; Eckhardt and Shane 2003). These can be seen as equilibrium-based venture opportunities that through creative destruction move markets towards disequilibrium when entrepreneurs invent new solutions (Schumpeter 1934). Arbitrage opportunities, in turn, arise out of failure of the market mechanism to acknowledge changes in supply and demand. Consistent with Kirznerian view on entrepreneurship, they are open to alert individuals who create value by perceiving existing market inefficiencies (Kirzner 1997; Eckhardt and Shane 2003; Kirzner 2009; Anokhin et al. 2011). Arbitrage opportunities are disequilibrium-based profit opportunities, which can be seen to move markets towards equilibrium (Autio 2005; Anokhin et al. 2011).

While authors differ in opinion on what actually constitutes an opportunity and who is able to recognize them, there seems to be agreement in the literature that opportunities do not appear in a prepackaged form but begin as rather shapeless ideas about a latent market need or about underutilized resources that needs to be developed over time (Kirzner 1997; Venkataraman 1997; Zahra et al. 2000; Ardichvili et al. 2003; Wakkee and van der Sijde 2010; Davidsson 2015). Entrepreneurs and entrepreneurial ventures play a critical role in the realization of the value potential of opportunities. Without their actions opportunities cannot come into existence. In fact, the presence of an opportunity can only really be established with hindsight as it is only then possible to determine whether value was indeed created as a result of the introduced combination (Klein 2008; Venkataraman et al. 2012).

## The Nature of Opportunity Emergence

The entrepreneurial opportunity-centred activities (see Short et al. 2010) might be seen to involve a rational process of organizing information in order to construct a strategic business concept (e.g. Ireland et al. 2003), gathering and interpretation of information in order to find market or technology gaps (e.g. Cohen and Winn 2007), and as one of the activities through which a new international venture is organized (e.g. Davidsson et al. 2006). Alvarez and Barney (2007, 2010) saw most of the entrepreneurship research assume opportunities to exist as objective

phenomena waiting to be discovered and exploited. An entrepreneur is to use whatever data collection techniques exist and whatever strategies are required to recognize and exploit the opportunity before others (Shane 2012). Alternatively, opportunities are not found but constructed and transformed along the way and manifested in the entrepreneurial activity. Instead of searching and analysing how entrepreneurs act, it should be observed how customers and markets respond to their actions (Venkataraman et al. 2012). Various authors have tried to reconcile this divide. Indeed, many entrepreneurship scholars have acknowledged that in practice both objective and subjective opportunities may be observable (Short et al. 2010). Renko et al. (2012) go one step further and argue that both objective and subjective characteristics can be present within the same opportunity. In their model they do so by emphasizing the processual nature of opportunity recognition, as well as the importance of market conditions in addition to the entrepreneur's search mode.

Ardichvili et al. (2003) describe three different ways through which ideas can be shaped into opportunities, much in a similar vein as was done by Sarasvathy et al. (2003). First opportunity *perception* can be described as the process by which opportunities are observed in the local environment. This is similar to allocative opportunities, which Sarasvathy et al. (2003) define as any possibilities of putting resources to better use. In this situation both supply and demand exist but an entrepreneur needs to recognize the opportunity to put them together in a new venture. Thus, known resources are matched with identified needs to form businesses that can create and deliver value (Ardichvili et al. 2003). An example of an entrepreneur perceiving an opportunity would be the case of the German entrepreneur who realized that unused and depreciated army barracks left behind by the US army would create value if turned into a university campus.

The second way is the *discovery* of opportunities. According to Ardichvili et al. (2003) opportunities are discovered when an individual notices a potential for improving the fit between market needs and available resources. In opportunity discovery either supply (solution) or demand (problem) needs to be discovered. Examples of such opportunity discovery include the exporting of existing goods to countries where these are not yet available and the application of an existing product in a new domain (e.g. the introduction of Viagra). Thus, discovery is needed in situations where either supply or demand does not exist and economic

invention is needed before business can be created (Sarasvathy et al. 2003). The ideas of both perception and discovery are more easily connected to Kirzner's perspective of opportunities as they build on the notion of existing market gaps and the presence of a window of opportunity.

The third way by which opportunities can be recognized is labelled as *creation* (Ardichvili et al. 2003). Opportunity creation involves redirecting or recombining resources in order to create and deliver value superior to that currently available. Creation may go well beyond adjustment of current matches of resources and needs and may even lead to dramatic restructuring of an existing business or 'radical innovation' (p. 111). In Sarasvathy et al.'s (2003) typology, creative view is connected with true uncertainty where neither supply nor demand exists and the future is unknowable. Then we need to understand the process through which different actors interact to operationalize their vague and unformed aspirations into concrete products or services. As such opportunity creation is most closely connected to Schumpeter's ideas about what opportunities really are. As shown by Shane (2000) technological innovation is often the starting point of opportunity creation. Yet, as with perception and discovery the opportunity is not created in a final form. In Shane's (2000) example one technology gave rise to at least eight different kinds of business opportunities of which four were followed through.

Since the present study focuses on the type and nature of entrepreneurial opportunities that are at the heart of global start-ups or other international new ventures a key question that needs to be addressed is what makes an opportunity an international or even a global opportunity. We rely here on Ellis (2011, p. 101) who defined an opportunity as international when it involves '*the chance to conduct exchange with new partners in new foreign market*' which actually leads to '*the formation of a new international exchange relationship*'. Following on from the view that entrepreneurship entails the introduction of novelty value he furthermore asserts that it is not important what type of exchange partner is involved but whether the '*exchange-venture itself is unprecedented*'. In the following overview of previous research on international opportunities we use the above analysis of the opportunity concept in entrepreneurship research as a sensitizing framework to delineate approaches to international opportunities in IE research.

## Approaches to Value-Creating Opportunities in International Entrepreneurship Research

Below we provide an overview of IE research on the internationality of opportunities that we consider to differ in terms of their primary views of value-creating opportunities and the related activities.

### Value-Creating Opportunities in INV Establishment

To a large extent, IE is seen to be about the formation and development of organizations that are international from inception on the basis of an *'ability to discover and take advantage of business opportunities in multiple countries'* (Oviatt and McDougall 1994, p. 46). Crossing the border, i.e. acting internationally, is part of the value-creating activity of the ventures from their inception.

Early on, McDougall et al. (1994) suggested the need to combine Kirznerian entrepreneurship theory with the resource-based view to understand International New Venture (INV) formation on the basis of international opportunity recognition. Autio et al. (2000) saw pursuit of international opportunities to be the core of entrepreneurial activity and aimed to define the resources and capabilities critical to realizing identified opportunities as internationally growing ventures. Later Sapienza et al. (2006) illustrate the potential risks of early internationalization in terms of long-term success. Alertness to opportunities and identification of value-creating opportunities across national borders are core INV capabilities (Kuemmerle 2002; Evangelista 2005; Isenberg 2008; Karra et al. 2008; Muzychenko 2008). The perception of the availability of opportunities is a determinant of the type of the established firm but success is primarily a question of value creation to customers (Sequeira et al. 2009).

Acs et al. (2001, p. 239) see internationally operating firms as *'vehicles for internationalizing Schumpeterian creative destruction'* through the use of resources and capabilities to capture innovation-based opportunities. The capabilities and routines for innovating, as such, seem connected with INV success (Knight and Cavusgil 2004; Andersson and Evers 2015) but also the characteristics of the markets influence the strategic activities in

value capture through INVs (Park and Bae 2004). Critical decisions are made with respect to the number of value chain activities co-ordinated across countries, for example (Oviatt and McDougall 1994; Park and Bae 2004), and the novel combinations of resources across borders are integral to a venture's capability to create value (Di Gregorio et al. 2008). Di Gregorio et al. (2008) differentiate international venture opportunities on the basis of whether they focus on value creation by combining markets across borders or resources across borders. Value-creating venturing may also require both the discovery of market arbitrage and innovative new resource combination (Matthews and Zander 2007; Di Gregorio et al. 2008; Zahra et al. 2011). Overall, the question is about international opportunities as possibilities to combine dispersed knowledge or latent resources into value creating INVs.

## **Opportunities for Value Capture Through Internationalization**

Another approach to international opportunities in IE research focuses on capture of value through international market entry. This views opportunities to exist in the foreign markets and firms to be advantageous and deficient to varying degrees, in the development of those opportunities and related value capture. The management should have resources, time and competence to analyse and exploit international opportunities (Karagozoglu and Lindell 1998; Preece et al. 1998; Shaw and Darroch 2004), which are the starting point for the attempts of value capture through internationalization (e.g. Oviatt and McDougall 2005; Kontinen and Ojala 2011). Dana et al. (2009) define entrepreneurs on the basis of their being reactive or opportunity seeking and see the triggers of internationalization as differing on that basis. International entrepreneurship is not primarily a question of the establishment or emergence of the venture but of value creation and value exchange activities to see and exploit opportunities in foreign markets (Chandra et al. 2012; Dimitratos et al. 2012). Indeed similar arguments are posited by Andersson and Evers (2015) who argue that dynamic capabilities like managerial cognition, and social and human capital enable managers to recognize international opportunities and create value from these.



Common to these studies is that they emphasize multi-disciplinary frameworks in explaining internationalization. Crick and Jones (2000) note the importance of research at the entrepreneurship, marketing, and internationalization interfaces. Crick et al. (2001) state the need for more holistic approaches to entrepreneurial internationalization and add ethnicity as a determinant of structures and exploitation of opportunities. Ibeh (2003) combines ideas from entrepreneurship, exporting, and contingency literatures to examine the export activity of small firms. Crick and Spence (2005) again emphasize holistic explanations of entrepreneurial internationalization and add serendipity as a possible determinant of the activities (see also Spence and Crick 2006). Proactiveness is the element of entrepreneurial orientation that is often connected to perception of opportunities for value creation and appropriation in foreign markets (e.g. Pla-Barber and Escribá-Esteve 2006; Acedo and Jones 2007; Jantunen et al. 2008; Kocak and Abimbola 2009; Dimitratos et al. 2010; Zhou et al. 2010).

Overall, these studies emphasize discovered arbitrage opportunities in foreign markets. Regarding international opportunity the question is about being able to recognize a need for the company's products or services in foreign markets. The studies are primarily about the proactive and risk-seeking mindsets, orientations, and strategies of firms that exchange goods and services across borders. The studies highlight the potential of the discovered arbitrage to provide growth opportunities or new international markets, in general, for a firm. International entry is seen as an entrepreneurial act to create value by exploiting foreign market opportunities.

### **Social Construction of Value in Entrepreneurial and Internationalization Processes**

A group of studies sees international opportunities as the result of sense making and enactment of a variety of actors embedded in different contexts and influenced by dynamic social situations. Accordingly, every opportunity can be seen to be enacted by individuals in their specific social, cultural, and institutional setting (Baker et al. 2005), which makes opportunities evolve in a cognitive process (Zahra et al. 2005).

Value-creating opportunity is not to be recognized as such and value is not to be appropriated but value creation takes place by experimenting and learning (McGaughey 2007; Mainela and Puhakka 2009). Importantly, the newness value is relative because what is original in one context might be well established in another (Baker et al. 2005). Therefore, value-creating opportunity emerges only over its generation and use in a particular context (Zahra et al. 2005).

International opportunities can also be seen primarily as action- and interaction-based makings in the internationalization of firms (Hohenthal et al. 2003; Johanson and Vahlne 2006, 2009). They are a kind of a by-product from the interactive internationalization activities (Fletcher 2004; Schweizer et al. 2010). Chandra and Coviello (2010) emphasize co-designing, co-innovating, co-distributing and even co-consuming and Kauppinen and Juho (2012) co-learning to co-create value in the internationalization activities. Value-creating international opportunities are a question of cross-border interactions and responding to the unexpected in the relationship context.

To conclude, we see the prior research as rich in insights that could enhance our study of international opportunities and opportunity-related activities which, however, lack an in-depth and theory-driven conceptualization of international opportunities. We outline a conceptualization grounding it on the presented analysis of the opportunity concept in entrepreneurship research and the above overview of IE research on international opportunities.

## Conceptualizations of International Opportunities

We utilize the insights from our examination of the concept of opportunity and international opportunities in extant research to develop four conceptualizations of international opportunities. The conceptualizations are differentiated on the dimensions of type and nature of opportunity. On one hand, we differentiate international venture opportunities, that focus on the emergence of a new venture, and international market

opportunities, that focus on the needs for a firm's offerings in new country markets. In the case of venture opportunities, internationalization is based on innovative cross-border resource combinations, and this combination is the basis for international new venture establishment (Autio 2005). This is related to the Schumpeterian view on opportunities that focuses on creative destruction as a basis for value creation (Schumpeter 1934; see also Autio 2005; Zahra 2005). Venture opportunity means creation and delivery of value to stakeholders in prospective ventures (Ardichvili et al. 2003). In the case of market opportunity, the home base is primarily for value-creation activities but opportunities arise in the form of unsatisfied needs and demand in foreign markets (Autio 2005). International entrepreneurs and firms are alert to these market opportunities because of their skills to acquire, interpret, and use dispersed international market information consistent with Kirznerian opportunities (Kirzner 1973; see also Autio 2005; Zahra 2005).

On the other hand, international opportunities differ on the basis of their inherent nature. They can be seen to exist independently of an actor's perception of them and to be of an objective, observable nature or to be created as a result of an actor's actions and to be of a subjective nature (Alvarez and Barney 2007; cf. found vs. made opportunities in Ardichvili et al. 2003). Objective opportunities are concrete things to be recognized whereas subjective opportunities are processes to be actualized (cf. Sarasvathy et al. 2003; Shane 2012). Both objective and subjective opportunities are a result of competitive imperfections but the imperfections are seen as being of exogenous origin in the first case and the result of an actor's action and enactment in the latter case. Objective opportunities are searched for, recognized and exploited by alert entrepreneurs who can collect enough information to anticipate the possible outcomes of their actions and estimate and carry the risks related to the situation. Subjective opportunities are the result of action taken by entrepreneurs to enact opportunities as social constructions, in a genuinely uncertain sense-making situation where information to define possible outcomes does not exist (Venkataraman et al. 2012). Through these two dimensions we can deduce possible conceptualizations of international opportunities (see Fig. 3.1).



**Fig. 3.1** Different conceptualizations of value-creating international opportunities

In the case of objective venture opportunities, value creation is based on the need for innovative cross-border resource combinations (Shane 2012). This combination is the basis for international new venture establishment (Autio 2005). Value-creating opportunities are opened by the creation of new means, ends, or means-ends relationships by combining goods, services, raw material, markets, and organizing methods across borders such a way that it brings newness value and novelty to the international marketplace (Shane and Venkataraman 2000; Eckhardt and Shane 2003). These opportunities take the shape of a new venture, but not necessarily a new firm; they are extensions or changes to the existing businesses but may operate besides existing businesses as new market entrants (cf. Anokhin et al. 2011). The purpose of IE from this perspective is to create value by revitalizing and renewing the international economy by breaking old routines and patterns by introducing international new ventures.

In the case of objective market opportunities, the home base is primarily for value-creation activities but opportunities arise in the form

of unsatisfied needs and demand in international markets (Autio 2005). Arbitrage is a situation in which *'the ends that the decision maker is trying to achieve and the means that the decision maker will employ are given'* (Eckhardt and Shane 2003). Often arbitrage takes the shape of a new market. Central to the opportunity actualization is the alertness of international entrepreneurs to the information cues of possible market inefficiencies. Still, value creation and capture is not simple, because perceiving an opportunity calls for a creative insight (cf. Kirzner 1997) to combine the wealth of information at hand in a meaningful way. Were it only a matter of organizing information, everyone would be able to identify arbitrage opportunities. However, it is entrepreneurs who are specifically good at spotting opportunities based on dispersed information found in the environment. The role of entrepreneurs is not to break the existing patterns and create novelty but to work out how to combine the snippets of information to come up with a viable and profitable solution.

The subjective-venture conceptualization sees international opportunities as social constructions between people, organizations, artifacts and the cross-border environment, and defines international opportunity to be a creative process of generating new alternative venture ideas in the global business landscape (see Hills et al. 1999). International entrepreneurs are not able to acknowledge and process all information available in a situation (Fletcher 2004). Instead they use the parts they deem salient and ignore the rest. Through social processing they create their own versions of reality (Klein 2008; Venkataraman et al. 2012) based on the knowledge they possess and the social situation that prevails in that particular problem-solving situation (Baker and Nelson 2005). Opportunity creation is more about creating meaning in an ambiguous situation than reaching a decision grounded on information within a confined decision space (Sarasvathy 2001). Thus, international entrepreneurs create the opportunity rather than select it. This involves efforts in thinking of the business from a different viewpoint, one that emerges through social dialogue with others and may result in totally new business models and value creation logics.

The subjective-market conceptualization conceives that in order for an opportunity to carry value and potential, a certain level of mutual understanding must be created among the partners in the opportunity.

Thus, a subjective market opportunity is a collaborative activity between entrepreneurs, professionals, customers, and other involved parties. The created opportunity must be mutually interesting and attractive in order to be valuable (Downing 2005; Fletcher 2006; Holt 2008). The entrepreneur, or an entrepreneurial firm, in this sense acts as an integrator of emerging objects and information by collaborating, persuading, and creating a shared future vision (Johanson and Vahlne 2009; Wood and McKinley 2010). The core capability in relation to value-creating opportunities is the one of engaging others. The primary activity is boundary work (cf. Lindgren and Packendorff 2009) involving breaking existing patterns and deviating from the taken-for-granted reality. This involves influence over others and including others into the process (Schweizer et al. 2010). The opportunity process is unplanned and constituted by interactions (e.g. Van de Ven and Engleman 2004). Opportunities are generated by the actions, reactions, and enactments of entrepreneurs exploring ways to produce new economic value.

## Discussion and Implications

The study concludes by discussing the implications of the conceptualizations of international opportunities as different modes of value creation. We would like to suggest that the value creation logics in international opportunities differ by internal versus external focus. The primary value-creating activity is directed either internally to organize diverse venturing activities or externally in anticipation of unmet customer needs. The logics also differ by existence as a thing versus creation as a process circumscribing the activity of opportunity actualization. The value-creating opportunities come up either in observable and objective models or as access to participation in a dialogue. These views give rise to both research and managerial implications.

‘The new resource combination for international venture establishment’ type of a conceptualization sets the new venture as the primary vehicle for collecting and transmitting value to stakeholders. In research, the international opportunity is concretized in a venture that brings together the globally spread value-generating resources, skills and capabilities within a new business entity. For example, new technologies

can be found in Europe, manufacturing know-how in Asia, marketing expertise in the USA, and primary markets in China (cf. Oviatt and McDougall 1994). The international opportunity focused research might be advanced through wider problematization of the types of resources and capabilities and, in particular, the ways they are combined in the organizing of the venture's value-creating activities.

This conceptualization might acknowledge that the new venture is about internally organizing for the benefit of customers, but often it is also about international business scaling in order to serve the expectations of the venture's other stakeholders. In such cases the entrepreneurial team has to meet the interests of many stakeholders. For example, the right to exploit an innovative technology may be a starting point for international business. But to build a viable business, the entrepreneurial team may also need to organize adequate funding, industrial manufacturing, local understanding of customers, as well as essential services (e.g. legal, logistics). Furthermore, in order for an international opportunity to be a profitable investment, the venture often must be able to scale up the business to such a level that it corresponds to the expectations of return.

'The recognized supply-demand inefficiency in foreign markets' type of conceptualization sets the market external to the entrepreneurial venture at the forefront of the value-creating activity. The value capture is dependent on the entrepreneur's and the firm's ability to grasp the opportunity that may emerge unexpectedly and require a quick response (Hohenthal et al. 2003). In research, the attention could be centred on the strategies of coping with and initiating change in own activity for the purposes of value capture in foreign markets. The focus is not on the organizing of the activities of the venture as a value-creating opportunity, as it was above, but on the skills and processes that allow for flexible acting in response to opportunity emergence regardless of the often unknown contexts and lack of resources. The international opportunity focused research could be advanced through further study of the processes of awareness and choice under the uncertainties of foreign markets.

This conceptualization suggests that managers need to be active in the markets and open to possibilities emerging without well-made plan or careful preparation. The key to value capture in international markets might be the practice that keeps people sensing, interpreting and acting

upon variety of information and knowledge cues. Such information is not easily obtainable as it is not in a logical and finalized form. Instead it is typically scattered here and there in people's experiences and views and it is also culturally ambiguous. Creating value does not build on the company and its products and services as such, but on the practices to dig out and interpret customer needs (Rasmussen and Tanev 2015).

'The venture idea to be constructed as an international new venture' type of conceptualization draws attention to the socially embedded but internally focused creative process by the entrepreneur or the entrepreneurial team. Here, an international opportunity is not an instrumental starting point for business, as it was in the above types, but it is a flexible construct that takes its form over an embedding into the business context in question. Value is seen as culturally and socially determined and multi-cultural knowledge is a key determinant of the organizing of the value-creating activities of the emerging venture (Muzychenko 2008). Therefore, the value creating opportunities are not to be found, but they are socially constructed in a process of meaning building. The subject of examination of the international opportunity focused research could be the process in which a venture idea is signified as a basis for a value-creating venture in a particular business setting.

According to this conceptualization managers need to expose themselves to multi-cultural learning and experimenting processes, which are the key to turning their ideas into value-creating venture opportunities in different contexts. Central is the belief that, if you do not start the journey owing to the fact that there is no certainty in the future, then opportunity cannot be created. The idea is repeatedly outlined and tested in context and the mistakes are the basis for learning and taken as feedback that allow for modifications of the opportunity. The focus is on the abilities to create dialogue across borders, get feedback, learn quickly, and be flexible to change direction when the opportunity initially envisaged turns out to be unlikely to create value in the particular social context. In many ways, this resembles the process that Rasmussen and Tanev (2015) have labelled lean global start-up, where firms seamlessly synergize their global and lean product or opportunity development activities.

'The international market to be interactively enacted' type of conceptualization stresses the interactive spheres external to the venture and the entrepreneurial team necessary for the value-creating opportunity



processes. Value is conceived by the interacting parties in a process of joint activities. In the international entrepreneurial setting the question is about the practices that allow the parties with different backgrounds to create a common space for interaction, where it is possible to find shared interests and mutually satisfying solutions. In research, at the core is the interaction and its production of common interests (Johanson and Vahlne 2009). The market with identifiable customers and co-operation partners is created by the processes of exchange instead of being ready to be approached and served. The conceptualization calls for examination of value-creating international opportunities as evolving in-between entrepreneurs and their firms and the counterparts involved in the joint enactment that may concern single country markets or whole industries.

Here managers might be asked to open their ideas to others, to allow their views to intertwine with the views of their counterparts and to share from their experiences, to achieve both novelty and wider influence in the markets. The entrepreneurial team has to get into situations where it can interact with a variety of other actors, often people they do not know and with whom they might initially have very little in common. It is precisely this crossing of diversity and appreciative interaction that has the potential for the emergence of mutually value-creating opportunities. A company can have products and services with newness value, well-functioning production, patient financing, and a technologically and operationally capable management team, but the active and open-minded membership in international networks creates the most value potential.

Finally, it is to be noted that international opportunities are dynamic and they take different forms over time. Simultaneously we need to acknowledge that the value-creating activity related to different kinds of international opportunities needs to change over time.

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# 4

## Growth and Value Creation Through Diversified Exporting

Andreja Jaklič, Anže Burger, Aljaž Kunčič,  
and Desislava Dikova

### Introduction

Creation of value and international growth is a permanent challenge for enterprises; not only for large and established ones, but also for small and medium-sized enterprises (SMEs) or newly established start-ups. Market liberalization at home and the rapidly changing global business environment have forced small and medium emerging-market firms to radically change their growth strategies by focusing on internationalization. Export remains the initial and most widely used entry mode to foreign

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A. Jaklič (✉) • A. Burger

Faculty of Social Sciences, University of Ljubljana, Ljubljana, Slovenia

A. Kunčič

Department of Economics, Adnan Kassar School of Business, Lebanese  
American University, Brezovica, Slovenia

D. Dikova

Department of Global Business and Trade, Vienna University of Economics  
and Business (WU), Vienna, Austria

markets, often supported by national policies. As a consequence, the number of first-time exporters originating from European emerging markets has increased.

In this chapter we study the value creation of new exporters from a small European emerging market. Small firms from small emerging economies offer a great opportunity for examining new approaches to internationalization and testing existing models of internationalization. The liability of smallness is undoubtedly the first important incentive for internationalization, yet transition, rapid economic and social development, liberalization, integration, and EU accession set a new context for value creation. Not only in terms of trade volume and share of enterprises operating abroad, but foremost in ways and patterns of internationalization developed by enterprises in this new context. Firms (of every size) internationalize more rapidly and in a more complex way. Firms from Central and Eastern European countries (CEEC)/new EU member states that enter internationalization much later than firms originating from other small European states highlight many of these changes. The economic growth of Slovenia, which is closely examined in this study, has always depended on exports, representing a majority share of GDP.<sup>1</sup> Yet the composition of export stock has changed due to a variety of reasons. For instance, large and established enterprises had to reorient their markets after transition and independence, but have lost their dominant share of total exports in the last decade (in particular after global economic crises). New exporters, mainly first time internationalizing SMEs developed several new patterns of international growth. The success of first-time internationalization, however, is far from guaranteed: failure rates in this process have remained high, which calls for a critical examination of internationalization strategies. Many empirical studies (e.g. Eaton et al. 2008, Cadot et al.<sup>2</sup> 2010) find that many new exporters do not succeed in maintaining or improving the value creation from their export flows, and some have to even close down completely.

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<sup>1</sup>The average value of Slovenian exports of goods and services as a percentage of GDP from 1990 to 2015 was over 60 % with a *minimum* of 47 % in 1999 and a *maximum* of 90.76 % in 1990.

<sup>2</sup>Cadot et al. (2010) show that less than 20 % of newly formed trade relationships survive more than a year and examine the specific characteristics needed for survival.

The chapter aims to present the behaviour of new exporters and the consequences of early diversification in international growth. It sums up the research on exports and newly born exporters in the manufacturing sector of Slovenia, a highly internationalized and export-oriented country that during transition and the EU integration process experienced rapid changes in its internal and external business environment. The analysis covers the period 1994–2010. We analyse how diverse their strategies and patterns of international growth are and which strategies are more beneficial for firm performance. The analysis shows how many new exporters succeed in creating value and growing continuously, and how many fail to survive and stop exporting. Next, we examine their performance and the determinants of good export performance. We explore the differences between the successfully performing new exporters and unsuccessful new exporters, and compare their export strategies. We monitor the continuity of exports and focus on the degree of diversification. We look at both geographical spread and diversification in terms of product portfolio and compare firms' number of export destinations and exported product varieties over time.

## Theoretical and Empirical Evidence

While the question *why* to internationalize became a rhetorical one for most enterprises, the questions *where*, *when* and *how* to grow internationally remain as challenging as they used to be in the past in spite of a greater understanding of international markets.

Traditional internationalization models (Johanson and Vahlne 1977) emphasized a gradual and sequential approach according to (geographical, historical, and cultural) proximity. Entering a foreign market in a sequential way (from geographically closer to more distant markets) and gradually increasing the number of products offered, in addition to analysing costs and risks involved in market/product diversification and gathering knowledge was recognized as the dominant formula for value creation. The majority of firms focused on the home market and variability across firms regarding the extent of export involvement is significant (Eaton et al. 2004). Furthermore, according to the research

on French manufacturing firms by Eaton et al. (2004), the number of firms selling to multiple export markets diminishes quickly and the variation of export volume across export destinations can primarily be explained by the number of exporters present there (extensive margin), rather than the amount each existing exporter sells (intensive margin). Bernard et al. (2003, 2004, 2010) used North American firm-level data and demonstrate that the majority of firms export only one product to one market, while there are less than 12 % of those exporting five or more products to five or more markets. Eaton et al. (2008) show that new exporters are typically small and start with only one export market. Further they demonstrate (Eaton et al. 2010) that over half the variation across firms in export market entry can be attributed to productivity differences. They also reveal that the number of exporters increases systematically with export market size, that sales distributions are similar across markets of very different size and extent of participation, and that average domestic revenues rise systematically with firms selling to less popular markets and to a larger number of markets. A model of sequential exporting is often supported by research. Albornoz et al. (2010) divide successful firms from others and note that they grow on both the intensive and extensive margins – firms typically start exporting small volumes to a single country, while many firms cease exporting at some point. Another examination of the dynamics of product varieties shows that varieties are added and removed from the export product portfolio, but there are firm and product specific characteristics that have an effect on the probability of survival (Görg et al. 2008). Analysing firm-level data in China, Manova and Zhang (2009) find that around 40–50 % of trade-volume expansion can be attributed to incumbent traders deepening their existing relationships; the rest depends on new expansions along both intensive and extensive margins and possibly by new firms. Also for Slovenian data, Burger et al. (2008) demonstrate temporary learning by exporting and Damijan et al. (2011) show that most new exporters start with one product and one market, and remain focused exporters for about six years after initial exporting.

A more recent strand of literature explores spatial patterns of exporting and incorporates network externalities that arise from a firm's existing

web of export contacts and/or from other firms exporting to the same (or similar) destination. A revisited Uppsala model (Johanson and Vahlne 2009) also sees the business environment as a web of relationships, where partners need to develop trust and knowledge. A number of studies emphasize the importance of relationships in the internationalization process (Bonaccorsi 1992; Erramilli and Rao 1990; Majkgård and Sharma 1998) as these influence contact and entry decisions. However, imperfectly informed firms discover the level of their profitability only after entering an export market (Albornoz et al. 2010). Assuming that profitability is correlated over time and across destinations, the model of Albornoz et al. (2010) predicts that firms will sequentially enter markets similar to the countries they are already present in. Firms can acquire new contacts and enter an export market both at random and through their network of existing contacts (Chaney 2011). The network externality creates an increased probability of a firm acquiring a contact in a new market and aggregating trade flows between the potential destination country and any other active export market of the firm. The recent stream of literature on 'global value chains' (Baldwin 2012) also supports these views. The capacity of the value creation largely depends on integration into global value chains.

A stream of literature on 'born globals' that developed over the last two decades did not reject the advantages of the gradual approach and learning by internationalizing. However it reported evidence that patterns and strategies of internationalization were changing. The question whether a firm that starts to export focuses on a single market, diversifies over several markets, or combines both approaches in the process of value creation re-emerged recently. However, current studies analysing the determinants of export performance do not provide a single answer. There are several possible explanations. First, there may be no relationship between diversification (the number of foreign export destinations) and firms performance (Piercy 1981). Second, there are performance benefits for firms following a focused export strategy (Brouthers et al. 2009). Third, there are performance benefits for firms taking a diversified approach to exporting (Pangarkar 2008). Insights into the internationalization behaviour of Slovenian exporting firms can add to the existing body of knowledge.

## Changes and Geographical Distribution of Export Activity

This section presents trends and changes in export activity for the Slovenian economy over the last two decades and links exports strategies to firm performance. Slovenian total merchandise exports experienced exponential growth in the period from 1994 to 2008, going from a just under US\$7000 million to almost US\$30 billion, averaging an 11 % annual nominal growth. There was a drop in merchandise export in 2009 due to the economic crisis, but it bounced back in 2010 (Fig. 4.1).

The share of exporters in the total corporate sector increased from 34 % in 1994 to 45 % in 2010. The structure of Slovenian exports shows manufacturing as the most important export industry with intermediary product representing a majority share of total exports (54.3 % in 2008; see *Statistical Yearbook of Slovenia* 2012, [http://www.stat.si/letopis/2009/23\\_09/23-06-09.htm](http://www.stat.si/letopis/2009/23_09/23-06-09.htm)). The backward participation of Slovenia into global value chains (share of imported intermediary products) was 34 % in 2009, and forward participation (the share of domestically created value added) 18 %, which brings Slovenia (Fig. 4.2) to an average for OECD countries (OECD 2013). High export orientation, rapid export growth, and the relatively high integration of the Slovenian economy into global value chains offer good opportunities to explore changes in export dynamics.

The analysis of Slovenian exports is based on a rich firm-level data set on bilateral trade flows from the Slovenian Customs Administration (CARS), which is linked to a balance sheet and income statement database from the Agency of Republic of Slovenia for Public Records and Related Services (AJPES), all for the period 1994–2010.<sup>3</sup> There are more than 100,000 firms in our database, from which 32.8 % are non-exporters,

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<sup>3</sup>There is a break in the series from Slovenia's accession to the EU in 2004 due to a changed system of recording trade flows. After 1 May 2004, only flows of firms with trade exceeding €100,000 on an annual level were recorded, while before that all trade flows were recorded by CARS. The smaller firms with lower values of total yearly exports are not able to make the cut, although they might still be exporting. This curtails the sample on one side. There is a limited solution to the problem, namely that the AJPES database, in which all firms are included, still records the trade status of a particular firm, namely, if a firm exports at all or does not (regardless of the value). Using the AJPES database to differentiate between firms concerning their export status avoids the break in the series, but it only applies to comparisons of firms' characteristics, which are drawn from the AJPES database. The problem still remains when using information from the CARS database, and caution is needed when interpreting those results.

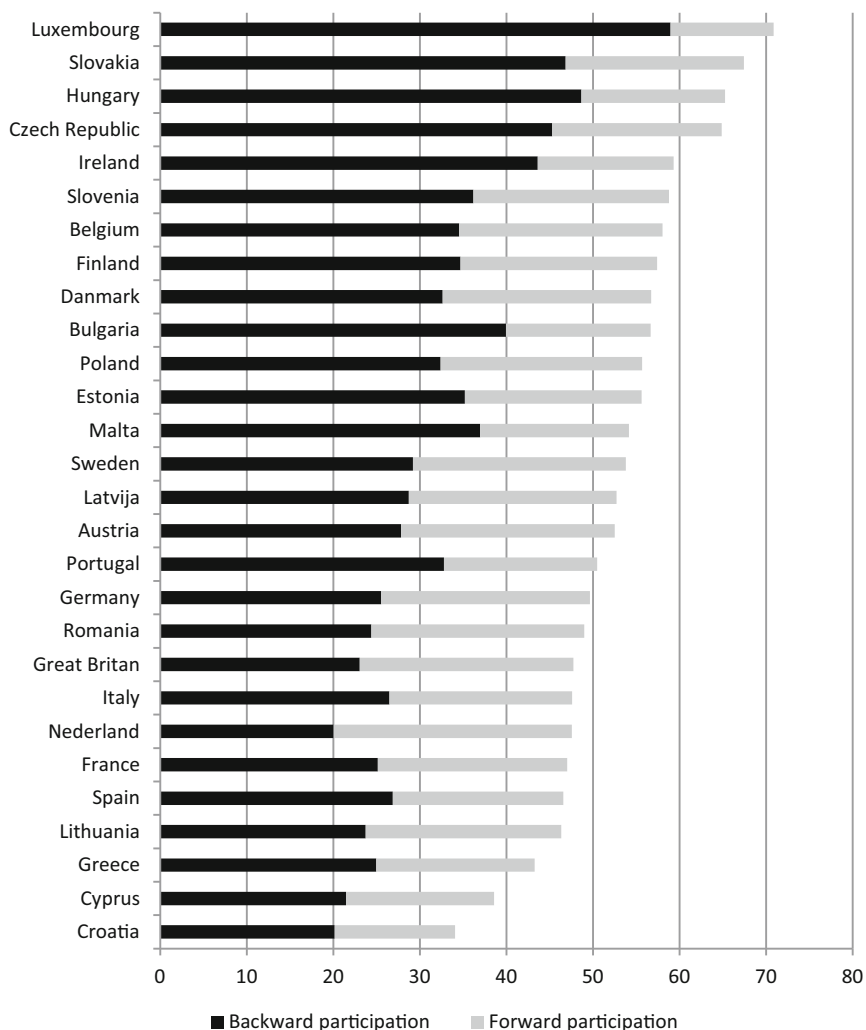


**Fig. 4.1** Total merchandise exports, absolute and relative  
(Source: Based on COMTRADE and World Bank)

50.1 % are switchers (firms that do export successfully or unsuccessfully some of the years in the sample) and 17.1 % are permanent exporters. The world maps below show exports in their totality and the extent to locations across Europe. The used export variable in all figures is divided into ordinal quartiles for easier representation. The first quartile represents lowest export intensity and is the lightest grey colour, and the fourth quartile represents the highest export intensity and is the darkest grey colour.<sup>4</sup> Figure 4.3 shows the *geographical distribution of Slovenian exports across the European continent (export volume)* in two snapshot years, 1995 and 2010. The major trading partners besides Germany were Slovenia's neighboring countries (Croatia, Austria, Italy) and France. In 1995,

<sup>4</sup> Slovenia is categorized in the figures as not having any data since it does not have an export value (i.e. it does not export to itself). Moreover, Montenegro and Kosovo on their own also do not have any data, but are aggregated with exports to Serbia.

The same calculation and graphical illustration was used for all indicators studied below, however the space limitations per chapter do not allow us including all the Figures.

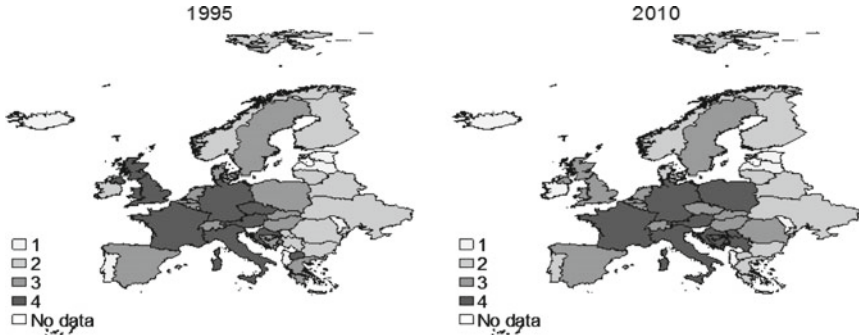


**Fig. 4.2** Integration into global value chains, by countries, 2009

(Source: Based on OECD; <http://www.oecd.org/sti/ind/GVCs%20-%20SLOVENIA.pdf>)

Slovenia was intensely involved in the transition process and still heavily export dependent on former Yugoslavian republics, despite ongoing Balkan wars. In the subsequent 14-year period Slovenian exports shifted slightly from the South-Western Balkans and CEEC region towards





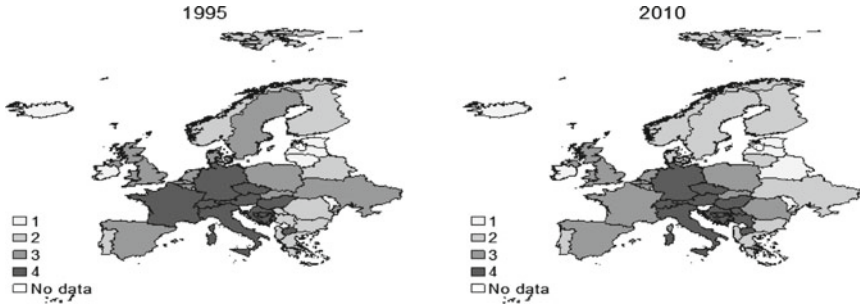
**Fig. 4.3** Geographical distribution of Slovenian export volume in 1995 and 2010 (Source: CARS, calculations by Burger and Kunčič (2013))

Western Europe as a consequence of skill upgrading, improved competitiveness, global and regional value-chain repositioning, and the trade-creating effects of the single European market and its common currency.

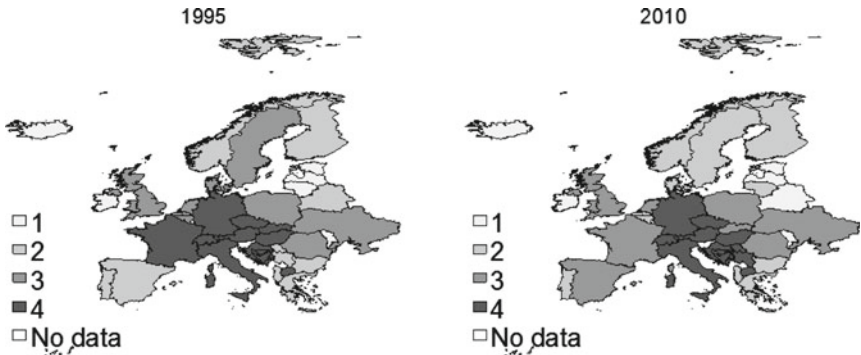
Most popular export destinations *according to the number of Slovenian exporters* (Fig. 4.4) exporting to a particular European country in the mid-1990s were neighbouring countries, Germany and the ex-Yugoslavian countries. In 2010 the number of exporting firms became even more concentrically grouped around countries closest to Slovenia, with France, the UK and Sweden having fewer Slovenian firms in the market, although they are still important in terms of export volume (see Fig. 4.2).

Next, we look at the *export dynamics with new exporters*, observing the *number of exporters starting to export* to a chosen European country in 1995 and 2010 (Fig. 4.5). As before, we notice a reorientation of firms from France and Sweden to geographically closer countries. *Exit frequencies of Slovenian exporters* (studied next) follow a similar pattern as entry frequencies above, both for 1995 and 2010, and are concentrated in the neighbourhood of Slovenia (Fig. 4.6). The largest number of exits recorded in 2010 were from frontier countries along with Germany and the former Yugoslav countries.

*Market entry and exit growth rates* (in relative measures of previously plotted absolute rates) are – contrary to entry and exit frequencies – both higher in the peripheral European countries. *Entry rates into exporting* are the highest in East European markets and are increasing over time. A similar pattern emerges when observing the *exit rates from exporting*



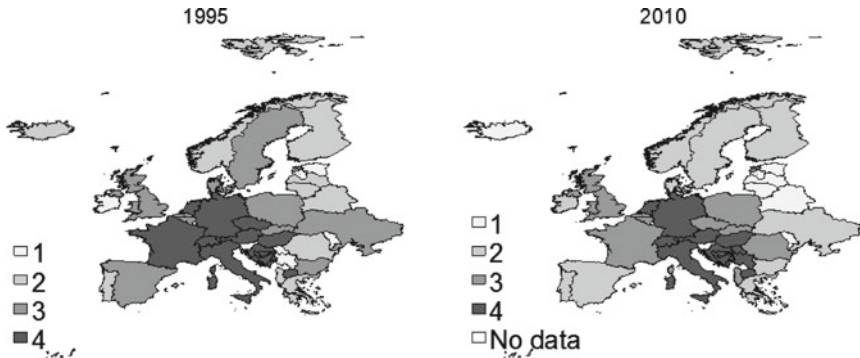
**Fig. 4.4** Geographical distribution of the number of Slovenian exporters in 1995 and 2010 (Source: CARS, calculations by Burger and Kunčič (2013))



**Fig. 4.5** Geographical distribution of the number of first-time exporters in 1995 and 2010 (Source: CARS, calculations by Burger and Kunčič (2013))

where CIS and south European countries (in particular those in the region of the former Yugoslavia, such as Bosnia and Hercegovina, and neighboring countries such as Romania, Bulgaria, and Albania) are the most dynamic markets regarding gross entry and exit rates.

We proceed by exploring the second aspect of the extensive margin of exporting, the *number of exported product varieties*. This indicator measures the number of recorded distinct six-digit product codes exported to a given country. Observing the number of product varieties exported to each European country in 1995 shows that export markets with the highest number of exported varieties were concentrated in the neighborhood of Slovenia, but also to the north and east. By 2010, the countries with the highest numbers of exported product varieties became more



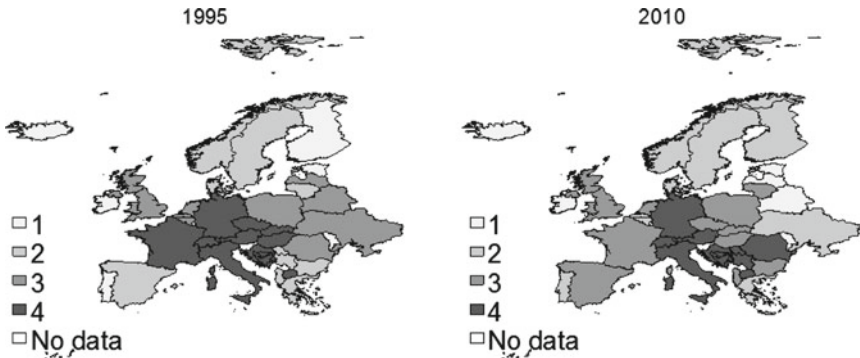
**Fig. 4.6** Geographical distribution of the number of exporters exiting a market in 1995 and 2010 (Source: CARS, calculations by Burger and Kunčič (2013))

concentrated around Slovenia, with a larger emphasis, as in the 1990s, on the West Balkans.

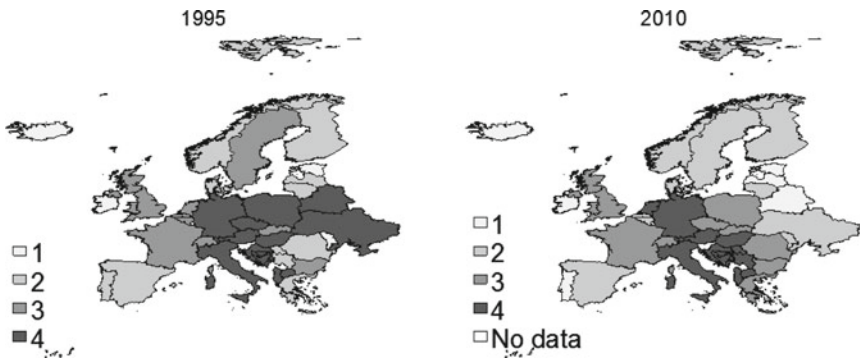
Our further analysis focuses on the *introduction of new product varieties* (Fig. 4.7) and the *exit of product varieties* (Fig. 4.8). The largest number of new product varieties introduced to a market in 1995 was distributed to the same countries that already had the biggest range of Slovenian products. Afterwards the orientation shifted towards CEEC region, and France experienced a drop in new product varieties relative to the other countries. The number of failed export products that ceased to be exported to a specific market is geographically more dispersed across Europe's east than the frequency of introduction of new exported varieties (Fig. 4.3). In 1995, apart from traditional neighbouring countries, Ukraine, Poland, and Belarus were among the export markets with the highest frequency of product exit. By 2010, the pattern became even more concentrated around Slovenia.

*Entry rates of new products introduced to an exporting market* and *exit rates of product varieties* are again larger in more distant countries with narrower existing product ranges. In both aspects of product range dynamics diversification increased; there was an even larger dispersion from 1995 to 2010.

Finally, we test the *average number of exported products per exporter to a given export market* to see where exporters achieve the highest scope of exported products. The pattern that emerges from observing this empirical exercise highlights interesting findings. Whereas the intensive



**Fig. 4.7** Geographical distribution of the number of new exported product varieties of first-time exporters in 1995 and 2010 (Source: CARS, calculations by Burger and Kunčič (2013))



**Fig. 4.8** Geographical distribution of the number of exported product varieties exiting a market in 1995 and 2010 (Source: CARS, calculations by Burger and Kunčič (2013))

and extensive margins of Slovenian exports are the highest in the vicinity of Slovenia, export scope per firm is the largest in more distant European markets, especially to the east. To overcome the higher trade costs to more remote countries, firms need to diversify and have a wider range of exported products in order to break even. In addition, there is a strong self-selection process taking place whereby only the most successful firms manage to export to far-away countries. The same firms also have an

above average product range and can therefore offer more products to their customers abroad.

Besides the indicators discussed above, data (Table 4.4 in the Appendix) show that there is a very large overlap between top markets in terms of firms and products present, firms entering and firms exiting the markets, and products entering and products exiting the market. Export dynamics and diversification increased. Table 4.5 in the Appendix shows the summary statistics of extensive export dynamics for the entire sample, and the average values of both number of firms exiting and entering new markets, and the number of products entering or exiting markets, are very similar. Additionally, the maximum and minimum values are as follows. The highest value of total exports was in 2008 to Germany, the lowest in 1999 to Togo. On the extensive margin, the largest number of exporters and the most varieties were being exported to Croatia in 2007 and 2008, respectively. In terms of export dynamics, the highest exit and entry of firms from and to a particular market was in Croatia in 2009 and 2004, respectively. Looking at the dynamics of exported product varieties, the highest number of new varieties were introduced to Albania in 2009, while the most varieties were pulled out of the Russian market in 1999.

## The Demography and Success of New Exporters

Next we concentrate on the export behaviour of first-time exporters (e.g. new exporters). We look for a distinction between successful and unsuccessful new exporters. Unsuccessful new exporters are defined as firms that have a span of a year or more of exporting, and then cease exporting or close down operations completely. Successful (continuous) new exporters are firms that remain exporters throughout the studied period, after starting to export and surviving to the last available year of the observed period. The classification as described above depends heavily on the exact time of the first exporting year relative to the last available year of our data sample (2010). In fact, around half of the firms that start exporting for the first time cease to export in the following year. In other words, half of the new exporters that start exporting in

2010 for the first time are classified as successful although they stopped exporting in 2011. Since we do not observe the data for 2011, we mistakenly assign the status of successful new exporters to around half of the 2010 cohort. Fortunately, each additional year of available observations of export status delivers more and more reliable categorization. Apart from being less reliable, more recent cohorts are also more numerous, which can represent a severe bias towards less successful firms. In order to alleviate the sample bias we perform weighted quantitative analysis whenever possible throughout the study. The construction of weights for successful new exporters is based on the number of exporting years we are able to observe for each firm, so that the successful new exporter that started to export in 1995 and remained an exporter until 2010 (16 years of exporting) has 16 times more weight than a new exporter that started exporting in 2010 (one year of exporting). No weighing is performed on the sample of unsuccessful new exporters. Compared to unweighted statistics, the weighted methods identify larger differences between successful and unsuccessful new exporters.

Table 4.1 presents first-time exporters: successful and unsuccessful new exporters. Out of all the firms, 8.9 % of firms are successful new exporters, and more than three times that (32.3 %) are unsuccessful new exporters. The left side of the table presents absolute characteristics, while the bottom right side shows characteristics of successful new exporters relative to unsuccessful ones.

The average export value of successful new exporters exceeds the export value of unsuccessful exporters by 6 times. Other most pronounced differences between the two groups can be found in terms of total revenue (3 times more for successful), physical capital (2.6 times more for successful) and equity (almost 3.7 times more for successful). Successful new exporters perform better according to other indicators as well, exceeding the average values of their counterparts by at least 100 %. Interestingly enough, there is almost no difference between the two groups when the debt to assets ratio is considered.

Next, we compare successful new exporters with unsuccessful new exporters in order to find major differences between the two. Where possible, we track performance measures from five periods prior to the start of exporting to five years after (Table 4.2). Characteristics related

**Table 4.1** Comparison of absolute characteristics of successful and unsuccessful new exporters in the period 1994–2010 (pooled)

|   | Absolute                         |          |           |             | Absolute weighted        |           |             |  |
|---|----------------------------------|----------|-----------|-------------|--------------------------|-----------|-------------|--|
|   | Successful new exporters (8.9 %) |          |           |             | Successful new exporters |           |             |  |
|   | N                                | p50      | mean      | Sd          | p50                      | mean      | sd          |  |
| Total revenue                                 | 9,900                            | 59,291.9 | 418,057.8 | 2,858,517.0 | 88,108.0                 | 537,296.1 | 2,974,684.0 |  |
| Employment                                    | 9,900                            | 5.0      | 26.7      | 115.4       | 7.0                      | 35.0      | 128.0       |  |
| Physical capital<br>(fixed assets)            | 9,900                            | 16,494.2 | 183,236.8 | 1,410,875.0 | 26,977.0                 | 230,126.9 | 1,529,962.0 |  |
| Value added per<br>employee<br>(productivity) | 9,900                            | 3,054.6  | 4,201.0   | 9,973.7     | 3,276.9                  | 4,532.6   | 10,658.0    |  |
| Exports                                       | 9,900                            | 1,627.5  | 246,557.8 | 2,481,438.0 | 7,707.5                  | 325,682.4 | 2,598,982.0 |  |
| Exports as % of<br>total sales                | 9,449                            | 0.0      | 0.2       | 0.3         | 0.1                      | 0.3       | 0.3         |  |
| Equity  | 9,900                            | 19,234.8 | 369,692.7 | 5,190,792.0 | 32,073.0                 | 415,558.7 | 4,961,158.0 |  |
| Debt to assets<br>share                       | 9,889                            | 0.6      | 0.8       | 15.6        | 0.6                      | 0.7       | 14.6        |  |
|   |                                  |          |           |             |                          |           |             | Relative to unsuccessful new exporters |
|   |                                  |          |           |             |                          |           |             | Successful new exporters               |
| Total revenue                                 | 35,914                           | 25,342.3 | 137,082.4 | 980,062.0   | 234.0 %                  | 305.0 %   | 291.7 %     |  |
| Employment                                    | 35,914                           | 2.9      | 13.0      | 57.5        | 174.2 %                  | 205.8 %   | 200.6 %     |  |
| Physical capital<br>(fixed assets)            | 35,914                           | 5,526.2  | 69,272.9  | 485,886.3   | 298.5 %                  | 264.5 %   | 290.4 %     |  |
| Value added per<br>employee<br>(productivity) | 35,914                           | 2,300.2  | 3,094.8   | 13,810.2    | 132.8 %                  | 135.7 %   | 72.2 %      |  |

(continued)

Table 4.1 (continued)

|                             | Unsuccessful new exporters (32.3 %) |                          | Relative to unsuccessful new exporters |         |
|-----------------------------|-------------------------------------|--------------------------|--|---------|
|                             | Unsuccessful new exporters          | Successful new exporters | /                                      | %       |
| Exports                     | 35,914                              | 834,712.4                | 587.9                                  | 297.3 % |
| Exports as % of total sales | 34,357                              | 0.2                      | 207.1                                  | 131.4 % |
| Equity                      | 35,914                              | 994,356.0                | 366.9                                  | 522.0 % |
| Debt to assets share        | 35,844                              | 2,235.0                  | 4.5                                    | 0.7 %   |

Source: Based on AJPEs and Burger and Kuncič (2013)



**Table 4.2** Performance of successful and unsuccessful new exporters relative to the three-digit industry average in the periods before and after the start of exporting, 1994–2010

| Time           | Total revenue       |                       |                     |                       | Employment          |                       |                     |                       | Fixed assets        |                       |                     |                       | Capital-labour r.   |                       |  |  |
|----------------|---------------------|-----------------------|---------------------|-----------------------|---------------------|-----------------------|---------------------|-----------------------|---------------------|-----------------------|---------------------|-----------------------|---------------------|-----------------------|--|--|
|                | Succ. new exporters | Unsucc. new exporters | Succ. new exporters | Unsucc. new exporters | Succ. new exporters | Unsucc. new exporters | Succ. new exporters | Unsucc. new exporters | Succ. new exporters | Unsucc. new exporters | Succ. new exporters | Unsucc. new exporters | Succ. new exporters | Unsucc. new exporters |  |  |
| t - 5          | 0.356               | 0.373                 | 0.339               | 0.369                 | 0.324               | 0.346                 | 0.324               | 0.346                 | 0.805               | 0.950                 | 0.805               | 0.950                 | 0.805               | 0.950                 |  |  |
| t - 4          | 0.325               | 0.375                 | 0.317               | 0.359                 | 0.310               | 0.351                 | 0.310               | 0.351                 | 0.951               | 0.901                 | 0.951               | 0.901                 | 0.951               | 0.901                 |  |  |
| t - 3          | 0.358               | 0.365                 | 0.312               | 0.393                 | 0.327               | 0.366                 | 0.327               | 0.366                 | 1.085               | 0.981                 | 1.085               | 0.981                 | 1.085               | 0.981                 |  |  |
| t - 2          | 0.473               | 0.377                 | 0.446               | 0.410                 | 0.498               | 0.402                 | 0.498               | 0.402                 | 1.192               | 1.118                 | 1.192               | 1.118                 | 1.192               | 1.118                 |  |  |
| t - 1          | 0.421               | 0.431                 | 0.412               | 0.461                 | 0.472               | 0.434                 | 0.472               | 0.434                 | 1.687               | 1.102                 | 1.687               | 1.102                 | 1.687               | 1.102                 |  |  |
| t <sub>0</sub> | 0.973               | 0.550                 | 0.914               | 0.574                 | 0.878               | 0.508                 | 0.878               | 0.508                 | 1.406               | 0.989                 | 1.406               | 0.989                 | 1.406               | 0.989                 |  |  |
| t + 1          | 1.180               | 0.575                 | 1.077               | 0.582                 | 1.053               | 0.532                 | 1.053               | 0.532                 | 1.227               | 0.958                 | 1.227               | 0.958                 | 1.227               | 0.958                 |  |  |
| t + 2          | 1.323               | 0.607                 | 1.196               | 0.602                 | 1.154               | 0.565                 | 1.154               | 0.565                 | 1.208               | 1.019                 | 1.208               | 1.019                 | 1.208               | 1.019                 |  |  |
| t + 3          | 1.439               | 0.606                 | 1.320               | 0.612                 | 1.272               | 0.601                 | 1.272               | 0.601                 | 1.054               | 1.035                 | 1.054               | 1.035                 | 1.054               | 1.035                 |  |  |
| t + 4          | 1.498               | 0.647                 | 1.370               | 0.619                 | 1.343               | 0.635                 | 1.343               | 0.635                 | 1.091               | 1.027                 | 1.091               | 1.027                 | 1.091               | 1.027                 |  |  |
| t + 5          | 1.659               | 0.673                 | 1.485               | 0.649                 | 1.493               | 0.664                 | 1.493               | 0.664                 | 1.108               | 1.047                 | 1.108               | 1.047                 | 1.108               | 1.047                 |  |  |

Source: Based on AJPES and Burger and Kuncič (2013)

to exporting are tracked from the first year of exporting ( $t_0$ ) to five years later. Summary statistics for successful new exporters are based on analytic weights that assign larger importance to firms with longer export spells.

Tables 4.2 and 4.3 compare performance measures of successful and unsuccessful new exporters in terms of total revenue, employment, fixed tangible assets, capital intensity, productivity, exports, export revenues as a share of total sales, equity, and indebtedness. The largest improvement of performance in the period of exporting comes in the form of significantly larger relative sales of successful new exporters that escalate from 42 % of the industry average a year before the exports start to 66 % above the average by the sixth year of exporting. The evolution of sales in unsuccessful new exporters is much more subdued despite an almost similar starting-point. This group of new exporters achieves only a 12 % increase in relative sales in the first year of exporting and an additional 12 % by the sixth year of exporting. The pattern is almost identical with regards to employment and fixed assets growth. By the sixth year of exporting, the first group achieves 50 % higher employment and fixed assets than the industry average compared to the second group's average at 65 % of the average value. Both types of new exporters are above the industry average in capital intensity prior to their export start. In the years after they switch to exporting successful new exporters start exhibiting diminishing premium in average capital intensity of production whereas unsuccessful new exporters increase it only slightly. Compared to unsuccessful new exporters, their successful counterparts are significantly more capital intensive already before the switch to exporting, probably due to having invested more in better and more advanced production technology.

Productivity, measured by value added per employee relative to industry average, evolved roughly at the same level prior to the start of exporting in both groups of new exporters. However, already in the first year of exporting, successful new exporters improved productivity by 70 % points whereas their less successful exporters advanced by 15 % points. Productivity level improved even further in the following years in the first group but slid back to before-exporting levels in the second group of new exporters. Looking at exports as a share of total sales, the successful new exporters start on average with a much larger relative export share. The differences even increase in time, which is natural since one group is good at

**Table 4.3** Performance of successful and unsuccessful new exporters relative to 3-digit industry average in the periods before and after the start of exporting, 1994–2010 (cont.)

| Time           | Productivity        |                       | Exports             |                       | Exp. share in sales |                       | Equity              |                       | Debt-asset ratio    |                       |
|----------------|---------------------|-----------------------|---------------------|-----------------------|---------------------|-----------------------|---------------------|-----------------------|---------------------|-----------------------|
|                | Succ. new exporters | Unsucc. new exporters | Succ. new exporters | Unsucc. new exporters | Succ. new exporters | Unsucc. new exporters | Succ. new exporters | Unsucc. new exporters | Succ. new exporters | Unsucc. new exporters |
| t - 5          | 1.096               | 1.196                 | 0                   | 0                     | 0                   | 0                     | 0.396               | 0.321                 | 0.657               | 0.748                 |
| t - 4          | 1.033               | 1.124                 | 0                   | 0                     | 0                   | 0                     | 0.339               | 0.370                 | 0.645               | 0.812                 |
| t - 3          | 1.304               | 1.072                 | 0                   | 0                     | 0                   | 0                     | 0.308               | 0.347                 | 0.866               | 0.888                 |
| t - 2          | 1.107               | 1.045                 | 0                   | 0                     | 0                   | 0                     | 0.542               | 0.287                 | 0.675               | 0.844                 |
| t - 1          | 0.900               | 1.053                 | 0                   | 0                     | 0                   | 0                     | 0.446               | 0.379                 | 0.695               | 0.762                 |
| t <sub>0</sub> | 1.597               | 1.202                 | 0.835               | 0.283                 | 1.589               | 1.482                 | 0.672               | 0.391                 | 0.809               | 0.782                 |
| t + 1          | 1.558               | 1.140                 | 1.148               | 0.259                 | 1.825               | 0.912                 | 0.706               | 0.427                 | 0.774               | 0.870                 |
| t + 2          | 1.644               | 1.101                 | 1.339               | 0.276                 | 1.958               | 0.782                 | 0.919               | 0.494                 | 0.722               | 0.940                 |
| t + 3          | 1.524               | 1.100                 | 1.442               | 0.298                 | 1.909               | 0.716                 | 1.111               | 0.506                 | 0.701               | 1.230                 |
| t + 4          | 1.519               | 1.064                 | 1.377               | 0.360                 | 1.968               | 0.715                 | 1.174               | 0.466                 | 0.673               | 0.884                 |
| t + 5          | 1.413               | 1.076                 | 1.621               | 0.367                 | 2.031               | 0.758                 | 1.337               | 0.589                 | 0.679               | 0.879                 |

Source: Based on AJPES and own calculations

**Table 4.4** Top markets in 2010

|   | # of firms | # of products | # of entering firms | # of exiting firms | # of entering prod. | # of exiting prod. |
|---|------------|---------------|---------------------|--------------------|---------------------|--------------------|
| 1 | HRV 4412   | HRV 3565      | HRV 1170            | HRV 1449           | ITA 446             | MKD 392            |
| 2 | SRB 3047   | SRB 3233      | SRB 1139            | SRB 1016           | SRB 336             | DEU 373            |
| 3 | BIH 2671   | BIH 3082      | BIH 853             | BIH 957            | DEU 322             | BIH 358            |
| 4 | MKD 1446   | ITA 2418      | MKD 643             | MKD 369            | BIH 322             | ITA 352            |
| 5 | DEU 1373   | DEU 2386      | CHE 291             | CHE 233            | AUT 321             | AUT 308            |

Source: Based on CARS and calculations by Burger and Kunčič (2013)

**Table 4.5** Summary statistics of extensive export dynamics for the entire sample

|                     | mean   | sd     | min | max  |
|---------------------|--------|--------|-----|------|
| # of firms          | 116.77 | 440.51 | 0   | 5178 |
| # of products       | 179.21 | 474.17 | 0   | 3652 |
| # of entering firms | 40.73  | 145.22 | 0   | 1578 |
| # of exiting firms  | 38.56  | 140.35 | 0   | 1590 |
| # of entering prod. | 52.43  | 101.78 | 0   | 1622 |
| # of exiting prod.  | 45.81  | 86.73  | 0   | 594  |

Source: Based on CARS and calculations by Burger and Kunčič (2013)

exporting and the other is not. Both variables showing financial constraints evolve more favourably for successful new exporters. Starting from a similar level just prior to exporting, the value of equity increases steeply and linearly immediately after the start of exporting in the first group, while it stagnates in the second group of new exporters. Conversely, indebtedness is heavily increased for unsuccessful new exporters while remaining below industry average for successful new exporters even in the years after internationalization. These findings suggest that successful new exporters are less financially constrained as they are able to finance their organic growth through equity and depend much less on external sources of finance.

## What is Behind the Difference in Performance?

Several analyses were done afterwards to understand the reasons for the differences in performance and internationalization behaviour that led to such differences in performance.

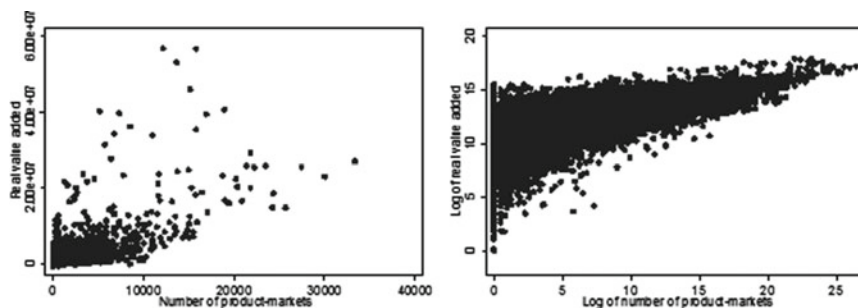
Burger and Kunčič (2013, p. 22–30) did an in-depth analysis with the Kernel densities of total exports, export per market and export per products (intensive and extensive margins) for successful new exports and unsuccessful new exporters. The Kernel density estimation is a non-parametric estimation of a probability density function of a random variable. Firms are realigned based on technical time, where technical time  $t = 1$  represents the start of exporting and technical time  $t = 6$  represents the functions five years after that. Looking at the total exports (intensive margins), exports per market and exports per product, they found that successful new exporters' densities are shifted to the right, slowly followed by unsuccessful new exporters. Successful exporters tend to export higher values of exports altogether and per market, and more value intensive products than unsuccessful new exporters. Unsuccessful new exporters do not change their export intensities in time, implying their lack of export intensity is one of the reasons for not being successful in the long term. Without adding new markets they were not be able to increase the value of exports per product and without broadening their product portfolio (product varieties) they were not able to increase exports per market and total exports.

Unsuccessful new exporters tend to start with fewer markets and product varieties than successful exporters. Forty-four percent of all successful exporters start with two markets and with three products (the majority started with more markets and products). A similar combination was found for 65 % of unsuccessful new exporters. Out of all unsuccessful new exporters, 88 % of them export only to one or two markets and 72 % export only three products. In other words, successful new exporters have a much more developed extensive margin of trade, as 14 % export to more than five markets (3.5 % for unsuccessful exporters), and 16 % export more than 10 varieties (8 % for unsuccessful exporters).

Even after six years, unsuccessful new exports continue to be focused on a couple of products and markets. After five years, only 25 % of all successful exporters still export to only two markets or less, with three products or less, while the same combination is still valid for almost 50 % of unsuccessful new exporters. Out of all unsuccessful new exporters, 67 % of them export only to two markets or less and 52 % export only three products. What happens after five years with successful exporters is

that they are very diverse in terms of products and markets, as compared to their unsuccessful counterparts, that remain exporting a few products to a few markets. Successful new exporters continue to have much more developed extensive margin of trade, the difference from  $t = 1$  to  $t = 5$  increases, as 36 % export to more than five markets (10 % for unsuccessful exporters), and 41 % export more than 10 varieties (24 % for unsuccessful exporters).

In another study, Dikova et al. (2016) examined the relationship between foreign market (geographic) diversification, product diversification, and export intensity and firm performance of an entire population of Slovenian exporters, using an extended production function approach and applying a regression analysis to a panel population data of first-time Slovenian exporters in the period 1994–2012. They tested the impact of geographical differentiation and product differentiation on performance (value added and export revenues) and whether a complex export strategy – an export strategy of simultaneous product- and geographic export diversification – is beneficial for first-time exporters. Data plots revealed correlations between firms' performance and export markets, products and product markets, both with and without natural logarithms (these results are available upon request). Both export markets and exported products, as well as product markets (Fig. 4.9), have a positive relation to performance, which, however, does not seem to



**Fig. 4.9** Value added and number of product markets (Source: Dikova et al. (2016))

be linear, but approaches linearity when the variables are in natural logs (Dikova et al. 2016).

Variety of specifications confirmed that both market as well as product differentiation have a positive and significant impact on the performance of new exporters. Market differentiation showed an even greater impact on performance. The authors also found that complex internationalization strategies and simultaneous diversity – both in terms of products and foreign markets – is significantly related to productivity and sales performance of new exporters. Further, the diminishing effects of export scope on performance were tested and revealed clear diminishing returns for value added in exports, number of markets, number of products, number of product markets, and all different formulations of export intensities (export volume). Additional export activity thus helps, but in a decreasing way, likely due to the increasing difficulty of managing further export diversification. Both interactions of export duration with product- and geographic diversification were positive and significant, implying that exporters successfully reconfigure their activities to support international activities (Hitt et al. 1997). If new exporters accumulate experience and develop capabilities through learning-by-exporting (Zahra et al. 2000) they grow faster and become more adaptable to future exporting opportunities (Sapienza et al. 2006). In spite of diminishing returns, the analysis showed that diversification strategy and the dynamics of internationalization in the first years of exporting determine the growth and survival of the new exporters and differentiate successful from unsuccessful new exporters.

We collected case studies and interviews for further insights into differentiated export strategies. Exporters emphasized the importance of speed and diversification in export activity. Though preparation before market entry is very demanding with a larger product portfolio and a presence in more than one market, complex diversification speeds up the learning process and may shorten the adaptation period. Unsuccessful new exporters often emphasized that they recognized competitors with richer or more adaptive product/service portfolios were able to spread faster within their first foreign market and also to other neighbouring countries/regions. Frequently their market position weakened since they did

not cover distribution across country or had incomplete market coverage. In the case of only a few testing destinations and an inability to cover other major export channels or product varieties fast enough, they were crowded out of the market. Entry with a larger product portfolio or into more markets in a short period might also compensate for losses due to mistakes that are always possible. In spite of limited resources, successful new exporters (which are normally SMEs) often applied export strategies similar to large multinational enterprises and sharply increased the complexities and diversities in their value creation strategy in order to survive and grow globally.

## Conclusion

Firms are heterogeneous and so are their strategies for value creation and international growth. The firm-level analysis of export activity showed increased export dynamics, both entry and exit, and rising product and geographical diversification. There is a large overlap between top markets in terms of firms and products present, firms entering and exiting the markets, and products entering and exiting the market. The total sample analysis revealed that the average values of both number of firms exiting and entering new markets, and the number of products entering or exiting markets, are very similar. Whereas the number of exporting firms and export volume per market (intensive and extensive margins) of Slovenian exports are the highest in the closest markets, export scope per firm is the largest in more distant European markets, especially to the east of Slovenia. Overcoming higher trade costs in more remote countries demands diversification and a wider range of exported products in order to break even. This relates to firms' capacity and productivity. According to data, only the most successful firms, with an above average product range, manage to diversify exports, expand to a greater number of markets and reach far-away countries.

Detailed analysis of new exporters revealed that diversification has proven to be a demanding but an effective way of value creation. Taken



separately, both geographical as well as product diversification are positively related to the performance of new exporters, though with diminishing returns. Next, a complex strategy with simultaneous market and product diversification is also positively related to performance. Contrary to traditional approaches that focus on a single product in a single market and slow, gradual growth, based on our observations we suggest that this strategy brings risks to creating value. Newly born exporters lack economies of scale and scope to afford such a focused approach to internationalization. An early decision for a diversified exporting strategy determines the success of international growth. Adding new markets and new products (variety) is demanding, but with the right strategy and management, each can increase the benefits the other brings to a company. In the process of international growth, first-time internationalizing firms from emerging markets try to imitate large multi-national enterprises, strategically plan their diversification early on and grow on a global level faster.

The results based on first-time exporters and their strategies may be context and country specific, so the fact that the study was carried out in Slovenia may be seen as one of its limitations. The behaviour of firms from a small and relatively high-income emerging market facing rapid liberalization may not be taken as a universal pattern. New exporters may also behave differently from established exporters. Future research can therefore test the validity of these findings both in different business environments and for a different group of enterprises. Additional firm level insights and case studies of newly exporting firms from emerging countries or mature developed economies would improve our understanding of the importance of diversification in value creation.

## Note

The views expressed are those of the authors and do not necessarily reflect those of the United Nations.

## Appendix

|   | # of firms | # of products | # of entering firms | # of exiting firms | # of entering prod. | # of exiting prod. |
|---|------------|---------------|---------------------|--------------------|---------------------|--------------------|
| 1 | HRV 4412   | HRV 3565      | HRV 1170            | HRV 1449           | ITA 446             | MKD 392            |
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Source: Based on CARS and calculations by Burger and Kunčič (2013).

|                     | mean   | sd     | min | max  |
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Source: Based on CARS and calculations by Burger and Kunčič (2013).

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# 5

## Value Creation During Different Development Stages: What Changes When an Entrepreneurial Firm Transforms into a Multinational Corporation?

Peter Zettinig, Birgitta Sandberg, and Sascha Fuerst

### Introduction

Entrepreneurs are said to behave differently from managers. This general assumption, which gets considerable backing from different authors (e.g. Schumpeter 1934; March 1991; Stevenson and Gumpert, 1985; Lewin et al. 1999; Zahra and George 2002), is surprisingly little considered in the emerging field of international entrepreneurship (IE). Keupp and Gassmann (2009) analysed a wide array of literature which makes reference to phenomena pertaining to international entrepreneurship and discovered that entrepreneurship contributes little in terms of theoretical input to IE and that international business (IB) on the other hand has a high level of disregard for many of the processes that make

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P. Zettinig (✉) • B. Sandberg  
University of Turku, Turku, Finland

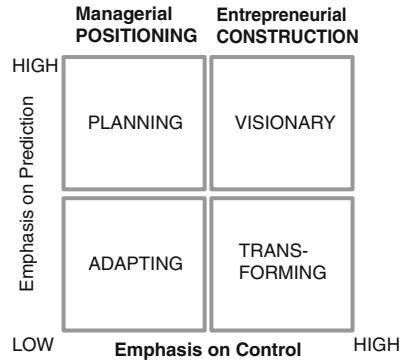
S. Fuerst  
Universidad EAFIT, Medellín, Colombia

firms' international expansion possible. This is interesting because IE is positioned at the intersection of entrepreneurship and IB research, and the need for a new disciplinary niche would logically stem from the limitations of the two parent disciplines in that they cannot sufficiently explain the phenomenon in isolation (Mathews and Zander 2007). While IB offers a number of theories that explain why multinationals are able to perform better than other organizational forms and approaches (e.g. Dunning 1988), there seems to be little theoretical input that helps explain why firms that are entrepreneurial achieve success in pursuit of internationalization.

This chapter aims to evaluate a particular strand of entrepreneurship theory (Endres and Woods 2009), effectuation theory (Sarasvathy 2001), and uses a model of effectual processes (Wiltbank et al. 2006) as an analysing framework for longitudinal case data to explain how entrepreneurial internationalization may be different from managerial (e.g. firm-specific advantages, location-specific advantages, internalization rationales) behaviour as it is usually assumed in IB theories. In our discussion we propose a number of ideas which may provide new pathways for explaining why multi-national corporations (MNCs), or at least a share of them, might be the result of entrepreneurial effectuation rather than the outcome of rationalized managerial behaviour, which we claim is a logic which applies only under certain conditions and can usually only be rationalized ex post.

Zahra (2005, p. 24) underlines an important fact which he encourages others to take up for further research: '[...] *we do not know what becomes of those INVs [international new ventures] that survive and become established.*' One assumption is that entrepreneurial firms which manage successful to quickly and extensively internationalize will become similar to other firms in their industry over time (Zettinig and Benson-Rea 2008). We wonder if this is so and why. Logic might command us to believe that start-up firms usually start out small and most of them are entrepreneurial. They internationalize and usually years or decades later they classify as what the field of IB calls multinational corporations. There seems to be one or more breaks in terms of how the firm at one point in time is small and entrepreneurial and at another point in time is large, powerful and multinational. While entrepreneurship research usually focuses on action (Zahra 2005) in the earlier phase, IB looks at firms in the later stage. The fact is that the firm is the same, even though it is difficult to establish

**Fig. 5.1** Framework of prediction and control (based on Wiltbank et al. 2006)



what the essence of the firm is that qualifies it as the same firm after time has passed. The firm has developed and changed into something different to what it was at its outset. From a discipline of IE, at its particular disciplinary intersection, we could expect to learn how the firm transforms from its initial entrepreneurial actions to become a MNC.

During the last decade much emphasis in IE has been given to define and qualify quantitative outcomes of international new ventures (compare Fig. 5.1 in Keupp and Gassmann 2009: e.g. degree of internationalization; export intensity; export performance; share of foreign sales) and too little attention has been given to the transformation of the firm and what individuals in it might do in order to create value. It is interesting to explain how the firm becomes international because this involves qualitative changes in behaviour that create value. This is the focus of this chapter and we hope to continue a discussion (e.g. Jones and Coviello 2005) of how entrepreneurial behaviour (Zahra 2005) over time unfolds and results in the multinational corporations with which IB is traditionally concerned.

## From Value Creation Through Effectuation to Entrepreneurial Internationalization

March (1991) defines the long-term survival of the firm as being dependent on its ability to exploit given knowledge while exploring new knowledge in a balanced way. While current opportunities have the advantage of being known, we have difficulties in assessing future opportunities

when we are unable to assign risks to them (cf. Knightian uncertainty). Exploitation is the domain of managers (Lewin et al. 1999) when they create value by utilizing their extant knowledge in efficient ways. They can draw on their knowledge and use it for estimating how certain changes unfold and that enables them to utilize sophisticated techniques to plan and execute firms' behaviour. This involves calculated risk taking, evaluating alternative courses of action and inducing incremental improvements with a high focus on efficiency, all in a fairly systematic and rationalized way. The focus of these actions is on the predictable. The entrepreneur on the other hand has been characterized as an actor who explores new knowledge for finding or generating new opportunities. This involves experimenting with ideas, new technologies and business models. Sarasvathy (2001) distinguishes these two approaches to business based on their process logic. Managerial logic is based on *causation* processes, formulating objectives and deploying the means to attain these ends. Entrepreneurs on the other hand follow *effectuation logic* (Sarasvathy 2001, p. 251) which disregards the emphasis on the predictable elements but stresses elements which can be controlled in the process of defining and attaining new value (Sarasvathy et al. 2008). These are the fundamental premises distinguishing the entrepreneurial and the managerial mindsets. These fundamentals influence how these types of actors think and act and how they perceive themselves and their firms in relation to the environments they are a part of.

In our view effectuation is a very useful approach for IE because it addresses how the early stage firm (INV) acts, in the absence of relevant knowledge about international markets or how to enter them. In addition, effectuation may contribute to explaining how the later stage firm (e.g. MNC) is a result of qualitative changes that take shape in its initial stages.

To explore this we investigate Wiltbank et al. (2006) who put forward a framework of prediction and control (Fig. 5.1) which depicts the useful mindset differences of actors at different stages, so we argue later, and serves to subsequently investigate the longitudinal case data of a firm which transformed from entrepreneurial beginnings into a complex international company managed by professional managers.

The framework of prediction and control (Fig. 5.1) distinguishes the way different actors compute their environment. It conceptualizes



fundamental differences in the way the nature of the environment is viewed and processed. Managerial approaches have a low emphasis on elements which can be controlled despite uncertainty. This means that the firm will either subscribe to stringent planning if data about the firms' environment is available; or an emphasis on adaptation is given when information about the way the environment will evolve in future is missing and thus predictability about future environmental states is low. While the planning approach has been benefiting from work such as competitive analysis (Porter 1980), the adaptation approach has been conceptualized by work in the area of emerging strategy (Mintzberg 1994) or by approaches to understanding firm adaptive actions as dynamic capabilities (Teece et al. 1997), to name some examples (a wider discussion can be found in Wiltbank et al. 2006).

The right column of the typology depicts entrepreneurial approaches which contrast managerial approaches in that they are driven by a philosophy that the environment can be actively constructed and is not a given set of factors the firm adapts to. A visionary approach assumes that the actor possesses a glimpse of what is to come and therefore acquires and allocates resources toward attaining envisioned opportunities (e.g. Hamel and Prahalad 1991). The fourth type, transformative, shares with the visionary approach in that it emphasizes factors which can be controlled but differs from the visionary approach in lacking the belief that future opportunities exist and can therefore be defined and attained. Instead the transformative approach puts little emphasis on future prediction but is mainly concerned with controlling elements that can be controlled.

The transformative approach has the premise that the entrepreneur understands which means are available and can be influenced to actively seek possible ends based on these controllable elements: thus the belief in the creation of new opportunities based on available own and accessible others' resources. The key difference of this approach to the managerial approaches on the left side of the framework is the assumption by the entrepreneur that environments can actively be constructed because they are not pre-determined. This approach is convincingly explained and discussed by Sarasvathy and Dew (2005) when they conceptualize entrepreneurial market creation. The entrepreneur starts out with an understanding of who she is; what she knows; and who she knows. With

this basic understanding of means she develops goals concerning what is possible. From that first, arguably rather vague goal setting, she starts to utilize her networks of people. She starts to interact with them, presenting *initial* ideas and vague objectives, convincing some of them to join and commit to the emerging business in various ways. Through these interactions and commitments two effects occur. First, new stakeholders through their commitment provide new means and expand the resource-base of the venture; and secondly, through stakeholder interactions goals emerge and converge, giving the venture direction and focus. While this transformative approach is clear on controlling its means, it is loose on setting goals, which influences the way the firm's environment is gradually constructed in a dynamic process of interactions with stakeholders of the firm. Thus the environment in which the entrepreneur and her venture operates is the outcomes of interactions with stakeholders.

In the international expansion of the entrepreneurial firm we can assume and observe the existence of a transformative approach. The entrepreneur might have some general resources, maybe a product or service idea, some basic understanding of market dynamics and some ideas about how a market offering might be sold. She then ventures out and utilizes contacts which might be made purposefully or are of a social nature (cf. Coviello 2006) and starts to commit certain partners to the venture with the effect that new environments are created (Sarasvathy et al. 2008) and new objectives within this emerging environment are defined. This process in the end might lead in many cases to the phenomenon of international new ventures as originally defined by Oviatt and McDougall (1994), but may also results in new markets or industries (Sarasvathy and Dew 2005).

In the next section we use the prediction and control framework (Fig. 5.1) and the transformative effectuation process to analyse the case of a hugely successful serial entrepreneur who, over 40 years, created several firms which relatively quickly internationalized and grew to considerable international scope and size, in some product segments attaining global market shares of up to 90 %. What is more interesting for this study is to reconstruct processes of organizational change which occurred through the internationalization of one of his, to date, most successful ventures. For this purpose we use both retrospective and real-time longitudinal

observations and multiple respondent interview data which we triangulate with secondary data provided by the case firm and by third parties. It shows how a company starts out with little, internationalizes on a global scale in a relatively short time and how it emerges to be what generally could be regarded as a multinational corporation.

## The Hifog Case

Our initial unit of analysis is a long-standing entrepreneur, Göran Sundholm, who received in 2002 the Finnish Engineering Award for pioneering work as an inventor and in the same year the Finnish National Board of Patents and Registration Award. Few other people in Finland have to date been as industrious when it comes to patents, with Göran holding well over 1000 patents or patent pending applications. Göran, with a technical education background, filed his first patent at the age of 17 and a few years later, in 1973, started his first company which focused on high-pressure hydraulics services and systems for the international maritime industry. Many of the technologies his firm developed in the maritime field have been transferred via newly founded firms to create value for other applications in other industries. This *modus operandi*, to take valuable solutions and find new applications in other industries, has been a characteristic of Göran's entrepreneurial approach to business. Another characteristic of this entrepreneur's way of doing things is to actively create opportunities by taking notes of trends that might produce them. He does not consider boundaries such as definitions of specific markets, industries or niches, and has a healthy disregard for competition or rules of industry as limiting factors. By 1985 his first company, GS-Hydro, a company with a 60 million Finnish Marks turnover (equivalent to approximately €18.2 million at the 2010 index-level), had been sold to Kone Corporation, effectively making him a very wealthy man who could have retired. However, he did not and became the enabler for another venture which was created through his interpretation of environmental changes and coincidences.

To understand the subsequent case it is important to know that in 1987 the United National Montreal Protocol banned Halon chemicals, used

in automated fire extinguishers, as being hazardous for the ozone layer; and that in 1990 the devastating fire on the cruise ship Scandinavian Star, caused the deaths of 158 people and triggered the UN International Maritime Organization to decree that by 2005 all new and existing passenger vessels must be fitted with automatic sprinkler systems preventing similar tragedies.

These regulatory changes in the business environment triggered one of Göran's long-standing customers to contact him and in January 1991 requested that Göran '*do something*' to solve the problem of conventional automatic sprinkler systems which technically were unsuitable for use on ships. This set in motion a series of events leading to establishing a new venture under the umbrella of his firm, called Marioff. Conventional sprinklers are not an option for ships because their deployment would compromise a vessel's stability and may result in its sinking. The request by the ship owner ordering a solution to this problem was instantly sealed with an unconventional approach. Göran agreed with the customer on a price for what he thought such a new sprinkler system would probably cost and sold it. The customer made a 40 % down-payment to finance the development of a system that was commissioned as '*equivalent but lighter*' than conventional systems and to be installed on two new-build vessels within 18 months. In effect Göran had made his first sale for his new venture for a product (Hi-Fog) and product category that did not exist and for a market that was non-existent. (Quote: '*If you haven't sold it, there's nothing to develop. First you need to sell, and then develop. Isn't that how it usually goes?*') The opportunity though was very clear in Göran's mind: there were capabilities in terms of hydraulic knowledge and piping; there was a healthy lack of knowledge of existing automated sprinkler systems enabling experimental actions (quote: '*I once experienced a forest fire when I was about ten years old. That was [all] my experience [with fire extinguishing]*'); and there was a clear regulatory induced need for this sort of product. In addition there was good access to discuss this new technology with ship builders, ship owners and operators around the world, an important network in the development of this market which stemmed from his previous ventures.

Göran did not pay too much attention to what competitors were up to; no formal market research activity had been conducted (quote: '*The only thing we ask is: Where is the order? We don't waste time on market*

*research*) and there were rather informal exchanges of ideas and presentations to potential customers and other potential stakeholders (e.g. insurance companies and authorities). During the rapid product development that the company carried out at the premises of the Finnish Technical Research Centre (VTT) and the Swedish National Testing and Research Institute (SP) the atmosphere was very open (quote R&D manager: *'There it felt like every passer-by was invited to see the tests'*; quote Göran: *'Yes: here's the fire. Let's see how the system functions'*). The mindset had been one that where there is a customer's order it must be delivered. Göran invested the down-payment of the first client, together with a calculated €7 million of his own money and a great deal of confidence to deliver a solution (quote: *'We didn't have a clue what we were promising, and luckily so. I don't think we would've promised anything otherwise'*).

Three months later, in April 1991, the prototype was introduced at the Cruise and Ferry exhibition in London and by 1995 the company had established the global maritime automated sprinkler business. During these first years Göran used his personal contacts to *'most'* (quote) of the world's major shipping companies to introduce the product and its advantages, heavily supported by reference to the first industry sale. After capturing most of the maritime automated fire extinguishing system market globally (by 2005 an approximately 90 % global market share in new vessels) the firm started to extend its focus to onshore business, where they met considerable opposition from established competitors. Focusing initially on the US market as the biggest market for sprinklers, rivals used all kinds of protective measures (e.g. lobbying) to assure that the new sprinkler system would not get accepted by major stakeholders (e.g. insurance companies, authorities) and that heterogeneous national regulations would be slow to acknowledge the superior water-mist-based systems of Marioff. The firm finally succeeded in making major sales in key onshore markets by 2000 and has since steadily extended its market share, leading to partial sale of the company in 2001 (in order to raise €50 million in capital) for fuelling further expansion and for Göran to finally sell his remaining personal ownership of the company in 2007.

Organizationally Marioff employed 14 people at the beginning of Hi-Fog's development in 1991. The business had no formal strategy and according to the R&D Manager *'no organization'*. The emphasis was on getting things done rather than being formalized. Decisions

were taken quickly, if not instantly, and in an autocratic fashion by the entrepreneur (quote: *'It was quite easy, I decided everything'*). The company tended to make sales often without formal contracts but relied heavily on utilizing Göran's access to main players in the maritime business all over the world. Very often international sales have been agreed, installations started and down payments made within a week. By 2002 turnover reached €64 million and the workforce had grown to 307, with about a third of staff located around the world. Over the years foreign subsidiaries had been established at major locations for this rather global industry, including a local presence in Norway, 1995; Sweden, 1997; Denmark and the USA, 1998; the UK, 1999; Spain, 2000; Italy and France, 2001; Singapore, Germany and Canada, 2002, etc. Around the year 2001 the business had grown to a considerable size and had diversified its offerings into many sub-markets of the overall sprinkler market, developing from offshore to onshore markets, and creating applications for special requirements like storage rooms, tunnels, churches, and hotels. To fuel this rapid expansion into new and little known onshore markets, and to acquire management experience, Göran sold 50 % the company to a private equity firm, raising €50 million. From this point on the company changed considerably. An outside manager had been appointed as CEO and formal structures and processes started to be introduced in the firm (quote R&D manager: *'Well, I'd say it was around the year 2000 when things started to get more ordinary. It started to become an ordinary, boring company. It seems with growth comes bureaucracy'*). After a successful entry into onshore markets Göran sold his remaining share of the company in 2007 for €132 million.

In terms of objectives, at the beginning of its development in 1991, the firm did not make any effort to quantify the opportunity or to espouse goals for the business. It was clear that the problem they were trying to solve was a serious one for the shipping business and their objective was to deal with it by developing a technology. It was also clear that the nature of the shipping industry was international and that the scope of such business would have global potential, but besides this simple and taken-for-granted understanding was that the initial focus

was heavily geared toward fulfilling the first order, at any cost. The approach to establish the business was simple: make sales and deliver. Decision making was quick and usually sales were done without written contracts and the installation and delivery of systems were covered by down payments.

In terms of rapid product development co-operation with SP and VTT was vital because it added expertise in different aspects of the development and created new ways of looking at things. Business development was heavily influenced by interactions with different stakeholders, especially potential customers, first off-shore, which was achieved by a very open approach involving visiting all of the main international players and presenting the product at fairs and conventions. Entering onshore markets though was a different story. Since the company did not create a new market it needed to adhere to the rules of the game in the industry, which created considerable barriers by substantial lobbying against the new technology. This required the company to substantially change its approach in order to grow further and subsequently led to the need for professional managers to adapt the firm to this new situation. Since 2007 the company is a subsidiary of UTC, the 91st largest US Corporation (Forbes 2015 List).

## Case Analysis

The case illustrates overall how a small entrepreneurial firm transforms gradually over time into a multinational company. At the beginning some changes in the institutional environment of the global shipping industry set the stage for an emerging need by shipping companies to find a solution to a serious problem. Subsequently we use Wiltbank et al.'s (2006) prediction and control framework (Fig. 5.1) to analyse how the firm's approach to business changes throughout its internationalization and organizational development. We distinguish the longitudinal development in four stages which have important implications for the entrepreneurial firm in emerging as a global player in the maritime fire protection market and beyond.

## The Visionary Stage

At the very beginning, in 1991, the entrepreneur did not have any plans or visions to engage in maritime fire protection. An initial *vague* vision was brought to the entrepreneur's awareness in the form of an expressed need for a solution by a ship owner who had two new vessels under construction. It was easy to envision that certain changes in the regulatory environment could bring considerable opportunities in the long run (the International Maritime Organization, a UN unit, decreed that by 2005 all new and existing passenger vessels must be fitted with automatic sprinkler systems). Then current technologies were unfit to satisfy these demands (in 1987 the United National Montreal Protocol banned Halon chemicals which were used in fire safety; traditional water sprinkler systems failed to comply with industry standards). This provided some sort of visionary certainty, in our view a key defining factor for a visionary approach, that there will be a market even though this market might be so far in the future that it cannot be justified in terms of conventional business logic. The unconventional acceptance of a down payment for a new revolutionary system (many tried before but failed to solve inherent problems with high-pressure mist sprinkler systems) and delivery within 18 months quickly diverted the attention away from envisioning future market opportunities further and set the focus on developing the technology and delivering what had been sold. While there had been the vision that this is a big market, it was not considered to be important at that stage to quantify what the implications for product or business development may be or to develop an express strategy to attain this result.

## The Transformative Stage

This phase provides a key in understanding how internationalization unfolded and how the entrepreneurial organization was shaped by actions rather than plans. The entrepreneur at the beginning of the venture in 1991 focused with perseverance on fulfilment of the first order. The interesting aspect here is that the sale and payment concerned a completely unknown technology at that stage and it triggered processes



of effectuation (Sarasvathy and Dew 2005). Göran, through his previous business experiences, had the self-confidence to sell systems in areas he considers his expertise without actually having the solution. This is critical for the development of the venture because it emphasizes the mindset and understanding of who the entrepreneur is and what his capacity and identity is. Much of what happened after reflects this approach to doing business, even more so than the enthusiasm for solving challenging technical problems (Sandberg et al. 2013). In addition he had more than 20 years' experience of fitting hydraulic systems onto ships, which provided the essential knowledge needed for a solution. The third category of means encompasses the established network of contacts and relationships with many different stakeholders, most importantly ship builders, owners and operators, plus other stakeholders used to support the development of the technology (Sarasvathy and Dew 2005). With this understanding and a first commitment it was crucial to focus attention on the technological research and development, which at that point did not have any clear shape, with the business rationales at this stage clearly being secondary. The entrepreneur started to collect the stakeholders needed to find a solution (engineers, testing institutes, and potential customers interested in the development) The initial sale could also be seen as important due to the legitimacy it created ex-ante and the trust that this was a serious effort to solving a major problem for the industry. With more stakeholders committing over time new means were brought into the venture's extended resource base, something that has also been found to be a necessary condition for the establishment of international new ventures, in that it allows a venture to access others' resources (Oviatt and McDougall 1994). Through its interactions the venture also developed its trajectories that determined how the business side developed and when and where subsidiaries were set up around the world; and later setting actions in motion for entering new business markets beyond the shipping industry. This stage lasted approximately from 1991 to 2000 until the entrepreneur decided that a harder push was needed to enter existing fire protection markets onshore. During this stage, while the main focus was the vast global shipping industry, many other markets were identified and the firm started to market its products against the strong competitive reactions of existing market

players. What is interesting in this phase is that the off-shore market for sprinkler systems did not exist prior to Marioff creating it, thus it was able to set many of the rule that created the market. The desire to grow the business to capture much larger opportunities in existing markets, markets which were well structured in terms of competition and which had their own practices in place, required major changes for the company which was thus far used to define rather than following the rules of industry. The rationale of needed change to capture growth opportunity led Göran to bring in new capital and new knowledge in the form of a private equity partner. This partner initiated critical organizational changes in the firm. This phase of organizational development can be considered ending at that stage with the new partner restructuring the firm by hiring professional managers who started to put in processes that were found necessary to prepare the organization for systematically approaching existing markets, leading to the next stage.

## **The Adaptation Stage**

While the previous stage can be characterized as emphasizing elements the firm can control and thus enables it to shape its own business environment, this stage can be interpreted as one in which a relative loss of control was accepted in order to capture a huge opportunity. At the same time the firm, which had established the rules of the game for offshore sprinkler systems (due to previous knowledge of many aspects of offshore business generally, and having many relationships available to the entrepreneur) found it was different for the endeavour to enter the onshore market. The firm had to first learn how that existing market functioned, which mechanisms were used by competitors and what needed to be done to enter this industry with a superior technology but lack of understanding about the business. To compensate for the shortcomings managers were brought in who started to adapt the firm to this new environment. They started to evaluate how existing processes and capabilities could fitted into these substantially different industry structures in these markets around the world, especially in the USA. This loss of control over the means and lack of knowledge of how the industry

does business represents low predictability due to the many unknowns (e.g. how important stakeholders like insurance companies can be won over while existing market players heavily lobby against the new technology) and means that adaptation requires organizational flexibility to fit into the industry, while paying much attention to what is happening on the market. In organizational terms the stage change from transformative to adaptive has also influenced the organizational culture and the way the firm has been doing things. Emphasis was given to managerial processes, analysis, and systematic approaches to conquer new industries and markets. Many of the key individuals who joined the firm early started to lose interest in working for a '*normal and boring*' company. This might have subsequently led to its change into the fourth stage.

## The Planning Stage

With private equity partners acquiring half of the firm and with managers taking charge of the firm, including taking the post of CEO, Göran, the entrepreneur who was still the president of the board, handed operational business over to managers. With this loss of direct control over critical elements and actions in the business he also lost his passion for it leading him to invest increasingly more time in separate new ventures. Subsequently, the conclusion was to sell the firm to a giant MNC with strong market share in the global fire protection industry. This decision led to the acquisition of Marioff and the integration of its business with that of an established competitor in an industry which overall can be characterized as fairly stable and thus rather predictable (for established insiders).

This case illustrates a firm's transformation from its unconventional entrepreneurial beginnings to becoming quite a regular business in its industry. What is interesting is the way the firm shifts its approach from being entrepreneurial to becoming a managerial company. In the first two phases it was critical to control certain means and expand them through developing new value by exploring stakeholder interactions and to stay open to allowing the business first to develop its value creating technology before defining any organizational goals. The decision to enter existing markets

and the subsequent shift to a managerial orientation can be interpreted as loss of control over the environment, and at the same time it can be seen as a transition phase in which the firm tried to become organizationally flexible while learning fast what the rules of the game are. Value creation at this stage is hanging in the balance between the huge technological value of the product and the lack of know-how in terms of commercializing it in new markets. Because the market for shipping fire protection systems was created by the firm it had widespread control over it. Expanding the firm to existing markets meant a relative loss of control and in parallel having little insight into the mechanisms of an existing industry. To overcome this the answer was to apply managerial logic, acquire the lacking knowledge in the form of new managers and to start exploiting this knowledge to leverage the superior technology, which was fully realized when the whole venture was finally exploited via an industry sale, transforming the business into a conventional one.

## Discussion and Conclusion

The case describes one and a half decades of the development of an entrepreneurial firm that managed within only a few years to expand its business worldwide. Our analysis was using effectuation as an entrepreneurship theory (Sarasvathy 2001) and a prediction-control framework (Wiltbank et al. 2006) to show how a firm is able to create value throughout different stages of its development, drawing on different mechanisms that allow the venture to establish and expand internationally and in global market niches (cf. Sarasvathy and Dew 2005). We applied this framework and theory with a process philosophy in mind, emphasizing the events and unfolding changes that happen over time (Van de Ven and Engleman 2004) rather than fitting the case into a certain quadrant of Wiltbank et al.'s (2006) framework. As a result we gained a number of insights which might be further discussed.

First, overall effectuation (Sarasvathy 2001) is a theory which might serve IE to substantially advance its further development as a discipline because it enables us explain different approaches and mindsets of international value creation *vis-à-vis* the developmental stage of the organization and the opportunity that is being realized. It is a useful

entrepreneurship theory which convincingly explains how entrepreneurs function differently from managers and therefore provides a basis to further develop gap filling knowledge about how MNCs emerge from small entrepreneurial firms. In combination with that, the larger framework of emphasis and control (Wiltbank et al. 2006) is useful. In that framework effectuation is positioned as a transformative approach which entrepreneurs apply. As such it helps us understand the mindset and subsequent actions of entrepreneurs and the development of their firms as it explains why and when firms change behaviour in their development. As our case analysis has shown there is substantial explanatory power in investigating how behaviour is changing with varying degrees of belief in predictability and control. We recommend that this framework is used to consider possible developments rather than being used as an ordering framework for when firms developing knowledge of dynamic processes of the internationalising entrepreneurial firm. That this framework is used to consider possible developments rather than an ordering framework for firms. We have seen with the Marioff case that a firm may go through several stages, and we have been able to explain how a development from visionary to transformative to adaptive to planning occurs in relation to the shifts from an entrepreneurial to a managerial firm, which draws on different rationales and processes, usually expressed as balancing exploitation of given and development of new knowledge (March 1991), in the way it creates value.

Secondly, the use of the control and prediction framework, supported by effectuation theory, provides IE with the means to combine knowledge of how entrepreneurs function with knowledge about the MNC. It may provide explanations as to why young firms have been found to have certain advantages in their early internationalization (Autio et al. 2000) compared to older (more managerial) firms. It also gives us a framework to explore new ways of investigating what happens at the 'phase change', when the firm switches from entrepreneurial to managerial behaviour and opens up new ways of looking at qualitative changes within the firm. This might add to our understanding of the process of internationalization as, for instance, prominently described by Johanson and Vahlne (1977, 2003) and it might establish differentiated views on the mechanism of how value is created in the process. Entrepreneurs tend to process reality in different ways than managers do (cf. Sarasvathy et al. 2008,

p. 46), which should influence the way the firm processes its knowledge and makes decisions concerning market entry and value creation.

Thirdly, arriving at IB, this approach to look at qualitative changes in the firm from its entrepreneurial beginnings to its development into a MNC might give us insights into the making of MNCs. Currently, major theories about foreign direct investment (e.g. Dunning's Eclectic Paradigm) tend to accept the fact that a MNC's success in terms of its value creation capacity can be explained by a number of factors, like firm-specific advantages, location-specific advantages and internalization choices. It nevertheless does not help us understand how these types of firms came to enjoy these advantages in the first place. In that respect IB would not only be influential for IE but IE could contribute to answering some fundamental questions about IB.

Fourthly, most influential theories developed for MNCs and INVs (e.g. Oviatt and McDougall 1994) are ex-post rationalizations of successful outcomes. We suggest investigating the development of entrepreneurial firms which might grow into MNCs, applying a process theoretical lens and using event-driven methods (e.g. Aldrich 2001; Van de Ven and Engleman 2004). This approach may help us learn more from failures, for instance when entrepreneurial firms fail to recognize their limitations when constructing their environments, or under which conditions such limitations might be encountered.

In addition it is important to analyse what the boundary conditions are under which such a new theoretical trajectory using effectuation logic applies. We suggest that firms should be investigated in terms of their mindset at the onset of their internationalization. How do they see their future? Do they emphasize understanding international environments and prediction of what their environments might become? Or do they focus on elements which they can actively control? This is all in all a very interesting question, which has already, in fields other than IB, created paradigm wars (cf. McKelvey 1997), by debating whether the firm needs to respond to naturally occurring phenomena outside its own direct influence or make its own decisions which influence its further development. As our approach to explaining entrepreneurial internationalization has shown, it may be that both paradigms are valid at different stages of a firm's development and to different degrees. What is important is to investigate the actions of inter-

nationalizing firms over the course of their development with one critical phase being the phase change from entrepreneurial to managerial.

Further research should be directed to put emphasis on the behaviour of internationalizing firms and towards the mindset they have at various developmental stages. For entrepreneurial firms that become managerial MNCs it might give substantial insights into how to benefit from the different operating logics of entrepreneurs and managers, and to accept clearly what constitutes the boundaries of either approach in order to optimize the international development of such firms. In addition this might lead us to a new way of making sense of a new discipline which integrates vast knowledge of IB with new theoretical insights in entrepreneurship, and in return provides answers to some of the larger remaining questions in both parent disciplines.

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# 6

## A Service-Ecosystem Perspective on Value Creation: Implications for International Business

Valtteri Kaartemo, Melissa Archpru Akaka,  
and Stephen L. Vargo

### Introduction

In international business (IB), value is generally considered as something that is created in a global value chain (Gereffi et al. 2005). Conventional views suggest that companies engage in exchange with other companies across different countries in a somewhat sequential manner (e.g. from raw materials, to production, to wholesalers, to retailers), and value is added along the way (Funk et al. 2010; Kumaraswamy et al. 2012). Nevertheless, there is not much discussion on how value is created or

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V. Kaartemo (✉)  
University of Turku, Turku, Finland

M.A. Akaka  
Department of Marketing, Daniels College of Business,  
University of Denver, Denver, CO, USA

S.L. Vargo  
Shidler College of Business, University of Hawai'i at Mānoa,  
Honolulu, HI, USA

derived throughout these interactions. Instead, in line with neoclassical economics, it is generally assumed that value is created through firms' participation in value chains and, ultimately, 'consumed,' or destroyed, by individual customers.

Johanson and Vahlne (Eden and Winners 2009) criticized that by inheriting the ontological and epistemological premises from economics, IB scholars became 'prisoners' of neoclassical economics. They argue that this approach is notorious for treating business processes as separate from the surrounding society. In response to this narrow view, Johanson and Vahlne (2009) revised their original Uppsala model to discuss firms in a network type of environment. They explicitly note that a firm's success depends on its role in one or more networks. In addition, they have recognized that knowledge is created in the relationships embedded in these networks, and that knowledge is 'context-specific' by nature. However, there is still a lack of consideration of the underlying complexities of the social and cultural context (Akaka et al. 2013) through which value is created in international markets.

From time to time, IB scholars encourage studies regarding context. Most notably this happened in the stream of comparative marketing in the 1960s and 1970s. However, since then, attention toward comparative marketing has faded. Consequently, IB research has not developed an understanding of social complexity and the co-evolution of marketing systems and their environments (Cantwell et al. 2010) that could have emerged from comparative marketing studies. It seems that this lack of understanding dynamic contexts may be a central reason for why the IB discipline has been 'running out of steam' (Buckley 2002).

We argue that a shift toward understanding context is needed if IB scholars want to advance the discipline in such a way as to explain the social and cultural complexities of exchange (Calhoun 2010; Sullivan et al. 2011). This is because following the philosophical premises of neo-classical economics limits the potential of IB research in understanding and analysing the social and cultural context within which exchange and value creation occur. Thus, developing a deeper understanding of context can potentially revive momentum in IB research, distinguish this body of knowledge from mainstream economics, and provide important

insights into other disciplines (Calhoun 2010; Michailova 2011; Toyne and Nigh 1998).

In this chapter, we propose a service-ecosystem perspective (Vargo and Lusch 2011) to understand how context influences and is influenced by value creation in IB. Earlier, Akaka et al. (2013) indicated that a service-ecosystem perspective can potentially aid researchers in understanding international markets in a more comprehensive manner. Thus, we draw on their work to discuss the complexity of context in international markets, and how this can help us to refocus our attention on the relationship between international businesses and the environment within which they are embedded. More specifically, as a contribution to the discussion on value creation in IB, we argue that a service-ecosystem perspective can help develop an understanding of value creation beyond the conceptualization of a value chain. Rather than focusing on differences between systems (e.g. firms and public actors) or markets (e.g. foreign and domestic), we contribute to understanding how value creation can be interpreted as a part of a complex context.

## **Comparative Marketing Scholars as Pioneers of Contextual IB Research**

Comparative marketing is a topic of IB that centres on the study of marketing flows, marketing-environment relationships, constraints of the environment on systems, actor characteristics, structures, and institutions in exchange systems (Boddewyn 1981; Iyer 1997). Scholars of comparative marketing (for a review, see Boddewyn 1981) have studied differences among broad national systems (macro-level), such as institutional development, or their specific components of national systems, such as consumer behaviour and segments (micro-level). Whereas macro-level studies mostly concentrated on the differences between countries, the micro-level studies focused on discovering the similarities in customer behaviour so that marketing managers could minimize costs and effort with the use of standardized strategies in several countries.

While some scholars of comparative marketing compared the key concepts separately from one country to another, Bartels (1968a, b) focused on the relationships between a marketing system (interactions among individuals acting in various relationships, sets, or channels involved in the distribution of goods and services') and the broader social environment in which marketing is performed. For Bartels (1968a) the comparison of marketing systems and marketing environments did not make sense, as these resulted only in descriptive studies. Instead, he considered that a focus on comparing relationships between a marketing system and its environment in two or more countries had the potential to reveal the orientation of each marketing system to its complex environment. This kind of comparative analysis is required to study the actions and interactions of participants in the marketing process operating under the constraints of their respective societies. Here, Bartels (1968a) was interested in both non-human aspects of the marketing process, such as products, prices, channels, markets, and institutions as well as human aspects, namely social systems, roles, behaviour, interaction, and management. Being based on social interaction, marketing was considered as 'subordinate to social objective', and as a result being guided by social ethics and society's primary institutions, and 'even to the alteration of conditions of the market and of behavior patterns within it' (Bartels 1968b).

Thus, comparative marketing was an IB topic that had the potential to study the influence of context (e.g. different cultures and markets) on exchange and value creation. Unfortunately, if comparative marketing was considered as being 'green' after the first 25 years (Boddewyn 1981, p. 61), now it can be declared grey. It never reached mainstream status in the IB literature, as the conceptualizations of comparative marketing scholars have not perpetuated or spread throughout the IB research stream.

One of the rare IB scholars who has built directly on the insight of comparative marketing scholars since early the 1980s is Gobalkrishnan Iyer (1997). Iyer was influenced by new institutional economists (North 1990) who enabled him to realize that a systems view requires more than a simplistic analysis of the structures and functions of a market. Iyer (1997, p. 533) argued that 'variations in national marketing systems can be established on the basis of their institutional environments as much as from strategic responses of organizations comprising the

system'. However, IB studies remain characterized by system-level divides between individuals and groups and organizations. Furthermore, studies of organizations, individuals, and groups are separated from scholarship on economic and social systems (Molloy et al. 2011). These shortcomings reveal the need for multi-level studies in IB, as called for in the interaction paradigm for IB (Toyne and Nigh 1998).

Toyne and Nigh (1998, p. 866) apply an interaction paradigm and perceive IB as 'a multi-level, hierarchical process that evolves (or emerges) over time as a consequence of the interaction of two or more socially embedded, multi-level business processes'. In line with Bartels, they suggest that neither companies nor IB phenomena are identical within or across national contexts. Therefore, they argued for focusing on *interaction* as a means for explaining the emergence, continuance, and individuality of business processes and IB phenomena. These views were later echoed by Calhoun (2010), who considered that IB would benefit from new theoretical insights from emerging market characteristics, and societal and market path dependence, which can be identified in complex international contexts. In brief, she argued for a revolution to a context-focused paradigm that shifts attention away from firm actions to contextual variance. Nevertheless, neither interaction nor context-focused paradigms have captured the attention of the majority of IB researchers. As a result, similar to comparative marketing they are far from paradigm status in the field.

It is important to note that the heritage of comparative marketing can be seen more clearly in other fields of study. For instance, macro-marketing was also heavily influenced by Wroe Alderson (Shaw and Jones 2005) and has revived attention in marketing systems (Layton 2007, 2015). Interestingly, Iyer (1997) considers that researchers associated with the Industrial Marketing and Purchasing (IMP) group are also important contributors to comparative marketing thought, with their focus on understanding business network relationships.

We expect the further development of IB to occur in a Kuhnian way, by extending the knowledge of existing models or through a scientific revolution, which revises existing beliefs or practices. In other words, IB researchers and practitioners can continue to adapt and apply models using a "manufacturing mentality" (Ryans et al. 2003, p. 589) or develop

new theories and models using an alternative. We argue that adapting an old mentality is insufficient for understanding the context of IB and propose a more encompassing approach that takes into account the dynamics of the relationship between a marketing system and its environment, which has the potential to advance our thinking in value creation. In particular, we draw on a service-ecosystem perspective that reconciles ideas from the IMP school, new institutional economics, and macro-marketing into one broad and cohesive framework (Vargo and Lusch 2016; Vargo 2009; Wieland et al. 2015). In doing this, we highlight an evolving approach to exchange and value creation that is in line with the comparative marketing perspective (Boddewyn 1981), the interaction paradigm of international business (Toyne and Nigh 1998), and the context-focused paradigm of IB (Calhoun 2010). Below, we introduce how a service-ecosystem perspective integrates systems and environments by drawing attention toward the complexity of the context of value creation in IB.

## A Service-Ecosystem Perspective

Service-dominant (S-D) logic was introduced by Vargo and Lusch (2004, 2008) to reframe ‘service’ as a concept that transcends and unifies ‘goods’ and ‘services’. This alternative approach to thinking about exchange advanced our thinking about value creation. The evolution of S-D logic has led to the discussion of service ecosystems, which are defined as “a relatively self-contained, self-adjusting system of resource-integrating actors connected by shared institutional arrangements and mutual value creation through service exchange” (Vargo and Lusch 2016, pp. 10–11). This service-ecosystem view emphasizes the role of context in value creation, both international and domestic, as a complex phenomenon emanating from a few central constructs: service exchange, integration of resources, value co-creation, and value-in-context (Akaka et al. 2013). In addition, attention towards the importance of institutions in value creation has grown (Vargo and Lusch 2016). To summarize, an S-D logic, or service-ecosystem perspective, is grounded on five axioms (Vargo and Lusch 2016, p. 18):

**Axiom 1** Service is the fundamental basis of exchange.

**Axiom 2** Value is co-created by multiple actors, always including the beneficiary.

**Axiom 3** All social and economic actors are resource integrators.

**Axiom 4** Value is always uniquely and phenomenologically determined by the beneficiary.

**Axiom 5** Value co-creation is co-ordinated through actor-generated institutions and institutional arrangements.

With its five axioms, a service-ecosystem perspective shifts a singular focus on firm-specific resources toward the integration and generation of adaptive resources, which can reduce resource depletion, or increase availability, and create alternative service solutions. In this view, it is the perspective and knowledge of people, such as employees, customers, and other actors, that differentiates resources from resistances and drives value creation in both global and local markets (Akaka et al. 2013). Thus, value creation within 'global value chains' is driven by the integration and application of resources within complex networks (e.g. organizations, industries) that interact across national and cultural borders.

Interestingly, a service-ecosystem perspective draws on a dynamic systems approach to study the interaction and exchange of service among various stakeholders. It emphasizes the role of institutions (Williamson 2000) in governing interactions of several actors that participate in value creation. However, these same institutions are also composed of human actions and interactions at the micro-level, i.e. duality of structure (Giddens 1984). Therefore, meso- and macro-level systems and structures are formed and reformed through individual actions and the reproduction of relationships and shared meanings (e.g. social norms and cultures).

This service-ecosystem approach has the potential to broaden the scope of IB beyond a firm-centric view that has been criticized by Calhoun (2010) and Toyne and Nigh (1998). It provides an insight into understanding the dynamics of exchange relationships in multi-level markets (e.g. local,



national, global). Importantly, this dynamic, multi-faceted approach provides important insights into what underpins the complexity of the context that frames value creation in international markets (Akaka et al. 2013).

## Service-Ecosystem Perspective to Value Creation

Regardless of calls for more interactive and contextual approaches for advancing IB, the mainstream literature about IB implicitly maintains the view that firms create value, which is eventually destroyed by customers. Even the internationalization of services literature has focused on firm-level resources, as well as management and firm characteristics (Javalgi and Martin 2007) with limited attention being paid to the social and cultural context of value creation.

Alternatively, a service-ecosystem perspective reconceptualizes what value is and how it is co-created by joint efforts among firms, customers, and other actors (e.g. suppliers, government agencies, nonprofit organizations) (Vargo and Lusch 2008). According to a service-ecosystem view, value-in-exchange is only a nominal representation of value; the “real value” or value-in-use (Smith 1776) is derived and determined through the integration and application of resources. This distinction between value-in-exchange and value-in-use sheds light on how customer perceptions of particular market offerings vary across countries (Akaka and Alden 2010). In particular, a service-ecosystem perspective provides insight into the dynamic nature of IB by suggesting that value is always derived and evaluated by the customer (Merz et al. 2009; Vargo and Lusch 2008).

In a service-ecosystem perspective, exchange is embedded in social interactions and the resource integration practices of multiple actors (Korkman et al. 2010). This points toward resource integration as a central practice in value co-creation (Akaka and Chandler 2011; Vargo and Akaka 2012). Importantly, as exchange and resource integration are embedded within a variety of contexts, value creation is influenced by interactions that take place outside of dyadic transactions, including international markets (Akaka et al. 2013).

Thus, a service-ecosystem perspective and its conceptualization of value co-creation emphasizes the embedded nature of exchange in social context (Edvardsson et al. 2011) by focusing on value derived through use of market offerings in complex social and cultural contexts (Vargo and Lusch 2011). ‘Value-in-context’ (Vargo et al. 2008) articulates the value that is derived and determined through the integration of a market offering with other resources, in a particular context. In this view, value co-creation is not only influenced by the use of firm-specific resources, management, or firm characteristics, but also by contextual factors, such as networks of relationships, social structure, and cultures (Akaka et al. 2013; Chandler and Vargo 2011; Edvardsson et al. 2011). Together these different layers offer a view of markets that includes multiple levels of interaction, namely micro-, meso-, and macro-. These levels are relative to each other (i.e. not fixed) and an analytical meta-layer reveals the relationship among the nested levels that enables researchers to understand the connections among different levels of interaction and how the ecosystem evolves over time (Akaka et al. 2013; Chandler and Vargo 2011).

In short, this approach emphasizes how micro-level interactions constitute meso- and macro-level contexts, and vice versa. For example, at a micro level, a dyad (e.g. firm and customer) might frame the integration of resources by each actor as well as the value derived and evaluated from that particular encounter (Chandler and Vargo 2011). Each actor that engages in exchange is guided by sets of institutions (Williamson 2000), or institutional arrangements (Vargo and Lusch 2016) at meso- and macro-levels. When similar institutional arrangements (e.g. common cultures and/or social norms) guide the actors entering an exchange encounter, the value co-creation is more likely to occur. However, if the institutional arrangements vary widely between the actors (which is often the case in IB), the likelihood for value co-destruction (Plé and Cáceres 2010) increases.

In order to illustrate this, we consider the context of global shipping. In the shipping industry, a shipyard typically aims at building container ships that are heavily standardized in order to reach economies of scale. They justify the need for lower costs by the ability to decrease capital expenditure by shipowners. Yet, shipowners encounter various actors in their

daily operations, depending on whether they operate the ships or lease them out. As a result, they may find out that a standardized vessel is not suitable for them and, with higher operational costs, value creation is limited. For instance, if the operator is a member of a carrier alliance (where vessel-sharing agreement is a common practice), other shipping companies may believe that the standardized vessel is not efficient enough and is not accepted by other members of the alliance for vessel-sharing. Similarly, the vessel can be too wide to dock at some of the ports in the route it was planned to serve. Likewise, inefficient engines may consume a lot of fuel and as a result raise concerns in environmental organizations, which makes the ship less appealing for environmentally-oriented third-party logistics companies or cargo owners. This is important because in the aftermath of the COP21 climate conference, several large logistics companies are under pressure to meet their clients' requests to meet particle emissions standards before they agree to do business with them. Naturally, the general shifts in international trade at a macro-level also have a great impact on the demand in global shipping. For instance, 3D printing is becoming a common practice that can significantly reduce the need to ship ready-made items globally, which makes container ships more obsolete. Thus, a value proposition (standardized container ship with lower capital expenditure) that initially seems to be value creating for both parties (lower cost for both shipyard and shipowner) may in the end result in challenges in value creation as both parties are nested in a complex global context.

These contextual limitations can be particularly devastating for small- and medium-sized enterprises (SMEs), but can also provide interesting business opportunities. For instance, counteracting institutional arrangements in global shipping have encouraged start-ups like FreightOS and Xeneta to serve the needs of shippers. Zvi Schreiber, Founder of FreightOS, became frustrated with the industry practice of waiting 'a day or two to get a quote for door-to-door freight'. In 2013, FreightOS created an online solution for freight forwarders to make instant quotes and a platform for shippers to compare prices. In doing so, this company brings together big data on various fees: trucking, ocean liner, fuel, handling and port fees. As a result, they contribute to the co-creation of value derived by shippers and freight forwarders. This solution can also be seen as proposing value to the wider ecosystem, as automation of instant freight quotes eliminates invoicing errors that, according to

the company, cost the industry millions of dollars annually. In addition to the monetary benefits, they recently added a way for importers to cut their carbon footprint, thus addressing rising environmental concerns at the COP21 climate conference.

Xeneta was established in 2012 to provide the world's largest database of contracted freight rates. The founders became frustrated with the high volatility and lack of transparency in the ocean freight market. As a solution, they crowdsource data of contracted shipping prices from thousands of shippers. The integration of these resources and analysis of the data provide intelligence that was not available earlier. As a result, shippers are able to make sense of the quoted rates they get from their carrier and compare it to the real contracted rates of the market. Although, according to the company, some shippers have stated that they pay 40–50 % more than the market average, it takes time for shippers to understand that there is a tool that can help them negotiate a better deal, and give them the information they need to make better decisions during the tendering process. It has also been difficult for some people to accept that the previous way of doing business is not the most efficient way and that requires a change in mindset. Therefore, Xeneta needs to educate the shippers that technology and big data can make them more efficient as well as change their supply chain strategy by simply being better informed with facts. At the same time, the shipping companies are losing their potential to make more money, and they are not happy to see a change in the pricing system that has existed for decades.

Value creation of shippers and carriers can thus be seen as being influenced by SMEs. These SMEs may create new markets within the institutional arrangements of highly institutionalized international markets like global shipping. Yet, these companies are simultaneously influenced by other institutional arrangements, which enable and constrain exchange and value creation, such as changes in international trade patterns, trends in environmental awareness and advances in digitalization.

For IB, this broad view of context incorporates multiple levels of interaction and intersecting and overlapping institutions, but suggests that driving the formation and reformation of these meso- and macro-levels of structure is the enactment of practices and the co-creation of value. In other words, this lens helps refocus the initiative of IB on understanding the fundamentals of value creation and exchange.

By focusing on institutions and institutional arrangements as the foundational social aspects of value creation in service ecosystems, IB scholars can better understand the origins of broader meso- and macro-level changes. Value co-creation drives market (re)formation by changing the landscape of local, national, regional, and global contexts. This is because, as actors enact practices and integrate resources across countries and cultures, they are guided by diverse institutional arrangements, both complementary and competing. The integration of different perspectives of value and enactment of different practices within a particular local, regional, or global context can potentially lead to the development of new institutional arrangements that shape new markets.

This emphasis on institutions highlights the social and cultural context that exists beyond direct interactions between firms and customers and the physical and social environments that surround them. Most importantly, it broadens the scope of the IB context to include all global market interactions and their associated institutions. In other words, because experiences are influenced by direct and indirect interactions among multiple actors, the context of value creation is not limited to particular ‘types’ of products or encounters. Furthermore, by focusing on how institutions influence value creation, it becomes clear that unique experiences often emerge from differences in institutions and socio-historic perspectives rather than heterogeneity of products. This view of context provides insights into the dynamics of IB that can help to guide future research in exploring how value is co-created (Akaka et al. 2013; Akaka and Vargo 2015). This approach suggests that value creation is not based on discrete moments in time through direct interactions between firms and customers; rather, value is created through complex social and cultural contexts. These contexts are formed and reformed through iterative and recursive social and cultural processes, and value is created and recreated over time and space (Akaka and Vargo 2015).

## Conclusion

International business has been criticized for running out of steam (Buckley 2002) and being a ‘storer’ of knowledge rather than a source for other disciplines (Sullivan et al. 2011). In line with Calhoun (2010) and

Michailova (2011), we consider that the lack of energy in the discipline is due to a lack of focus on context. Interestingly, this view has been shared by some of the leading names of the field. For instance, Dunning (2009) suggested that the eclectic paradigm needs to be revisited as functional approaches cannot explain complex IB phenomena. Moreover, the revision of the Uppsala model (Johanson and Vahlne 2009) can be seen as a part of a wider paradigm shift focusing on the market complexity and context instead of searching for generalizability (Calhoun 2010).

Prior proposals for moderate changes in incorporating context in IB literature have drawn attention to the environment within which value creation occurs, but the ongoing focus on firm actions and characteristics continues to limit the advancement of the field. In other words, the positivist assumptions of reality result in the dominance of de-contextualized research (Welch et al. 2011). Therefore, any attempt towards contextualization of IB research requires a shift in one's philosophical orientation. Welch et al. (2011) conclude that contextualization requires a paradigmatic change in IB thought. We believe that advances in IB theory are going to be made when IB shifts the focus away from firm-centric studies to multi-level processes, which evolve over time as a consequence of the interaction of two or more socially embedded, multi-level business processes (Toyne and Nigh 1998). Somewhat ironically, shifting away from a firm-centric lens and focusing on understanding the complexities of context can potentially improve understanding of firm behaviour within IB (Calhoun 2010).

We argue that a service-ecosystem approach provides an alternative, and arguably unifying, lens for studying IB, which can help bridge the gap between efforts to understand a multitude of diverse, international contexts and efforts geared toward developing underlying theories for dynamic systems of exchange. In particular, S-D logic's emphasis on service reconsiders the resources and processes which are involved in value creation and stresses the complexity of all contexts through which value is derived and evaluated. Thus, we argue that this service-ecosystem perspective is a viable alternative for facilitating paradigmatic change in IB.

Importantly, a service-ecosystem approach enables the consideration of exchange and value-creation in a specific environment (local or global) within the context of different levels of systems in a dynamic manner. By

oscillating foci across different levels of a service ecosystem we can have a rich understanding of the environmental forces that influence, and are influenced by, service exchange and value creation. Associated reframing of exchange and value creation provides a broader, but realistic scope, for traditional research topics in IB. For example, the market entry decision or the entry mode choice becomes a study of institutions and networks of actors that weave in and out of national borders as well as micro-, meso-, and macro-levels of interaction and analysis. Similarly, innovation is no longer what occurs within the firm but something that emerges through in an ever-evolving service ecosystem, in which it is continually co-created. Global supply chains morph into global human resource systems of service-exchanging actors, in which liquefied information makes distinctions between offshoring and domestic business increasingly irrelevant. Furthermore, the conceptualization of value-in-cultural-context (Akaka et al. 2013) offers a more dynamic view of culture than conventional frameworks in IB, which traditionally centre on how collective values influence individual behaviours (e.g. Hofstede 1980).

The concepts of value co-creation and value-in-context imply that, rather than segmenting customer characteristics and targeting customers through standardization or adaptation techniques, managers can consider the social and cultural contexts that frame particular market interactions and focus on contributing to the creation of value and shaping of markets. In general, a service-ecosystem approach shifts the focus from marketing management to questions about how actors enact routine practices to create value (i.e. benefit) for themselves and for others by drawing on and contributing to a multitude of institutional arrangements that comprise various levels (micro, meso, and macro) of social and cultural contexts.

Extending the context of value creation in IB using a service-ecosystem perspective not only provides insight to phenomenological conceptualizations of customer experiences (i.e. diverse interactions and institutions influence experience), but also how contexts are formed. This is important because adopting a service-ecosystem approach to context requires the consideration of how social processes (e.g. institutionalization) shape value creation, and vice versa. This view aligns with Griffith's (2010)

multi-level approach for institutional analysis, which varies among global, regional, and national levels of institutions. This multi-level view emphasizes the way conflicts can arise in multi-level contexts as firms enter foreign institutional environments.

Although the prevailing paradigms have been challenged by several authors (Calhoun 2010; Michailova 2011; Sullivan et al. 2011; Toyne and Nigh 1998), and a move towards context-emphasizing pluralistic research has been encouraged, little is known about what kind of changes are required to shift the paradigmatic thinking of IB in order to successfully explain complex IB phenomena. Thus, much research remains to be done in order to better understand the central practices and resources of particular markets and how they contribute to the uniqueness of those markets and the value co-created within them. In other words, a value co-creation approach to identifying and distinguishing markets, based on differences in practices and resources, is needed to better understand cultural and national contexts and how they contribute to the derivation of value in particular local contexts as well. In addition, the social norms that guide interaction among firms, customers, and other actors should be more closely investigated.

Perhaps most importantly, at this stage, empirical work is needed to apply this dynamic framework toward understanding how conflicting viewpoints on evaluations influence what value is and how it can be created. The congruence of evaluation and viability in value co-creation is an especially important topic for future research because oftentimes what is considered as valuable at a micro (e.g. local) context may not be considered as such at meso- (e.g. national) or macro-levels (e.g. global), and vice versa. Advancing the understanding of multiple levels of social and cultural context and contextual change will provide a more comprehensive understanding of what market cultures are and how value is co-created in IB systems.

**Acknowledgment** This book chapter is part of the research programme REBUS, which is one of the research programmes of the Finnish Metals and Engineering Competence Cluster, FIMECC. REBUS is funded by the Finnish Funding Agency for Technology and Innovation (Tekes).



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# 7

## More Than Just One Middleman: On the Value of Different Entry Modes by SMEs in Foreign Markets

Mette Vedel and Per Servais

### Introduction

Trade and inter-company relations, in other words international business (IB), has been a subject of academic research since the early twentieth century. Until the end of the century studies in IB had focused on export activities, foreign direct investment, technology transfer, and the management of multinational corporations (MNCs) whereas less attention was directed towards small- and medium-sized enterprises (SMEs). The theoretical bases for research into the cross-border activities mainly emerged from economics, business strategy, organizational development, and political science. This literature explains the success of international firms as a result of various characteristics; such as strategy, structure, performance, size, ownership, marketing, internal organization, etc. It is a basic assumption in economics that firms are rational economic actors,

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M. Vedel (✉) • P. Servais

Department of Marketing and Management, International Business & Entrepreneurship, University of Southern Denmark, Odense, Denmark

and the close link between IB and economics has resulted in a preoccupation with the more or less 'optimal' entry mode decision relating to a particular foreign market at a given point in time (Benito and Welch 1994). The normative literature in international marketing frames such decisions as a rational response to conditions in the market, which are seen to be made on the basis of objective information gathered systematically via market research (Ellis 2000).

Over the past three decades more attention and increasing interest has been directed towards the change of initial entry decisions, the ways in which relationships between entities evolve over time and influence the decision-making process, and the interplay of market servicing decisions and other aspects of the internationalization of the firm. This line of research focuses on internationalization as a process. Welch and Luostarinen (1988) set out to unravel the fundamental characteristics of the internationalization process. In this process they uncover two concepts occasionally applied in the context of internationalization, namely international orientation and international commitment. Furthermore, they contend that internationalization is not just an outward movement, but a process that could assume both directions: inward and outward. They argued that internationalization is 'the process of increasing involvement in international operations' (*ibid.*, p. 84). This definition eventually became one of the most recognized and accepted within the IB literature. Lu and Beamish (2001) focus specifically on the international expansion and performance of SMEs. The result is that an expansion into new geographic markets presents an important opportunity for growth and value creation, but the implementation of such a process also involves many unique challenges in addition to those common to domestic expansion.

Johanson and Vahlne (2003) focus differently. They assume that all relevant business information is channelled through network relationships and that each of these relationships is unique due to the characteristics of the relationship partners and the history of the relationship. In a business network perspective entry problems are not associated with foreign country markets as such. Entry is a matter of getting access to specific customer or supplier firms and therefore the managerial challenge lies in problems associated with the establishment and development of relationships with suppliers and customers. Relationships are important because they offer

general relationship and network development experience, which can be applied more generally, besides the partner specific knowledge. Based on these insights, Johanson and Vahlne (2009) updated their original Uppsala process model of internationalization first proposed in 1977. Their rethinking offers a renewed network view of the internationalization process in which they outline the lack of access to business networks as the core obstacle for internationalization. Consequently, successful internationalization is a matter of overcoming liability of outsidership rather than liability of foreignness. Knowledge about the market, which formerly was assumed to be the crucial condition for internationalization, is still important, but learning and commitment in relationships is the prime condition for strategizing of network positions, which offer access to new markets.

Harris and Wheeler (2005) focus slightly differently when they list five roles of networks in the internationalization of firms. Networks can:

- provide information on business opportunities and business partners in international markets and transfer general market knowledge
- provide an introduction to unknown possible business partners located far away
- create access to international marketing networks, such as distribution networks, and legitimize the firm in the market
- provide a basis for interacting with others thus making it possible for a firm to learn and develop skills needed in internationalization
- may also inhibit the international growth possibilities for the firm.

This list of roles emphasizes that the use of networks can decrease the slowing effect of resource scarcity, liability of newness and foreignness, on rapid globalization. To further elaborate this Coviello (2006) and Zhou et al. (2007) turn to social network relationships and their impact on the internationalization patterns of firms. They combine current research on social networks and social capital in the international context with the network theory of internationalization and through this combination they aim to explain how personal relationships are transformed into exchange relationships, and how this transformation contributes to the early and rapid internationalization of new firms.

They suggest that particularly in the early phases of internationalization, new firms focus on exploiting the existing ties instead of adding new ties. When they move on to building new ties, they exploit their existing ties to find new partners and take advantage of existing international network relationships to increase their attractiveness. Moreover, they found that it is useful to divide the internationalization process into two phases: early internationalization, which is aimed at gaining access to global business; and subsequent international growth. This finding is further elaborated by Zhou et al. (2012) who claim that early entry into foreign markets mitigates the liability of outsidership, because early entry not only enables young internationalizing firms to become insiders, but also helps them secure better positions in foreign market networks. As a result, early international market entry may be a source of entrepreneurial advantage for young internationalizing firms to develop market specific knowledge and capabilities required for successful internationalization, particularly in new and rapidly changing environments.

Still, few studies go beyond the actor and the dyad in spite of the expanding interest in a network approach to internationalization. In the following we discuss how an expansion from dyadic relationships to three actor constellations, i.e. triads, can support the study of internationalization processes. Moreover, we discuss potential insights offered when combining the emerging net perspective of Industrial Marketing and Purchasing (IMP) with a more structural perspective of networks.

## Entry Nodes and the Value of Intermediation

A network approach to internationalization implies a change of perspective from the significance of the entry mode to the significance of the network position. The link between network position and internationalization is explicated in the concept of entry node (Hilmersson and Jansson 2012; Jansson and Sandberg 2008; Sandberg 2013), which focuses on how a firm connects into a foreign business network. When the first contacts are customers the entry node is defined as direct. The dyadic entry node includes two modes (i.e. direct sales from a subsidiary in the host country and direct exports from the home market to



customers in the foreign market). When the entry node is an intermediary either in the home or host country, the entry node is defined as triadic; it involves a third actor. The entry node concept does not substitute the entry mode concept. Rather the two concepts are complementary (Sandberg 2014). This is evident when combining the concepts of dyadic and triadic entry nodes (Hilmersson and Jansson 2012; Sandberg 2013) and the high versus low control mode described by Chetty and Agndal (2007). The triadic mode is regarded as the least committed entry node and a low control mode, direct export as a more committed situation and a medium control mode, while subsidiaries/joint ventures are defined as high commitment nodes and high control modes.

Finding and choosing an entry node is the first step in an entry process in which the exposure network, characterized by information exchange, gradually develops into a formation network in which social exchange develops in order to reach the end goal which is to establish a sustenance network (i.e. an organization set), which is closed enough to sustain the business (Hilmersson and Jansson 2012). In the study of entry nodes the ideal sustenance network is described as a closed network which 'consists of a few strong social ties, which then form the core of the local business network, being the major network behind achieving insidership' (ibid., p. 686). This quote indicates that insidership is best achieved through a collection of dyadic entry nodes. Still, insidership is not a goal in its own right, but a means to create and appropriate value in business relationships.

In spite of the conceptualization of the ideal sustenance network as a collection of dyadic entry nodes, the choice of an indirect triadic entry node does not necessarily prevent the entering firm from gaining experiential knowledge of a market, and a relatively high number of triadic entry nodes survive (Sandberg 2013). This observation indicates that sustenance networks can include triadic entry nodes (i.e. intermediaries as valuable partners). This is consistent with the findings of Ellis (2000). In a literature review of market entry research, Ellis (2000) concluded that much research has shifted from the point of view of the exporter to the buyer-seller relationship or the cross-border distribution channel and in addition to the exporter, or seller, other exchange parties may play a role in the foreign market decision. Ellis (2000) furthermore stresses

that future research in this area should take into account the fact that exchange relationships may be: (1) seller-initiated (exporter's initiative), (2) buyer-initiated (an unsolicited order), (3) broker-initiated (sponsored by a middleman or agency), or (4) initiated as a result of a trade-fair/chance encounter. In fact Ellis (2000) is the first researcher to highlight the value of the third party or triadic relationship. Ellis (2000) stresses that an opportunity may first be noticed by some mutually related third party (e.g. government agency, bank, or business associate), rather than by the potential exporter or importer. In fact when analysing a survey of foreign market entry by direct exports nearly half of the population mentioned a third party as the prior social contact (Ellis 2000, p. 454).

So what value does the middleman or intermediary bring? Basically, customer perceived value in a business to business context is defined in terms of the benefit/sacrifice ratio. Benefits as well as sacrifices originate in the combined value of single exchange episodes and the relationship between the two parties involved in the exchange. (Ravald and Grönroos 1996). Consequently, value in business markets originates both in the exchange value of goods and the offering and in the value of buyer-seller relationships. Business relationships can involve interaction over a prolonged period of time from the sourcing/acquisition phase before exchange to the operation after exchange (Menon 2005; Ulaga and Eggert 2006). Not all exchanges are equally demanding in terms of acquisition and sourcing, but the value of any exchange materializes over time as value-in-use (Lapierre 1997).

The role of intermediaries is to supply valuable services including cost-economizing (Bartels 1988), which facilitates interaction and exchange. Studies of intermediary activities centre on logistics (Alderson and Martin 1965), risk (Bucklin 1965), and information (Balderston 1958). The logistic activities involve packing, transporting, storing and sorting. The first three demand some sort of physical resources whereas sorting refers to a decision activity concerned with the creation of sets of similar goods or assortments of dissimilar goods. Sorting therefore primarily demands human resources (Hulthen and Gadde 2007). The risk aspect partly refers to the speculative risk placed on inventories, but also to the availability of liquidity, the risk placed on quality, and contract-fulfilment (Anderson and Anderson 2002; Spulber 1996). Finally, the information

aspect refers to the intermediary's function as a conduit of information. This role is based on the assumption of information asymmetries in the market, which creates a need for the contact and communication system offered by intermediaries (Baligh and Richartz 1964). Intermediaries are therefore regarded as actors, who facilitate trade and the organization of trade (Casson 1997; Spulber 1996). This is what international trade intermediaries do – they facilitate, support and co-ordinate interaction between buyers and sellers (e.g. Ellis 2006; Fung et al. 2007; Peng and York 2001). This, we believe applies to the intermediating actor in the triadic entry nodes, too. The value of a triadic entry node cannot be judged from the entrant party's perspective alone. The value of organizing business in this way must be analysed from the perspective of all three parties in order to understand the resilience of the triadic entry node. The triadic entry node may persevere, because the buyer, the seller or both prefer this arrangement to a dyadic relationship.

Holmen and Pedersen (2003) offer an explanation which goes beyond the value of services related to logistics, risk, and information. They set off from a situation in which two actors are indirectly linked by an intermediary (i.e. a triadic entry node). In such situations the intermediating actor can initiate direct interaction between the entrant and the insider or insulate them and keep them apart. However, Holmen and Pedersen emphasize that insulation also offers advantages for the two insulated actors. The functions performed by the intermediary enable the two indirectly linked actors to economize on resources for mutual co-ordination; they need not know each other. This potential is even more explicit in the description of relating. In this case the two indirectly linked actors are aware of each other, but still they choose to interact through the intermediary. As explained by Holmen and Pedersen (2003) this is an indication that 'if its counterparts are efficient and effective intermediaries, partial ignorance (myopia) may be a suitable basis for a firm's actions aimed at achieving exchange effectiveness' (ibid., p. 414).

The relating function emphasizes that relationship with efficient and effective intermediaries offering direct as well as indirect value functions (Walter et al. 2001, 2003). A business relationship offers valuable functions related to volume, profit, cost-reduction, quality, and safeguard; in

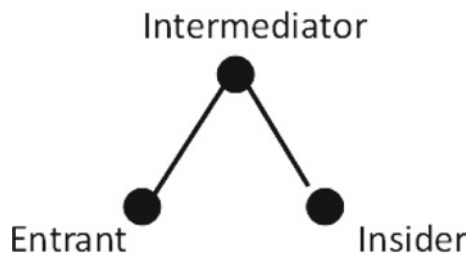
other words a well-established relationship offers a relatively stable source of supply and demand. This present performance related outcome is the direct value of the relationship. In addition a business relationship offer an indirect value function, which is not related to the present performance, but to the future possibilities in the network, facilitated by the relationship. The indirect value function is partly linked to the information and communication aspect of the intermediary's activities. The intermediary offers knowledge about the market as well as access through referrals to new customers/suppliers and contacts with authorities, banks, associations, etc. if the indirect value of a relationship is high. Thus, a high level of indirect relationship value is closely connected to the appropriateness of partial myopia, which involves a reduction of the network horizon. The advantage of having efficient and effective intermediaries is that they offer information from and access to a wider network, but only communicate what is necessary for their counterparts, who can then focus just on the relevant context instead of investing in scanning the broader network horizon (cf Holmen and Pedersen 2003). Sometimes, less is more. However, intermediation is not a one-sided activity, but involves two counterparts; the insider and the entrant. Consequently, the value of a triadic entry node and resulting resilience not only depends on the entrant's perception of the value of the arrangement. The insider's evaluations of the service offered by the triadic entry node are equally important.

## Analyzing Triadic Entry Nodes as Triads

In a network context the word 'node' refers to an actor. Consequently, the entry node concept is concerned with the identity of a specific actor in a network. However, the addition of the pre-fix dyadic and triadic indicates that the concept of entry nodes also refers to two very different structural entities: the dyad and the triad. Simmel's (1950) seminal work on triads describes constellations of three actors in much detail. All actors need not be directly linked for a triad to exist; it is sufficient that they are indirectly linked to one another. The triadic entry node constituted by an entrant, an intermediating actor, and an insider is therefore an open triad.

In Fig. 7.1 the intermediary (i.e. the triadic entry node as an actor) is spanning a structural hole (i.e. he creates the link between two actors, who would otherwise not be linked). His has a brokerage position, which traditionally has been understood as an individually advantageous position, because such positions enable the intermediary to control and manipulate information (Burt 1992). But as pointed out by Obstfeld et al. (2014), this is a simplified understanding, because brokerage involves ‘behavior by which an actor influences, manages, or facilitates interactions between other actors’ (ibid., p. 141). Thus a brokerage position facilitates three different roles: (1) a conduit of information; (2) a *tertius gaudens* who keeps two parties apart, plays them against each other or even creates separation and conflict between them in the role of ‘divide and impera’ (Wolff 1950); and (3) a *tertius jungens* (Obstfeld 2005) who introduces and co-ordinates collaboration between the two.

The role as conduit of information is well described as an intermediary activity and further developed in the concepts of relating and indirect value function described in the former section. The role as *tertius gaudens* refers to the traditional understanding of brokerage as an individually favourable position as described above. As long as the *tertius gaudens* can keep the two others apart, he has an advantage. Finally, the *tertius jungens* initiates direct contacts between entrant and insider, which results in the closure of the triad, as all three actors then have direct relationships and interaction. The above re-conceptualization of brokerage broadens the possible functions of intermediating actors and in the words of Obstfeld et al. (2014, p. 141): ‘opens the door for a more complex consideration of brokerage as a process’. In the context of entry nodes this has a number of implications. Here we will focus on two issues: the closure of triads and connections between relationships.



**Fig. 7.1** The open triad formed by the triadic entry node (the intermediary) and two counterparts

Madhavan et al. (2004) explain that open triads may close for two reasons. If the broker is behaving like a *tertius gaudens*, and the two other parties to the triad get a chance to establish a direct relationship between them, they can counter the intermediary's control of the structure and his resultant ability to appropriate extra value from the business. But the closure may also be motivated by clustering; the collaborative pooling of resources in order to strengthen value creation through specialization. In the case of closure motivated by clustering, where the initiator behaves as *tertius jungens*, the intermediary may maintain his position in the triad in spite of the creation of a direct relationship between the entrant and the insider. This is illustrated in a study of international business relationship triads in which we find examples that the 'intermediary takes care of some of the contacts between the selling party and the buying party, but not all contacts' (Havila et al. 2004, p. 183). Thus, a triadic entry node might change shape from an open to a closed triad indicating a sustenance network in which dyadic entry nodes are not substituting, but supplementing, triadic entry nodes.

Still, closed triads also differ. This variation is grounded in connectedness, degree of cohesion and the ability to act as an entity (Vedel et al. 2016). Here we focus on connections between relationships, which is a concept describing how relationships influence each other in different ways (Emerson 1972). When exchange in one relation has a negative influence on exchange in another relationship the result is competition for resources among the actors. In contrast, connections are positive if exchange in one relationship influence positively on another and create collaboration. Therefore, it is not enough to examine the shape (i.e. open or closed triad) when analysing different types of structures (Molm and Cook 1995). The effects of connections, the way relationships influence each other, must be included, too. However, actors do not perceive of the same network in similar ways (Ibarra et al. 2005). Each actor has his own subjective interpretation of how the relationships in the triad are connected and influence. Therefore, each actor has an individual and subjective perception of the value potential offered by the triad, which also influences the resilience of triads (cf Vedel Forthcoming on the triad value function). Consequently, a comprehensive analysis of the triadic entry node should ideally include all three actors, the content

of relationship, and the actors' triad value functions. Such an analysis offers the foundation for a more nuanced view on triadic entry nodes as dynamic structural phenomena. Still, triads are abstractions from the wider network which also influence the network strategy needed to get an attractive insider position.

## Entry Nodes in the Wider Network

'In a network view, intermediation is not only about connecting two individual firms with each other. Intermediation is also about connecting all the relationships of these two firms and with those of the intermediary' (Gadde and Ford 2008, p. 48). Consequently, the entrant must consider the structure of the wider network when choosing the entry node. Not all actors are equally well positioned to play the intermediary role. It depends on network positions and the structural properties of the network. This line of enquiry is well-established in social network analysis (SNA) (cf. Ahuja 2000; Burt 1992; Coleman 1988). SNA and IMP-based network research share an interest in relationships, named ties in SNA, and in network positions. But, whereas IMP research focuses on the value of strong, long-term and committed relationships, SNA discusses the advantages of weak as well as strong ties. Weak ties offer cost-efficient access to codified knowledge, which is easy to integrate and utilize, whereas strong ties offer access and facilitate utilization of non-codified knowledge (Hansen 1999). Likewise, the perspective on network positions and structural advantage differs. In the IMP tradition, focus is on the position of a focal actor in a net (an ego-network in SNA terminology). In comparison, SNA gives much attention to the advantages offered by different network positions and by different types of network structures.

Ahuja's (2000) comparison of the benefits of indirect ties (as those offered by triadic entry nodes) and direct ties (equivalent to dyadic entry nodes) offers an interesting example. The study shows that both types of ties influence output positively. Indirect ties offer access to information whereas direct ties offer access to information as well as other resources. He concludes that: 'The nature and content of the ties, the type of

outcome being studied, and the broader network structure within which a tie is embedded are all likely to influence the value of a tie' (ibid., p. 450). In other words there is no superior network strategy for value creation; the superiority depends on the network structure. This implies that the structure of the targeted network must be included when assessing which relationships are more advantageous to invest in with the purpose of becoming an insider. The future collaboration potential of a specific relationship should be assessed in the light of the wider network structure in which it is situated. It is not enough to focus on the quality of a dyad (relational embeddedness). The configuration of the network (the degree of structural embeddedness) also influences economic action (Granovetter 1992). The two illustrations below exemplify why the degree of structural embeddedness is of significance when choosing the entry node.

The left-hand structure in Fig. 7.2 illustrates a network characterized by closure and a high degree of structural embeddedness. In structures characterized by closure, everybody knows each other; the actors communicate frequently and share common norms, which breed trust. Structural embeddedness leads to co-operative expectation based on enforcement mechanisms. No matter whether parties to an interaction have any prior history, they expect the other party to act within the norms and rules, because news travels fast. Therefore, the reputation of an actor, who is not complying with the norms and rules, is endangered. For an outsider this implies that it might be difficult to access such a network. But if the

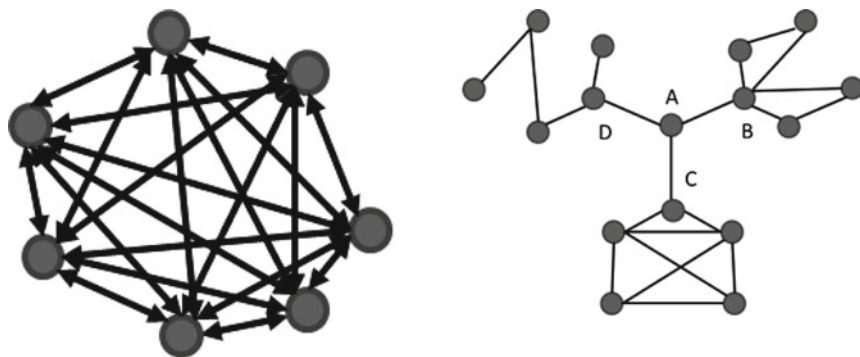


Fig. 7.2 Two different network structures



outsider succeeds in establishing committed and trusted relationships with one or a few selected actors, there is a chance that the network will 'break open', no matter the selected actors' specific position in the network. In the right-hand example this is not necessarily the case.

If the business network in the targeted market is structured as the right-hand network in Fig. 7.2, actor C could be an interesting entry node due to his position in a closed network, which may 'break open' and facilitate the initiation of further strong ties. But from a cost-efficiency perspective the most attractive entry node in this type of network is A. His central position enables him to offer access to the whole network. But, as pointed out by Ahuja (2000), the content of ties also influences network strategy. If the entrant's offering is a specialized, customized, and demand intense interaction with potential customers, C may be a better choice than A. If the entrant succeeds in establishing a close relationship with C, the access to the other actors in C's cluster will probably be easier. These examples illustrate why the entrant must monitor and consider carefully how to benefit from the structural value potential as part of the entry strategy.

Such considerations are only possible if the entrant has an expanded network horizon. The network horizon includes the part of the network that a firm is aware of, which is the basis for a firm's strategizing, and therefore constitutes an important asset when building competitive advantage (Van Liere and Koppius 2007). One way to expand the network horizon is to invest in an open network including multiple social ties in order to access information about the host market, before deciding on the identity of the preferred entry node. This is actually the core of activities in an entrance network (Hilmersson and Jansson 2012). Therefore, this initial stage of the entry process is of crucial significance: the wider a network horizon achieved through the entry network, the more qualified choice of node and mode can be made. Holmen and Pedersen (2003) point out that the relationship offered by an intermediary can substitute a wide network horizon. This concept also emphasizes a final point of interest when taking a network approach to business exchange: that the insider is also an entrant in the insider's network. Still, the two parties may not be equally interested in becoming an insider in their counterpart's network.

## Conclusion

Johanson and Mattsson stated nearly two decades ago that firms internationalize when they establish and develop positions in relation to counterparts in foreign networks. Because of network interdependencies a firm may even be forced to become international if it wants to defend or maintain its position in a particular business network, for example if their business partners establish relationships with counterparts abroad. Further, they suggested that success in internationalization is more dependent on domestic and international networks than on market features (e.g. on the culture of the target market). This indicates that in the internationalization process firms rely on their existing relationships for a number of reasons. They offer contacts to customers, help to develop partners and positions, provide local market knowledge and access to distribution channels, and create initial credibility (see e.g. Johanson and Mattsson 1988; Coviello and Munro 1995). Beyond information sharing and access, existing relationships may initiate unintentional internationalization if a current business partner becomes an active mediator introducing the firm to foreign actors. Coviello and Munro (1995) note that networks can enhance internationalization efforts and compensate for the limited resources, but potentially also restrict the international business. This is so because a firm's problems and opportunities in international business are becoming less a matter of country-specificity and more one of relationship-specificity and network-specificity (Johanson and Vahlne 2009). Hence the conceptualization of outsidership becomes the primary challenge which demands the application of a network perspective in the study of internationalization. In order to profit fully from the network perspective we must go beyond the dyad and the focal net and supplement the studies with a broader understanding of relationships, network positions, and network structures. One first and very helpful step is the addition of entry nodes to the analytic toolbox. The IMP research tradition has offered many important insights through a focused study of one particular type of relationship: direct long-term, committed and trusting business relationships, which characterize dyadic entry nodes. But the resource investment needed to establish such relationships is

of a kind which makes it impossible for firms to develop this type of relationships with all their business partners. The alternative triadic entry nodes are described as transitional and less resource demanding points of access to a network. Still, as pointed out by Sandberg, triadic entry nodes seem to be resilient against substitution with dyadic entry nodes. This observation is the point of departure in our elaboration of the double perspective on triadic entry nodes as intermediating actors and structural entities (i.e. business triads). When combining these two perspectives it is evident that triadic entry nodes can support a number of different entry strategies:

1. A *transitional triadic entry strategy* where a triadic entry node offers initial access to information and network partners with whom the entrant can build dyadic relationships, which substitutes the triadic entry node. In this case the initial structure is shaped as an open triad, which over time is substituted by a focal net of direct dyadic relationships between entrant and insiders. This entry strategy corresponds to the traditional understanding of intermediaries in IB.
2. An *indirect triadic entry strategy*, which is not transitional, but a long-term arrangement in which the triadic entry node offers insulation and/or relates as a less resource-demanding mode of international operation. In this case the structure is shaped as an open triad, which persists over time. This entry strategy offers the foundation for resilient triadic entry nodes.
3. A *combined triadic entry strategy*, which can either exist from the initiation of market entry or develop over time. In this case the triadic entry node is shaped as a closed triad, in which the involved actors profit from the potential for value through specialization. In such arrangements the involved actors can profit from the combined advantages of direct and indirect interaction. This entry strategy supports a specialized division of labour as described by Havila et al. (2004).
4. A *composite triadic entry strategy* which combines one or more triadic entry nodes with one or more dyadic entry. The resulting structure is a focal net including a number of open and closed triads with a number of direct dyadic relationships. This entry strategy corresponds to a multi-channel approach in an international context.

As a last step in the expansion of a network approach to internationalization, the structure of the network into which an outsider wishes to enter must also be considered. As pointed out by Ahuja (2000) there is not one ideal network strategy for value creation: it depends on the character of the ties, the outcome and the network. If so we need to explore how existing knowledge about networks, which goes beyond the dyad and the net, can enlighten the study of internationalization. Another interesting issue is how to study the significance of the bi-directionality of network entry: the entrant is an outsider to the targeted market network, but offers a potential pathway to insidership in its own network. We are therefore convinced that an elaborate network approach to internationalization has much to offer, both in terms of scholarly insights and in terms of relevant managerial insights concerning the potential for value creation offered by various network configurations, from the smallest triad to the wider network.

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# 8

## Value Chain Management Capability in International SMEs

Taina Eriksson, Niina Nummela, Liisa-Maija Sainio,  
and Sami Saarenketo

### Introduction

The nature of international business has changed dramatically during the past decade. In addition to globalization, the growing importance of the ‘non-manufacturing’ sectors has transformed firms’ value creating activities. We are experiencing a service-driven business revolution (Möller et al. 2008) and witnessing the rise of service-dominant logic (see Vargo and Lusch 2004). In this new situation, providers must be close to their

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T. Eriksson (✉)  
University of Turku, Turku, Finland

N. Nummela  
University of Tartu, Tartu, Estonia  
University of Turku, Turku, Finland

L.-M. Sainio • S. Saarenketo  
LUT School of Business and Management, Lappeenranta University of  
Technology, Lappeenranta, Finland

customers, that is, to have close contact with a customer and a good understanding of the customer's operations (Sawhney 2006). This trend does not, however, concern only service sectors, but also manufacturing. The boundary between physical products and services has become blurred, and some products are claimed to have become service-like (Grönroos 2006).

Simultaneously, the role of location, which has always been central in international business research, is changing (e.g. Dunning 2000). First of all, revolutionary developments in information and communications technology (UNCTAD 2003) have profoundly reconstituted the nature of international business. We have seen changes in all the elements of a company's value chain (cf. Porter 1985) or value network (for a detailed discussion of the impact on international business research, see De la Torre and Moxon 2001). Additionally, the importance of location is challenged by a 'global shift' (cf. Dicken 1998) in the economy. As multinationals have started to move their mobile assets globally to create a perfect fit with their immobile assets (UNCTAD 2003), their value chains have become disintegrated and scattered worldwide. The outcome is a 'global factory', a structure reflecting the combination of innovation, production, and distribution of goods and services globally (Buckley 2009; Buckley and Ghauri 2004).

These developments also influence small and medium-sized enterprises (SMEs), and push them to internationalize more rapidly than before. Even though companies benefit from technological advances in the form of opportunity identification, strategy execution, and resource building (Loane 2005; Aspelund and Moen 2004), technology also creates challenges in the form of excess information and markets (see also Jones 1999). To survive, an SME must be capable of managing<sup>1</sup> the internationally dispersed value creating operations effectively amidst an overload of information.

Management of the new kind of organizational structure presumes new kinds of capabilities<sup>2</sup> from the SME. There is only very little if any previous research in this area, and hence our knowledge of the capabilities

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<sup>1</sup>'Value chain management' refers to the actions that aim at influencing, coordinating, controlling, or integrating the activities in the value chain (Westerlund et al. 2007).

<sup>2</sup>A repeatable pattern of action in the use of resources, which is aimed at creating, producing, and/or offering products to markets (Sanchez et al. 1996).

required from an SME to manage its globally dispersed value chain in the service-dominant world is very limited. This chapter aims at partially filling the gap by answering the following research question: *what kinds of capabilities are required from a SME to overcome the challenges in value chain management induced by the global dispersion of the value chain?* Through a detailed analysis of the capabilities needed in management of the internationally dispersed value chain, this chapter contributes primarily to the body of literature on organisational capabilities. Additionally, the chapter contributes to research on value chain management; especially important is the increased understanding of how to combine globally dispersed value creating activities and the need to be close to the customers in different markets. Finally, the chapter contributes to the research on international business through increasing our understanding of the international activities of SMEs.

The phenomenon is examined in a real-life context, in a case company which is a small firm offering systems that combine hardware and software. At the time of conducting the study, the case company was transforming its value proposition from product-based towards solution-based. To make this happen, it strove to increase the service and software components of its offering. Additionally, although the company had been operating globally already for some time, its partner network was created for small-scale operations, while the market was developing towards larger project deals. Based on literature review and face-to-face interviews with key personnel in the case company, the study describes the requirements of the changing environment and analyses the capabilities needed.

## **SMEs in the Global Software Business**

In the software industry company size is not as critical as in many traditional bricks-and-mortar industries (see, e.g. Bell 1995). Very small software developers can deliver excellent solutions that have global potential. Nevertheless, compared to large firms, SMEs face more limitations in terms of, for example, resources and capabilities (Jarillo 1989; Beamish 1999). SMEs in the global software business are no exception, but are subject to several liabilities such as newness (Stinchcombe 1965),

smallness, foreignness (Hymer 1976), and outsidership (Johanson and Vahlne 2009). The last one is especially important in the software industry. To be successful, a firm has to have an established position in a network; to be an insider. If an SME entering a market does not have a relevant network position, it suffers from the liability of outsidership. It is argued that foreignness actually complicates becoming an insider (Johanson and Vahlne 2009).

Software SMEs, actually, question the conventional internationalization theories, since they tend to internationalize differently from SMEs in general: earlier, more rapidly and with a wider scope (see, e.g. Bell 1995). Moreover, as internationalization is traditionally understood as selling the firm's products in multiple countries, it is often forgotten that, especially for software SMEs, it is a comprehensive process that includes the entire value chain (cf. Servais et al. 2006). As argued by Johanson and Mattsson (1988), in order to understand how companies become international, one needs to study not only the company itself but also the network in which it operates. This is especially relevant in the software industry.

The spreading of value creating activities imposes considerable management challenges that only escalate when other key characteristics of the software business are taken into consideration (see, e.g. McGrath 1995; Etemad 1999; Cusumano 2004; Kuivalainen et al. 2007):

- Constantly forming and growing new markets.
- Short product life-cycles combined with the need to recover substantial development costs.
- The law of increasing returns – high development costs and zero-copy costs: need to be market leader or among the 'top three'.
- Network externalities – value of the product often depends on the number of other users of the product: the need to be market leader.
- Need to adapt to collapsing markets.

Due to fast changes in the market software SMEs must be able to adapt quickly. With its limited resources the firm, however, is bound to its core capabilities. The essence of flexibility for SMEs is having partners whose resources and capabilities complement those of the focal firm.

Software SMEs, thus, face the challenging task of building and managing a global network of partners capable of producing an output that prospective customers value. Due to various distances (e.g. cultural and temporal) and asymmetries (e.g. power and goal) operating the network is quite a task for an SME.

Customer value is created as a result of the joint effort of the whole network (see Möller 2006). In line with other industries, also in the software business, the current trend is to provide wider, more comprehensive systems that solve some of the customers' problems (Sawhney 2006). This requires not only more sophisticated coordination mechanisms (Möller and Rajala 1999), but also different kinds of capabilities compared to the ones needed previously (cf. Brady et al. 2005).

## Capabilities and Value Chain Management

Despite the scarcity of knowledge about the area, some insights can be drawn from previous research and especially the resource-based view of the firm, where the discussion on organizational capabilities stems from. Already Penrose (1995, originally from 1959) argued that resources per se are not the key issue, but the services that the resources yield are. These services differ according to the needs and abilities of the organization, and hence differentiate firms from one another. So, she refers to the firm's ability to put the resources into use. This is exactly the idea behind organizational capabilities. Based on existing literature it seems that international orientation, network capability, technological capability, and market orientation are central to the management of the internationalizing SME's value chain.

First of all, management of an internationalizing value chain presumes an active entrepreneurial attitude and an ability to recognize and utilize international opportunities. This is captured in the concept of international orientation. It is important that managers especially in the small system supplier firm are geared towards international operations. For example, Knight and Kim (2009) found that international orientation is an important factor in the international success of the contemporary firm. International orientation (also referred to as foreign orientation)

comprises of both cognitive and demographic factors (Dichtl et al. 1990) and it is typically discussed at an individual level.

Due to the limitedness of software SMEs' resources and capabilities on the one hand, and the complexity of software offering on the other, the importance of the networks and partnerships is often highlighted. This is further reinforced by the fact that these companies tend to start their international activities through network relationships, for example by following their clients abroad and forming partnerships (e.g., McNaughton 2001; Coviello and Munro 1995, 1997; Bell 1995). Management of the created network is essential for the internationalization of the small system supplier (Ruokonen et al. 2006, 2008). It could, therefore, be expected that a small system supplier would benefit from network capability.<sup>3</sup> (cf. Ritter et al. 2002). Network capability, actually, has two sides: maintaining the network as a whole, and managing individual relationships in the network (Ritter et al. 2002). Managing the network as a whole calls for an understanding of what are the value adding activities that are needed to create value to customers. The nature and complexity of the product offered, then again, impact the partnership capabilities needed in managing individual relationship (Ruokonen et al. 2006).

Moreover, it is important for a system provider to understand well the central technologies in the offering. Technological capability is needed to be able to orchestrate the interfaces between the different components of the system, i.e. to ensure interoperability (Helander and Möller 2008), and to be able to provide valuable solutions to the customer (cf. Kim and Mauborgne 1997). These call for technical expertise (Zhou and Wu 2010). Additionally, technological capability contributes to the ability to compare and assimilate external technologies (cf. Cohen and Levinthal 1990). This is important, since, as stated above, small system suppliers are typically heavily dependent on their partners. However, innovation also requires the potential for creativity, such as an ability to generate novel ideas and communicate them both inside one's own organization as well as to customers (cf. DiLiello and Houghton 2008; Kim and Mauborgne 1997).

The operating environment of system suppliers in the software industry is typically very dynamic. The markets change continuously and

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<sup>3</sup>The original concept in Ritter et al. (2002) was network competence, but because of consistency, the term capability is applied here.

product life-cycles keep shortening. Therefore, a small system supplier must understand the market it is serving and be aware of the dynamics of the market. Acknowledging the need for market knowledge is especially important for internationalizing system suppliers, since they operate on multiple markets across countries (Ruokonen et al. 2008). The awareness of what is going on in the market and how the markets are likely to develop has been referred to as market orientation (Day 1998), or as the market sensing capability (Foley and Fahy 2009). Market oriented companies are good at both generating and disseminating market intelligence. Additionally, they are responsive to market intelligence. (Kohli and Jaworski 1990) The components of market orientation have been found to be customer orientation, competitor orientation, and inter-functional co-ordination (Narver and Slater 1990).

As it can be seen from Fig. 8.1, value chain management capability is a higher level capability that draws together a variety of lower level capabilities. Each of the lower level capabilities is valuable and necessary as such, but they come together to form a higher level capability that gives a more holistic approach to managing the internationalizing value chain.

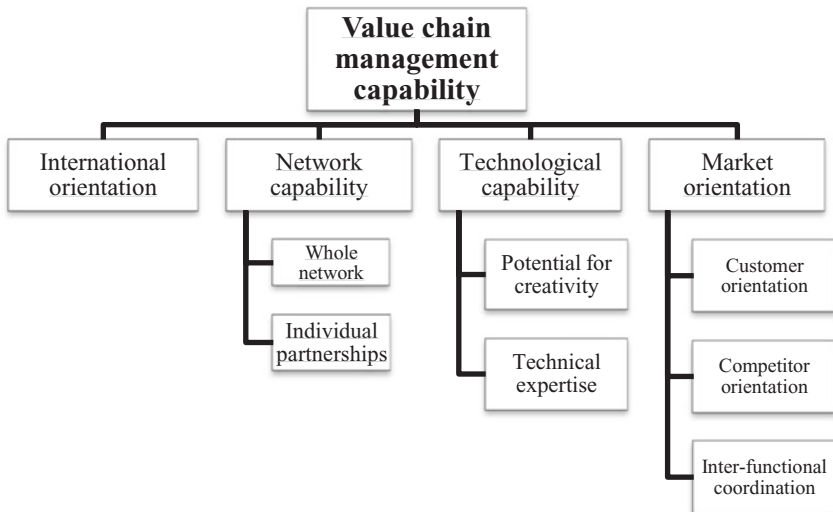


Fig. 8.1 Theory-based framework of value chain management capability

## Research Design

This qualitative case study analyses managerial level employees' understanding of what kinds of capabilities are needed to manage an internationalizing value chain in the context of a small systems supplier in the software industry. As stated above, previous research on the topic is nearly non-existent, and hence this study is exploratory in nature (see, e.g., Yin 1981, 1994). It serves as one of the first steps towards deeper understanding of the phenomenon, and brings a new perspective to the discussion of SME internationalization. Additionally, synthesizing studies that examine capabilities together and analyse how they come together as higher level capabilities are largely missing.

A case study approach was chosen here, since it allows inductive investigation of the research topic, analysis of the phenomenon in its contextual setting, and a more holistic coverage of a selected case (Ghauri 2004). Moreover, single-case design was considered appropriate for this study, since a smaller number of cases allows more depth. Additionally, the researchers had unique access to a company that has a track record of managing its internationalizing value chain (cf. Yin 1994). Single-case design was, therefore, considered as leading to more holistic view.

Case selection is crucial, particularly in single-case research, and must therefore be considered carefully. To be able to critically evaluate the alternatives, theoretical sampling is recommended instead of random sampling (Eisenhardt and Graebner 2007). This implies selecting a case that is likely to replicate or extend the emergent theory (Eisenhardt 1989). One must also pay attention to the theoretical qualifications of the case: how well it fits the conceptual categories and the extent of its explanatory power (Eisenhardt 1989; Smith 1991).

In this study it was particularly important to find a company that would be undergoing internationalization of the value chain and transition towards a solutions business. This, however, poses one of the greatest challenges for researchers: getting access. Companies are usually reluctant to reveal information about their ongoing strategic processes. Additionally, it was important that the company would already have experience of value chain internationalization, and especially of steering the chain. The authors had a collaborative research project with a suitable company, and hence access was possible. Access, therefore, played an



important role in case selection. Yet, the case was primarily chosen based on theoretical considerations; it was expected that analysis of this particular case would extend the understanding of the topic at hand.

To preserve the anonymity of the informants, the case company is referred to with an assumed name AlphaTech. The company has a turnover of roughly €10 million, and it employs around 70 people. Approximately half of these are located in the home country and the other half in various countries all over the world. The headquarters is located in Scandinavia, and the company has sales offices in Europe, North America, South America, and Asia. The company is represented by its resellers and integrator partners in more than 70 countries. Software for the offered systems is developed internally and externally, but hardware production is completely outsourced.

The data was collected with six semi-structured face-to-face interviews and one telephone interview in spring 2009. The interviews lasted between one and two hours each. The interviews were elite interviews (cf. Welch et al. 2002), as the upper management of the case company was interviewed. The interviews were transcribed and hence rich written data could be analysed. The data was analysed by themes to assure that it was done systematically. The qualitative data analysis software Nvivo was utilized in the analysis phase for coding the data. The interview guide served as the starting point for the analysis, but some themes also arose from the data.

As this is a single-case study, it has its limitations. The findings are not generalizable to all SMEs. Nonetheless, as the key characteristics of the case firm are reported here, analytic generalization to similar cases may be possible. Moreover, the study analyses the manager's perceptions of what capabilities are needed, which means that subjective measures are used. This may be considered as a shortcoming, although measuring the need for capabilities with objective measures could be deemed unattainable due to ambiguities around the concept of capability.

## Key Capabilities at AlphaTech

Based on the interviews, there are several different capabilities that are necessary for a small system integrator to manage its internationalizing value chain. In the following, these capabilities are discussed one by one.

There are some overlapping aspects, but this reinforces the notion that all these aspects are needed to make up the capability of value chain management. Our findings support and add to the findings of Knight and Kim (2009). Their focus is on the skills needed on the marketing and sales side of the international value chain. Because we take the whole value chain into consideration, the picture gained is more complete.

## International Orientation Versus Global Mindset

It was interesting to note that the interviewees mentioned the term ‘international’ altogether only a couple of times, whereas ‘global’ was brought up several times in all but one of the interviews. It really seems that the company’s operations are global, as it does business on all continents. Therefore, the term global mindset could also be used here (see Nummela et al. 2004). Internationality is built into the organization and, since it is so obvious, managers do not necessarily even think about it. Nevertheless, a couple of the interviewees emphasized that the firm must have personnel with international orientation and skills to operate in multiple countries.

Even though there exist a couple of organizational level examinations of international orientation or global mindsets (Begley and Boyd 2003, discusses multinationals), the focus in previous research has been largely on managerial level employees (Levy et al. 2007; Nummela et al. 2004). However, the findings of this study show that in a small firm, the mindset of all employees is important for managing the internationalizing value chain. In other words, there should be collective awareness of and open to, for example, a multitude of cultures (cf. Levy et al. 2007).

The interviewees emphasized that having the knowledge of global markets disseminated throughout the organization is one of the advantages of being small and highly networked. In larger, centrally-led organizations, the country units often do not have an understanding of the markets on a global scale: *‘Their focus is in the specific country and they lack the larger perspective that we are kind of forced to have.’* Therefore, it is necessary that employees and the culture in the organization are internationally oriented. This includes most importantly the courage and enthusiasm to operate internationally. Moreover, hiring people with complementary

language skills and different cultural backgrounds were seen as important. This has resulted in an organization that is tuned to global business: *'It is not just about communicating, but actually co-operating with different people in different environments.'* There clearly is international orientation in the firm, and it contributes to the management of the internationalizing value chain. Operating internationally, even globally is business-as-usual for this small organization.

## Technological Capability

In terms of technological expertise, the current strengths of AlphaTech relate to the versatility of the core product. It offers good possibilities for expansion into several business areas. Currently the firm has three product lines that are each based on different technologies. The knowledge of the core technologies is strong: *'When we need to build something new to existing systems, those steps are easily forecasted.'* All of the needed technological know-how does not, however, reside within the firm. Due to resource limitations it has outsourced some development work to its partners. Additionally, AlphaTech has done some co-development with a partner. The greatest benefit of this close collaboration that is done at the same location, sharing tools and databases, has been that *'in a way, know-how has been transferred over the table'*.

The interviewees recognized a need to expand the pool of technological expertise through partnerships. Currently the research and development (R&D) network is very small, and when facing new kinds of requirements, the firm has to start searching for a new partner. This is costly in terms of both time and money: *'It may take up to six, eight months... such a delay in the beginning is quite significant.'* In software, where the product life-cycles are short, the time to market is crucial. Therefore, a larger pool of potential R&D partners would give AlphaTech the option of more rapidly choosing the best partner for innovative projects from its network, and hence speed up the development process (cf. Kim and Mauborgne 1997). This is a notable bottleneck in current operations, especially with more innovative projects.

Previous research asserts that innovativeness also presumes potential for creativity (DiLiello and Houghton 2008). Creativity is seen as being important in the case company, since innovativeness is fundamental to its operations. However, an additional aspect of technological capability came up in the interviews. Strong technological expertise is not enough to fully utilize the technologies. To bring value to the customer, a very good understanding of the specific area where the technology is used is necessary (cf. Rajala and Westerlund 2007). Thus, in addition to knowing the technology and having the potential for creativity, technological capability also includes a good knowledge of the context where the technology is applied. This links further to knowing customers, and their business.

## Market Orientation and Customer Orientation

Market and marketing-related capabilities (Möller and Anttila 1987) play a central role in AlphaTech's current and, especially, future business. *'If during chimney-stack time we optimized the production processes, now we should optimize our marketing drive to full speed.'* The growing emphasis on services and software thus poses new requirements on marketing (cf. Vargo and Lusch 2004). The interviewees named consistent brand image as one of the strengths of their firm: *'We have been able to disseminate the AlphaTech brand in a more or less consistent and uniform fashion; we are recognized as the same beast almost everywhere where we exist and that has worked.'* Beyond the integrator partners, consistent brand image is often also communicated to the end customer in cooperation with the sales partners.

The interviewees stated that there is a need for a functioning market intelligence system to keep track of the market: *'We all need to be very much focused on what's available and what's already there. So we are talking about market awareness but also following trends.'* As the company operates in numerous different countries, it is important that it knows each of the markets it operates in. Defining the market may, nonetheless, be challenging, as mentioned above, and so market awareness is even more pronounced.

Additionally, the solutions business requires a strong focus on marketing and partner training, because selling solutions is more complicated than selling products (cf. Ruokonen et al. 2006). A related critical question concerns the extent to which the company should be present in the customer interface. The firm recognizes that there is a need for it to develop its customer contact point: *'The whole thing culminates in the need of being close to the customer interface, if not directly in it.'* However, presence is challenging when sales happen mainly through sales partners. Since the firm offers a complicated technological system, sales require presence. Nevertheless, as the firm is very small, global scale is only attainable through a network (further discussed in the section of network capability). The interviewees actually stated that being close does not, in their case, automatically mean selling directly to the customer, but customer orientation can be realized even when selling through partners.

The interviewees emphasized that there must be an understanding of customer needs throughout the organization, as well as in both upstream and downstream operations. Customer orientation seems to be crucial also because: *'If you sell a solution, it must be a solution to the customer as well, not just from our perspective.'* In fact, the change towards a solutions business stems from changing customer needs. The way customers purchase the AlphaTech system has started to change, and the firm saw its opportunity to move towards a solutions business. Nevertheless, there is still room for improvement in detecting and understanding the customer organizations' needs and preferences. Moreover, the end users of AlphaTech's systems are mainly young people who are familiar with latest the information technology. Therefore, in-depth and up-to-date knowledge of the end users is also necessary.

Market orientation seems to be necessary for the system provider so that it can steer the value chain effectively. Customer orientation was the most emphasized element of market orientation, yet the two others (see Narver and Slater 1990) were also mentioned in passing by some of the interviewees. The nature of the business may have an influence here. Since the systems sold require customer contact before (specification, etc.) and after sales (operational support and strategic care cf. Helander and Möller 2008), strong customer orientation is necessary.

## Network Capability

Networking has clearly benefited the company, as an organization that currently employs only about 70 people has managed to create an image of a considerably larger unit: *'From the outside, we have the image of a 70,000 people organization, and most of our strategic partners actually wonder how we manage our operations and bigger OEM partners in practice.'* The network of partners is the key to the scale and flexibility of the operations (cf. Ritter et al. 2002). One of the core capabilities of AlphaTech and a critical enabler of its current position has been its ability to approach potential partners with its high success rate: *'We have to hit the target every time; we cannot afford to miss. That means that we have to know the key persons as high in the organizations as possible to create the domino effect.'* The company has managed to create valuable headquarters-headquarters relations with its partners. However, it has been realized that it is important to co-operate on regional level as well: *'When it is region-region, then it results in business.'* Some level of technology and system integration with reseller partners was mentioned as a tool to strengthen the partnership bond and to promote the commitment of the partners (cf. Ruokonen et al. 2006), and is hence an important aspect of managing individual partnerships.

A small firm also faces challenges with large partners. In the case of the partner being a considerably larger firm, the small operator may not have any chance of actually influencing the partner organization: *'What we try to do, and have been doing, is that we are actively in contact with the Microsoft people.'* Through establishing good personal relations and frequent contacts with managers in the larger value chain members the firm tries to make sure the large partner remembers its existence and would turn to it when in need of the expertise it can provide. Dubini and Aldrich (1990) as well as Coviello and Munro (1995), for example, discuss the importance of informal networks or relations.

Management of individual partnerships is, nonetheless, emphasized more than the management of the portfolio as a whole. Therefore, the portfolio of partnerships is quite fragmented. In literature it is suggested

that linking different parts of the value chain would be part of managing the chain. AlphaTech has not tried to link the network of partners together, though for some parts of the network this was seen as a potential next step. There have been some experiments to combine partners in the downstream reseller end to manage larger projects, but the management representatives were a bit sceptical concerning openness of the whole partner network: *'Assuming we have significant R&D partners, then we would not even want to reveal those to our strategic partners in sales... we would like to keep that behind our back.'* Though, some co-ordination of the different operators in the value chain might be necessary in larger scale projects. Hence, even though it might not be beneficial to link all partners with each other, it might be advisable for the company to pay more attention to its network as a portfolio.

## Teamwork Management Capability

In addition to the capabilities highlighted in the literature review, effective utilization of virtual teams was brought up in the interviews. The firm has made intercultural teams work, and views this as a capability. Working in virtual teams is a part of employees' every-day routines, and the interviewees were told that this has proven to be productive in their organization: *'The way we work, just a very small organic organization, we need to be able to come together in different project teams to get things done.'* The culture in the organization supports teamwork.

Furthermore, employees must be tuned to teamwork in the sense that they see the benefits of doing things together. When asked about their most important personal skills one of the managers put it well: *'In my case it culminates with sort of controlling of time zones and motivating and managing virtual teams.'* The firm has put effort into promoting teamwork. This has developed into an important organizational capability, and it is one of the enablers of doing business on a global scale despite the company's limited resources. It is moreover an important factor in the value chain management, as the internationally spread virtual teams co-ordinate and try to influence the operations of the value chain members.

## Additional Aspects of Value Chain Management Capability

Management of the value chain may be, to a large extent, quite tacit in small firms. When asked about the management, one of the interviewees started: *'I don't know if we're managing it... Let me think how it really is.'* This illustrates how some of the actions taken to steer the value chain are so deeply rooted in the organization, that people do not even come to think that the activities are value chain management. On the other hand, in small firms, the processes are neither systematic nor systematically reported. Hence, the term value chain management sounded like an overstatement from the perspective of a small firm. The interviewees mainly felt that naming the actions taken to be value chain management is too strong: *'Let's say we would manage the actions of Microsoft, so it is quite an utopistic thought.'* Nonetheless, as the elements of management (influencing, controlling and monitoring, co-ordinating, and integrating (Westerlund et al. 2007)) were explained to them, they could easily think of the actions taken and the capabilities they possess to manage the value chain. The baseline being that they have purposefully created the partner network by screening and selecting suitable partners.

The operations of the firm are to large extent networked. This has enabled such a scale that would not be possible otherwise. Despite the network being a crucial factor in AplhaTech's operations, being small has its disadvantages: *'I think our biggest challenge is, not talent or anything, but simply we need a bit more mass.'* For a solutions business on a global scale, the organization seems to be too small. Employees are so busy with running the day-to-day operations that development of the business to a new level is extremely difficult. It was seen that the firm has the necessary skills, but that its limited resource in terms of numbers seems to be the bottleneck.

## Discussion and Conclusions

The holistic perspective of the internationalization of a small software system provider promoted in this study enabled an examination of various different capabilities the organization needs in managing its internationalizing value chain. Taking the upstream and downstream operations



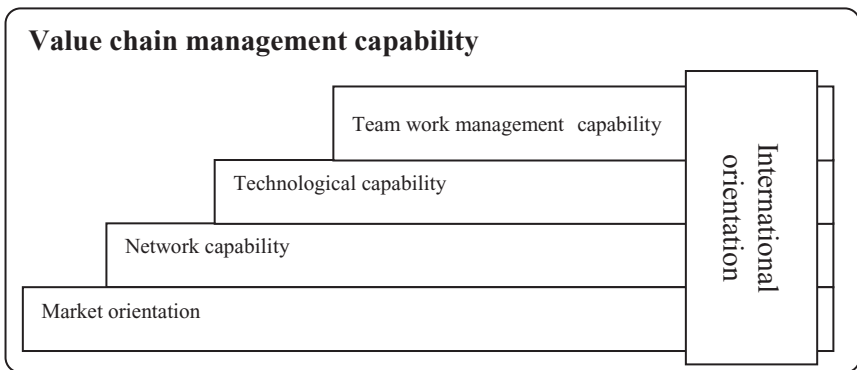
into consideration provides a more comprehensive picture of what it takes for a small firm to succeed.

When a company transforms from a product-based towards a solutions business, it actually repositions itself in the market, and may therefore again face some of the liabilities it was subjected to when initially entering the markets (newness, foreignness, smallness, outsidership). None of the capabilities discussed would, as such, be the key to solving all types of liabilities alone, but together as the value chain management capability, they should suffice to enable it to overcome its liabilities.

Internationality is an overarching theme in the value chain management of a small software system supplier. Therefore, it is argued here that collective international orientation is the basis for value chain management capability. This is illustrated in Fig. 8.2.

As Fig. 8.2 shows, international orientation penetrates all the other capabilities needed. Therefore, it seems that in addition to researchers managers must also take a holistic view of internationalization. Nonetheless, other employees' international orientation is also important for executing the international operations in managing the value chain. Therefore, we argue that every employee must have a mindset that supports internationalization (cf. Levy et al. 2007).

Market orientation was found to be another element fundamental to other capabilities. Closeness to customers and knowledge of their needs are focal for a solutions-based business and therefore market orientation,



**Fig. 8.2** Proposed model of value chain management capability

and especially customer orientation as part of market orientation, are underlined (cf. Narver and Slater 1990). Closeness to the customer is vital, yet challenging when operating on international markets through sales partners. Networked international operations that are central in the software industry may, hence, conflict with the needs of a solutions business. We argue that network capability is the key to balancing these two, and hence is part of the value chain management capability. Also balancing the management of individual relationships with the management of the whole network is essential (Ritter et al. 2002).

Technological capability is quite self-evident in the software industry. Nonetheless, knowledge of technologies is insufficient unless there is also good understanding of the conditions in which the technology is utilized. Deep understanding of the special requirements that the context of application sets for the technology is necessary (cf. Rajala and Westerlund 2007). This is important for R&D, and the selection and management of value chain partners. Also partners should be knowledgeable about the context if it affects their contribution to the solution. This comes back to customer orientation, and reminds us that technology is not everything.

Finally, teamwork management capability arose from the empirical data. It is especially important that employees are motivated to work in teams and they see the benefits of teamwork. Managers play a key role in this. As Eby and Dobbins (1997) do, we acknowledge that the shift from individually-oriented to team-based work does pose some management challenges, which would deserve more attention in the context of internationalizing SMEs.

Having discussed the different capabilities individually, it is time to discuss the utility of the upper level construct of value chain management. While analysing the different capabilities, it became apparent that they are very much interlinked and overlapping. The fact that the elements go hand in hand supports the need to have an upper level construct of value chain management capability. When changes in one area also affect the other areas of the higher level capability, it is important to be aware of the big picture. Synthesizing the individual capabilities into the upper level construct gives a more extensive view of the phenomenon and enables us to find linkages between the capabilities. Moreover, linkages between the different elements also support the use of qualitative research methods.

Identifying the overlapping, yet separate, capabilities would be difficult, if not impossible with only quantitative methods.

Moreover, introducing the concept has important managerial implication as it emphasises managerial know-how. The role of management is essential in developing the elements of value chain management capability. The concept brings to the foreground the importance of taking into consideration all aspects of value chain management if the small firm is to internationalize its value chain.

To conclude, it is argued that the concept of value chain management capability needs further development and more extensive research is required. This study provides interesting insights to this real-life phenomenon but it also points out that theoretically it should deserve additional attention. In further empirical research it would be interesting to conduct more of these holistic case studies to be able to analyse the phenomenon across cases. Additionally, extending the case study at hand to cover informants from other organizations of the value chain could bring interesting new insights. Since internationalizing value chains appears to be requisite for small firms in the software industry, and managing them is very challenging, it is vital to know more about what makes it possible to succeed with them.

**Acknowledgement** This work was supported by the Estonian Research Council's grant PUT 1003.

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# 9

## The Value of Knowledge, Network Relationships and Governmental Support for Chinese Firms' Early Internationalization: Survey Evidence

Tiia Vissak, Tatyana Tsukanova, and Xiaotian Zhang

### Introduction

Firms' early internationalization has received considerable research attention. According to studies on born globals<sup>1</sup> (Madsen and Servais 1997)

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<sup>1</sup>Several definitions of BGs have been developed. We follow the one by Kuivalainen et al. (2007) that such firms should achieve at least 25 % of turnover from abroad and enter culturally distant foreign countries during the first three years of establishment. We also agree with Madsen and Servais (1997, p. 579) that they should 'seek to derive significant advantages from ... the sale of

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T. Vissak (✉)

School of Economics and Business Administration, Faculty of Economics,  
University of Tartu, Tartu, Estonia

T. Tsukanova

Graduate School of Management, St Petersburg University, St. Petersburg, Russia

X. Zhang

Denmark and Oulu Business School, International Business & Entrepreneurship,  
University of Southern Denmark, Odense, Denmark



and international new ventures<sup>2</sup> (INVs) (Oviatt and McDougall 1994), firms enter far markets soon after establishment. However, according to studies on slower internationalizers – for instance, in the case of innovation-related internationalization models (Bilkey 1978) and the Uppsala model (Johanson and Vahlne 1977, 1990) – internationalization takes more time and starts from the closest and/or more familiar markets.

Despite of a large number of studies, there is not enough evidence yet on the internationalization of firms from China where firms are often more constrained by lack of resources and marketing and management capabilities than their Western competitors (Ge and Wang 2013). Moreover, contradictory evidence has been found about Chinese firms' foreign market preferences: for instance, while Vissak et al. (2012), Zeng et al. (2010) and Zou and Ghauri (2010) stated that Chinese firms tend to start internationalization from distant countries, Söderman et al. (2008) found that Asia is the most attractive market for Chinese firms. Sandberg (2009, p. 108) stated that traditional internationalization theories 'need to be adjusted and complemented to be suitable ... for studying firms taking off from a turbulent emerging market as China' and Drauz (2013, p. 281) concluded that Chinese firms' internationalization 'cannot be explained by one theoretical model only'. Moreover, Cardoza and Fornes (2013), Chen et al. (2011) and Xie and Amine (2009) found that only scant scholarly research had been conducted on Chinese locally-owned SMEs' internationalization.

It is also necessary to study the role of knowledge (especially, experiential knowledge)<sup>3</sup> in early internationalization as several scholars (for instance, Johanson and Vahlne 1977; Fina and Rugman 1996; Morgan and Katsikeas 1997) have considered it to be a very important factor while some others – including Boisot and Meyer (2008),

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outputs to multiple countries/continents right from their legal birth'. Thus, we expect BGs to enter at least one continent outside Asia in three years or less from establishment and achieve a minimum 25 % export share during this period.

<sup>2</sup>An international new venture should also internationalize fast – according to Crick (2009) in three years or less from establishment while according to McDougall et al. (2003) within a maximum of six years – but it does not have to enter other continents.

<sup>3</sup>Experiential knowledge is accumulated during foreign operations. Knowing more, in turn, increases the firm's commitment to that market as then it becomes easier to identify further expansion opportunities and also, the market will be perceived as less risky (Johanson and Vahlne 1977).

Liu et al. (2008), Naudé (2009), Sandberg (2009), Vissak and Zhang (2012) and Vissak et al. (2012) – have concluded that it is not always necessary for Chinese firms' fast entry into far markets.

Valuable knowledge can be acquired through network relationships (Barringer and Harrison 2000; Eriksson et al. 1998; Walter et al. 2001) and these relationships can also be useful in terms of reducing market entry time, risks and costs (Coviello and Munro 1995). Thus, it is also necessary to find out how Chinese firms value the importance of network relationships for their internationalization (Cardoza and Fornes 2013) as according to Ge and Wang (2013), Xie and Amine (2009) and Zhou et al. (2007), networks have been important for Chinese firms' internationalization while Ciravegna et al. (2014) found that network relationships did not lead to some Chinese producers' superior internationalization performance in terms of speed, scope or intensity, and Naudé and Rossouw (2010) stated that, in some cases, network relationships resulted in Chinese firms' lower export shares.

Finally, governmental support can be important in terms of getting access to knowledge and creating new network relationships (Barringer and Harrison 2000; Ge and Wang 2013) but also 'pushing' firms abroad in other ways. Thus, its value/usefulness also needs to be studied in the context of Chinese firms, as in China, local governments had an active role in supporting internationalization (Cardoza and Fornes 2013; Drauz 2013; Lin et al. 2014; Vissak and Zhang 2012) but, in some cases, relationships with governmental agencies can lead to corruption and, as a result, damage firms (Luo 2008).

This chapter aims to discover how Chinese born globals (BGs) and non-born globals (NBGs) assess the value of knowledge, network relationships and governmental support for their early internationalization stages and how they evaluate the impact of other factors. It starts from a literature review on differences and similarities between factors affecting BGs' and NBGs' early internationalization and pays especial attention to knowledge, network relationships, and governmental support. Thereafter, the methodology will be introduced and survey results presented and discussed. The chapter ends with managerial, research and policy implications.

## Literature Review

Firms' early internationalization stages have received considerable research attention. In the internationalization literature, two main internationalization paths have been identified. According to studies on born globals and international new ventures (Bell 1995; Cannone and Ughetto 2014; Cavusgil and Knight 2009; Crick 2009; Madsen and Servais 1997; McDougall et al. 2003; Oviatt and McDougall 1994; Saarenketo et al. 2004), foreign markets – including one or more outside the firm's home continent – are entered soon after establishment and often firms view the world market similarly to their home market. Moreover, they achieve a relatively high export share soon after establishment. On the other hand, according to studies on slower internationalizers – for instance, in the case of the Uppsala model and innovation-related internationalization models (see, for example, Bilkey 1978; Johanson and Vahlne 1977, 1990; and Johanson and Wiedersheim-Paul 1975) – the first foreign market entry will take more time and firms start their internationalization from the closest and/or more familiar markets because they lack contacts, knowledge, and other resources to enter more distant and/or less similar markets first. Also, in the beginning of internationalization, their export share can be lower. Only after acquiring foreign market knowledge and other resources and creating the necessary contacts, will they gradually enter culturally and geographically more distant countries.

Several authors have studied which types of knowledge are necessary for internationalization. For instance, Eriksson et al. (2000) distinguished between (1) business knowledge (about competitors, customers, and foreign market conditions), (2) institutional knowledge (about the foreign country's rules, norms, values, institutional and governmental frameworks) and (3) internationalization knowledge (about the firm's own resources and capabilities that are necessary for internationalization) while Sandberg (2014) studied general internationalization, and customer- and market-specific knowledge. Robertson and Wood (2001) and Wood and Robertson (2000), in turn, stated that a firm needs information about the target market's market potential, economy and infrastructure, but also political, legal, and cultural situation/factors to make an entry decision.

While according to the Uppsala model (Johanson and Vahlne 1977), experiential knowledge is very valuable for firms' internationalization, some other authors have disagreed: for instance, Monferrer et al. (2015), Oviatt and McDougall (1994) and Weerawardena et al. (2007) stated that very fast internationalization is possible without any foreign experience as other knowledge sources can be used and Cuervo-Cazurra (2011) concluded that some knowledge can be acquired through domestic operations and, thus, far markets can be entered fast. Some literature on knowledge sources is summarized in Table 9.1.

**Table 9.1** Sources of knowledge

| Source of knowledge   | Source   |
|---|--|
| The firm's own experience   | Johanson and Vahlne 1977; Fina and Rugman 1996; Morgan and Katsikeas 1997; Sandberg 2014   |
| The owner's or manager's pre-existing knowledge (e.g. from working in international firms)  | Andersson 2011; Cannone and Ughetto 2014; Chandra et al. 2009; McDougall et al. 2003; Weerawardena et al. 2007; Wiedersheim-Paul et al. 1978   |
| The firm's partners (e.g. suppliers, customers)   | Andersson 2011; Barringer and Harrison 2000; Brennan and Garvey 2009; Freeman et al. 2010; Ge and Wang 2013; Johanson and Vahlne 2009; Monferrer et al. 2015; Saarenketo et al. 2004; Sainio et al. 2011; Sandberg 2009; Schweizer et al. 2010; Walter et al. 2001 |
| Acquiring international firms   | Pajunen and Maunula 2008   |
| Hiring internationally experienced managers and other staff (e.g. those that had studied or worked abroad or worked in exporting firms) | Brennan and Garvey 2009; McAuley 1999; McDougall et al. 2003; Naudé and Rossouw 2010; Vissak and Zhang 2012; Wolff and Pett 2000   |
| Pre-entry visits  | Pedersen and Petersen 2004; Vissak et al. 2012; Zou and Ghauri 2010  |
| Conferences, exhibitions and trade fairs  | Chandra et al. 2009; Ciravegna et al. 2014; Liu et al. 2008; McAuley 1999; Vissak et al. 2012  |
| Domestic operations   | Cuervo-Cazurra 2011  |
| Industry associations and governmental organizations (e.g. export promotion agencies)   | Chandra et al. 2009; Child and Rodrigues 2005; Vissak et al. 2012  |
| Export consultants  | Zucchella et al. 2007  |

Network relationships with other businesses and with governmental institutions (Drauz 2013; Lin et al. 2014) can be very valuable for firms in achieving faster internationalization: for instance, in terms of entering distant markets (Xie and Amine 2009) and becoming born globals and/or international new ventures (Monferrer et al. 2015; Oviatt and McDougall 1994). They are useful for discovering new business opportunities (Awuah et al. 2011; Ciravegna et al. 2014), creating or getting access to valuable resources (Ambler and Styles 2000; Ge and Wang 2013; Madhok and Tallman 1998) like knowledge (Barringer and Harrison 2000; Monferrer et al. 2015), market information, know-how and new products (Sainio et al. 2011; Walter et al. 2001), and/or developing capabilities that are necessary for internationalization (Gadde and Håkansson 2001). In addition to triggering internationalization directly (Chetty and Blankenburg Holm 2000), sometimes, existing contacts/partners can be useful for creating new network relationships (Chandra et al. 2009; Johanson and Vahlne 2009). Still, network relationships do not always guarantee superior internationalization performance (Ciravegna et al. 2014; Naudé and Rossouw 2010). Maintaining them can be costly (Walter et al. 2001) as relationship-related investments (Madhok and Tallman 1998) and knowledge are needed for creating more value in network relationships (Möller and Svahn 2006). Moreover, sometimes network relationships fail (Barringer and Harrison 2000; Madhok and Tallman 1998).

Governmental support can be valuable for firms' internationalization as governmental agencies can 'push' firms to enter foreign markets (Cardoza and Fornes 2013) and help to build links between local and foreign firms in addition to providing financial support (Ge and Wang 2013). In China, born globals tend to evaluate the importance of governmental support more highly than other internationalizers (Vissak and Zhang 2012). Firms having stronger ties with governmental institutions tend to have an advantage (Drauz 2013) as they have better access to insider information (Lin et al. 2014). On the other hand, sometimes such relationships can result in illegal activities like corruption (Luo 2008).

Besides knowledge, network relationships, and governmental support, several other factors have been found to influence firms' early internationalization. For instance, Brouters and Nakos (2005) identified two main

approaches to market selection – a systematic and an ad-hoc/intuitive approach – while Andersson (2011) distinguished between causation and effectuation logic<sup>4</sup> in market selection, and Chandra et al. (2009) stated that initial internationalization can result both from deliberate research and opportunity discovery. Sakarya et al. (2007) stressed the importance of target countries' similarity and market potential. According to Johanson and Vahlne (1990), firms take into account the stability of market conditions, while Luostarinen (1989) stressed the importance of the market's size, closeness, and GDP per capita, but also the firm's assessment of its products' suitability for that market. Welch et al. (2007) stated that the market's production circumstances and opportunities for learning are also important. In addition, having (technologically) superior products (Chandra et al. 2009; Sainio et al. 2011) can also explain why some firms internationalize very fast and enter far markets soon after establishment (become born globals) while others are slower.

Based on the above, we can conclude that: (1) foreign market knowledge is necessary for fast internationalization; (2) experience is not the only source of foreign market knowledge; (3) network relationships can quicken internationalization but joining networks does not always guarantee it; (4) getting governmental support can lead to faster internationalization to get it, network relationships can be important; (5) early internationalization stages can be influenced by several other factors besides knowledge, network relationships, and governmental support; and (6) foreign market selection is not always systematic.

## Data and Methods

In this chapter, a survey method was used as it achieves a higher generalizability than case studies (Chidlow et al. 2015; Yang et al. 2006). The chapter is based on two surveys. Xiaotian Zhang conducted the first one in December 2010 to January 2011 in Anhui, Guangdong, Jiangsu, and

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<sup>4</sup>Effectuation logic means that, to choose a marketing strategy, entrepreneurs start from taking into account their own traits, tastes, abilities, knowledge, and social networks instead of analysing different markets and evaluating different foreign market entry methods systematically (Andersson 2011).

Zhejiang and the second one in December 2011 to November 2012 in these provinces, but also in Fujian and Shanghai. These regions were among the first that China opened during its opening-up and reform policy in the late 1980s.

Both questionnaires were developed in English and then translated into Chinese. In the first part of both questionnaires, the respondents were asked to provide their firms' general data. Thereafter, they had to characterize their internationalization activities and evaluate the level of pre-entry knowledge and the importance of networks, governmental support, and other factors for their internationalization. The questions coincided only partially – for instance, in the second survey, only questions about the firms' entry motives and level of knowledge of the first market were asked. Moreover, in the second sample, the firms were on average younger, larger, and more involved in international business activities (for descriptive statistics, see Appendix 9.1). Thus, results are presented separately for both samples.

For the first survey, 18,353 firms were contacted and 420 responses received and for the second, 8829 firms were contacted and 382 responses received. The respondents did not coincide. We had to exclude 90 responses, in total, as these firms were not internationally active. So, the final sample size was 712.

A small response rate could have been caused by the following factors: (1) some potential respondents had never exported; (2) as we asked questions about activities on other continents, some potential respondents might have refused due to being active only on one continent; (3) both questionnaires were long (four pages; in this chapter, only responses to some questions will be analyzed); (4) we asked questions about the firm's development since its foundation but some potential respondents might have lacked such knowledge; and (5) some potential respondents might have been unwilling to reveal their firms' financial data due to 'grey area' operations. As the data originate from a limited number of Chinese regions, we have to note that the results do not represent the whole of China. Moreover, young firms are under-represented as in our first sample the youngest firm was established in 2005 and in the second in 2006.

To assess the differences in the mean levels of knowledge and other characteristics of BGs and NBGs, we used a simple one-way analysis of variance

(ANOVA) and estimated it with SPSS. According to the null hypothesis, there are no differences between these firms:  $H_0 = \mu_{BG} = \mu_{NBG}$ . We conducted a Levene's (1960) test to assess homogeneity of variance to find out if standard deviations were similar across groups or not. Due to the lack of homogeneity ( $p < 0.05$ ) for several criteria, we also used two more robust tests – Brown-Forsythe (1974) and Welch (1951) tests – for testing the equality of means.

## Results and Discussion

The firms' selection of their first three markets is presented in Appendix 9.2. In the first sample, almost 64 % of BGs and 51 % of NBGs selected the USA as their first foreign market. Canada, Germany, and the UK were most popular choices for the second foreign market. In the second sample, the USA was also the most popular first market for both BGs and NBGs with 45 % and 38 %, respectively. Thus, we can agree with Vissak et al. (2012), Zeng et al. (2010) and Zou and Ghauri (2010) that Chinese firms tend to start internationalization from distant countries and disagree with Söderman et al. (2008) that Asia is the most attractive market for Chinese firms. Also, we cannot agree with the Uppsala model and other literature on slower internationalizers (see, for example, Bilkey 1978; Johanson and Vahlne 1977, 1990; Johanson and Wiedersheim-Paul 1975) that such firms tend to enter the closest countries first.

Based on Appendix 9.3 we can conclude that the respondents did not have much valuable knowledge when they entered their first foreign markets. They claimed to know a lot about their customers, suppliers, and foreign market conditions but even then, the averages were below 3.7 on a 7-point Likert scale (where 7 meant very much and 1 meant none at all) for NBGs and in the first sample, below 1.6 and in the second, below 2.4 for BGs. Thus, we can agree with Boisot and Meyer (2008), Liu et al. (2008), Naudé (2009), Sandberg (2009) and Vissak and Zhang (2012) that knowledge is not always necessary for Chinese firms' fast internationalization.

According to ANOVA and Brown-Forsythe and Welch tests, in the first sample, BGs differed from NBGs significantly ( $p < 0.05$ ) in terms



of all knowledge criteria: they had less knowledge. On the other hand, in the second sample, BGs had more knowledge and the results were statistically significant except in terms of knowledge about customers and suppliers. In the second sample, BGs were slightly younger (founded on average, in 1999, not 1997) but larger than in the first sample, and this could have affected the results as, according to Vissak et al. (2012), in 1999–2001, internet services were considerably expanded in China, but based on our data, we could not study this issue further. Moreover, we could not explain why in terms of some knowledge types, firms knew less about their third foreign market than the first, while in terms of some other types, they knew more.

Other reasons besides knowledge for selecting particular markets as the first three foreign markets are shown in Appendix 9.4. It is evident that in the first sample, both BGs and NBGs preferred markets to which the Chinese government supported entry. In the 1990s, Chinese local governments were active in export promotion. Moreover, our sample firms often selected markets from which customers contacted them and they entered large and rich markets. In the second sample, firms also preferred rich and large markets, and those with good production opportunities. Thus, we can agree with Sakarya et al. (2007) that market potential is an important entry factor, with Luostarinen (1989) that market size and GDP per capita matter, with Cardoza and Fornes (2013), Ge and Wang (2013), Lin et al. (2014), and Vissak and Zhang (2012) that governmental support can be helpful for international activities, and with Awuah et al. (2011), Chandra et al. (2009), Ge and Wang (2013), Johanson and Vahlne (2009), Monferrer et al. (2015), Oviatt and McDougall (1994), Sainio et al. (2011), Walter et al. (2001), and Zhou et al. (2007) that network relationships can be valuable for achieving successful internationalization. On the other hand, support from foreign governments and also the markets' closeness to China were not important market selection factors at all.

According to ANOVA and Brown-Forsythe and Welch tests, in the first sample, BGs differed from NBGs significantly ( $p < 0.05$ ) in terms of entering all three markets by three criteria: foreign customers' contacts were more important, while strong contacts before entry and the market's closeness to China were less important. We cannot confirm that such foreign

entry of BGs and NBGs was always systematic: it seems that rather, the firms used an ad-hoc or intuitive approach (Brouthers and Nakos 2005), effectuation logic (Andersson 2011), and opportunity discovery instead of deliberate market research (Chandra et al. 2009) in their initial internationalization. Still, we do not have enough data to study this issue further.

## Conclusions

This chapter was based on survey results from 712 Chinese firms. The results show that the USA was the most popular choice as the first foreign market for both BGs and NBGs. The latter is surprising as according to studies on slow internationalizers, such firms should have entered Asian markets first. Such a market choice was caused by several reasons. For instance, many firms started their internationalization from more distant countries because foreign customers contacted them. This happened mostly in the 1990s and often resulted from Chinese local governments' substantial export promotion. As a result, even firms that had almost no knowledge about foreign markets started exporting to the USA and other distant countries without entering any Asian markets first. Also, most firms – both BGs and NBGs – preferred entering large and rich markets.

As the BGs in our samples internationalized on average in 1997–2000, we cannot suggest that managers of recently established Chinese firms should also necessarily start their internationalization from the USA and other distant countries or guarantee that they would become successful without foreign market knowledge. (On the other hand, we also cannot confirm that acquiring such knowledge would speed up their internationalization.) For that, further research is necessary as success in internationalization could depend on many other factors not studied in this chapter.

We also found that, in the first sample, while BGs had less knowledge than NBGs and it did not matter whether they entered their first, second, or third market, this was not so in the second sample. Based on our data, we cannot confirm if, in the second sample, the fact that BGs were slightly younger (founded when internet services were considerably expanded in China) but larger than in the first sample had any influence

on this: further research is necessary for that. Moreover, with higher response rates, we could have received different results.

We also have to note that our results do not represent the whole of China as this chapter is based on data from a limited number of regions. Thus, data should be also collected from other Chinese regions. Future research should be based on even larger samples: not only from China, but also from other emerging countries. This would increase the generalizability of the results.

Researchers could study whether knowledge, network relationships, and governmental support are more or less valuable to Chinese and other BGs than to NBGs, how frequently NBGs from outside China prefer entering distant countries first and, if this is so, then what are the reasons for this. Moreover, it would be also interesting to study the role of different knowledge sources and different network types (both with other firms but also with governmental agencies) in successful internationalization. In this case, scholars should also take into account several differences between firms – for instance, size, sector and/or ownership – but also if the firms are entering their first, second, or third market. Finally, it should be found out if firms that internationalize without knowledge and strong network relationships tend to exit markets more frequently.

**Acknowledgments** This work was supported by the Institutional Research Funding IUT20-49 of the Estonian Ministry of Education and Research and by the Estonian Research Council's grant PUT 1003.

## Descriptive Statistics

|                                | Total  |         | NGB    |         | BG     |         |
|--------------------------------|--------|---------|--------|---------|--------|---------|
|                                | Number | Mean    | Number | Mean    | Number | Number  |
| <i>Sample 1</i>                |        |         |        |         |        |         |
| The year of establishment      | 380    | 1996.61 | 261    | 1996.54 | 119    | 1996.76 |
| Turnover (2010)                | 380    | 31.92   | 261    | 30.41   | 119    | 35.22   |
| The number of employees (2010) | 380    | 231.83  | 261    | 221.66  | 119    | 254.12  |

|  | Total  |         | NBG    |         | BG     |         |
|--|--------|---------|--------|---------|--------|---------|
|  | Number | Mean    | Number | Mean    | Number | Number  |
| The year of first export outside Asia  | 369    | 1999.83 | 250    | 2000.93 | 119    | 1997.51 |
| The export share (2010)  | 380    | 39.42   | 261    | 24.70   | 119    | 71.69   |
| The year when achieved 25 % export share   | 243    | 2001.27 | 124    | 2002.94 | 119    | 1999.53 |
| Number of countries (any foreign operations)   | 380    | 3.22    | 261    | 1.93    | 119    | 6.06    |
| The overall success of internationalization (subjective estimation) (max = 100 points) | 380    | 75.99   | 261    | 75.54   | 119    | 76.97   |
| <i>Sample 2</i>  |        |         |        |         |        |         |
| The year of establishment  | 332    | 1998.32 | 122    | 1996.65 | 210    | 1999.30 |
| Turnover (2007)  | 332    | 78.88   | 122    | 79.64   | 210    | 78.43   |
| Turnover (2010)  | 332    | 76.86   | 122    | 64.60   | 210    | 76.65   |
| Turnover (2011)  | 332    | 83.65   | 122    | 84.69   | 210    | 83.05   |
| The number of employees (2007)   | 332    | 306.85  | 122    | 355.93  | 210    | 278.34  |
| The number of employees (2011)   | 332    | 326.13  | 122    | 387.49  | 210    | 290.48  |
| The year of first export outside Asia  | 332    | 2000.62 | 122    | 2000.62 | 210    | 2000.63 |
| The export share (2007)  | 332    | 42.85   | 122    | 39.20   | 210    | 44.98   |
| The export share (2011)  | 332    | 45.11   | 122    | 41.48   | 210    | 47.22   |
| The year when achieved 25 % export share   | 332    | 2001.43 | 122    | 2001.97 | 210    | 2001.11 |
| Number of countries (any foreign operations) (2007)                                    | 332    | 5.90    | 122    | 5.28    | 210    | 6.26    |
| Number of countries (any foreign operations) (2011)                                    | 332    | 6.24    | 122    | 5.72    | 210    | 6.54    |
| The overall success of internationalization (subjective estimation)                    | 332    | 74.82   | 122    | 74.65   | 210    | 74.90   |

# The Most Popular Markets

|                 | Sample 1, 1st market |                |     |       | Sample 1, 2nd market |       |     |       |     |       |       |       |
|-----------------|----------------------|----------------|-----|-------|----------------------|-------|-----|-------|-----|-------|-------|-------|
|                 | NBG                  | % <sup>a</sup> | BG  | %     | Total                | %     | NBG | %     | BG  | %     | Total | %     |
| USA             | 134                  | 36.31          | 76  | 20.60 | 210                  | 56.91 | 9   | 3.88  | 9   | 3.88  | 18    | 7.76  |
| Germany         | 30                   | 8.13           | 13  | 3.52  | 43                   | 11.65 | 16  | 6.90  | 24  | 10.34 | 40    | 17.24 |
| UK              | 17                   | 4.61           | 5   | 1.36  | 22                   | 5.96  | 12  | 5.17  | 22  | 9.48  | 34    | 14.66 |
| Italy           | 13                   | 3.52           | 0   | 0.00  | 13                   | 3.52  | 7   | 3.02  | 2   | 0.86  | 9     | 3.88  |
| Australia       | 10                   | 2.71           | 5   | 1.36  | 15                   | 4.07  | 7   | 3.02  | 9   | 3.88  | 16    | 6.90  |
| Canada          | 7                    | 1.90           | 7   | 1.90  | 14                   | 3.79  | 17  | 7.33  | 24  | 10.34 | 41    | 17.67 |
| France          | 2                    | 0.54           | 1   | 0.27  | 3                    | 0.81  | 3   | 1.29  | 5   | 2.16  | 8     | 3.45  |
| The Netherlands | 4                    | 1.08           | 1   | 0.27  | 5                    | 1.36  | 5   | 2.16  | 5   | 2.16  | 10    | 4.31  |
| Russia          | 9                    | 2.44           | 3   | 0.81  | 12                   | 3.25  | 1   | 0.43  | 0   | 0.00  | 1     | 0.43  |
| Other           | 24                   | 6.50           | 8   | 2.17  | 32                   | 8.67  | 37  | 15.95 | 18  | 7.76  | 55    | 23.71 |
| Total           | 250                  | 67.75          | 119 | 32.25 | 369                  | 100   | 114 | 49.14 | 118 | 50.86 | 232   | 100   |

|                 | Sample 1, 3rd market |       |     |       | Sample 2, 1st market |       |     |       |     |       |       |       |
|-----------------|----------------------|-------|-----|-------|----------------------|-------|-----|-------|-----|-------|-------|-------|
|                 | NBG                  | %     | BG  | %     | Total                | %     | NBG | %     | BG  | %     | Total | %     |
| USA             | 2                    | 1.16  | 8   | 4.62  | 10                   | 5.78  | 46  | 13.86 | 95  | 28.61 | 141   | 42.47 |
| Germany         | 4                    | 2.31  | 16  | 9.25  | 20                   | 11.56 | 13  | 3.92  | 25  | 7.53  | 38    | 11.45 |
| UK              | 4                    | 2.31  | 9   | 5.20  | 13                   | 7.51  | 10  | 3.01  | 19  | 5.72  | 29    | 8.73  |
| Italy           | 2                    | 1.16  | 3   | 1.73  | 5                    | 2.89  | 2   | 0.60  | 0   | 0.00  | 2     | 0.60  |
| Australia       | 4                    | 2.31  | 18  | 10.40 | 22                   | 12.72 | 13  | 3.92  | 8   | 2.41  | 21    | 6.33  |
| Canada          | 4                    | 2.31  | 11  | 6.36  | 15                   | 8.67  | 17  | 5.12  | 27  | 8.13  | 44    | 13.25 |
| France          | 5                    | 2.89  | 10  | 5.78  | 15                   | 8.67  | 4   | 1.20  | 3   | 0.90  | 7     | 2.11  |
| The Netherlands | 2                    | 1.16  | 12  | 6.94  | 14                   | 8.09  | 0   | 0.00  | 3   | 0.90  | 3     | 0.90  |
| Russia          | 4                    | 2.31  | 4   | 2.31  | 8                    | 4.62  | 7   | 2.11  | 10  | 3.01  | 17    | 5.12  |
| Other           | 27                   | 15.61 | 24  | 13.87 | 51                   | 29.48 | 10  | 3.01  | 20  | 6.02  | 30    | 9.04  |
| Total           | 58                   | 33.53 | 115 | 66.47 | 173                  | 100   | 122 | 36.75 | 210 | 63.25 | 332   | 100   |

<sup>a</sup>Percentage of all respondents that selected this market as their 1st, 2nd or 3rd market

## Knowledge Characteristics (1: Not at All, 7: Very Much)

|   | Sample 1   |      |            |       |            |           | Sample 2   |      |            |       |            |           |      |
|---|------------|------|------------|-------|------------|-----------|------------|------|------------|-------|------------|-----------|------|
|   | 1st market |      | 2nd market |       | 3rd market |           | 1st market |      | 3rd market |       | 1st market |           |      |
|   | N          | Mean | Std. dev.  | N     | Mean       | Std. dev. | N          | Mean | Std. dev.  | N     | Mean       | Std. dev. |      |
| Customers                                 | NBG        | 261  | 3.40       | 1.184 | 115        | 3.45      | 1.428      | 61   | 3.51       | .942  | 122        | 2.32      | 1.26 |
|   | BG         | 119  | 1.31****   | .767  | 117        | 1.19****  | .776       | 114  | 1.06****   | .466  | 210        | 2.39      | 1.02 |
|   | Total      | 380  | 2.74       | 1.444 | 232        | 2.31      | 1.611      | 175  | 1.91       | 1.347 | 332        | 2.36      | 1.11 |
| Suppliers                                 | NBG        | 260  | 3.63       | 1.209 | 115        | 2.74      | .849       | 61   | 3.49       | .924  | 122        | 1.80      | .95  |
|   | BG         | 119  | 1.55****   | .661  | 117        | 1.13****  | .580       | 114  | 1.04****   | .264  | 210        | 2.10      | 1.03 |
|   | Total      | 379  | 2.97       | 1.440 | 232        | 1.93      | 1.085      | 175  | 1.89       | 1.311 | 332        | 1.99      | 1.01 |
| Foreign market conditions                 | NBG        | 261  | 3.48       | 1.090 | 115        | 3.10      | 1.059      | 61   | 3.03       | .774  | 122        | 1.95      | .84  |
|   | BG         | 119  | 1.20****   | .720  | 117        | 1.09****  | .491       | 114  | 1.04****   | .264  | 210        | 2.16**    | .89  |
|   | Total      | 380  | 2.76       | 1.446 | 232        | 2.09      | 1.296      | 175  | 1.73       | 1.078 | 332        | 2.08      | .88  |
| Competitors                               | NBG        | 260  | 3.12       | 1.106 | 115        | 3.60      | 1.362      | 61   | 2.87       | .785  | 122        | 1.90      | .75  |
|   | BG         | 119  | 1.18****   | .481  | 117        | 1.16****  | .682       | 114  | 1.04****   | .264  | 210        | 2.13**    | .93  |
|   | Total      | 379  | 2.51       | 1.312 | 232        | 2.37      | 1.625      | 175  | 1.67       | 1.013 | 332        | 2.05      | .88  |
| Foreign norms, rules and values           | NBG        | 260  | 3.16       | 1.151 | 115        | 2.21      | .960       | 61   | 3.16       | 1.036 | 122        | 1.70      | .75  |
|   | BG         | 119  | 1.13****   | .536  | 117        | 1.10****  | .480       | 113  | 1.03****   | .210  | 210        | 2.04****  | .88  |
|   | Total      | 379  | 2.53       | 1.373 | 232        | 1.65      | .937       | 174  | 1.78       | 1.203 | 332        | 1.92      | .85  |
| Foreign government, laws and institutions | NBG        | 260  | 2.98       | 1.263 | 115        | 2.13      | .874       | 61   | 2.87       | .846  | 122        | 1.75      | .81  |
|   | BG         | 119  | 1.09****   | .390  | 117        | 1.09****  | .508       | 114  | 1.04****   | .264  | 210        | 2.01****  | .89  |
|   | Total      | 379  | 2.39       | 1.382 | 232        | 1.61      | .881       | 175  | 1.67       | 1.030 | 332        | 1.92      | .87  |

\* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ , \*\*\*\* $p < 0.001$  based on the robust test of equality of means (Welch and Brown-Forsythe). The results of Welch and Brown-Forsythe tests are used in the cases where the results of Levene's test are significant ( $p < 0.05$ ), because it means that the equal variances are not assumed and we have heterogeneity and cannot rely on ANOVA results

## Other Market Selection Criteria (1: Not at All, 7: Very Much)

|                                       | Sample 1   |         |            |     |            |       | Sample 2   |         |            |     |            |      |
|---------------------------------------|------------|---------|------------|-----|------------|-------|------------|---------|------------|-----|------------|------|
|                                       | 1st market |         | 2nd market |     | 3rd market |       | 1st market |         | 2nd market |     | 3rd market |      |
|                                       | N          | Mean    | SD         | N   | Mean       | SD    | N          | Mean    | SD         | N   | Mean       | SD   |
| Good learning opportunities           | 261        | 3.15    | 1.089      | 114 | 2.09       | 1.209 | 56         | 3.04    | .687       | 122 | 4.09       | 1.40 |
| BG                                    | 119        | 2.95*   | .964       | 118 | 1.49***    | .814  | 115        | 2.90    | .706       | 210 | 4.02       | 1.31 |
| Σ                                     | 380        | 3.08    | 1.054      | 232 | 1.78       | 1.067 | 171        | 2.94    | .700       | 332 | 4.05       | 1.34 |
| Strong contacts before entry          | 260        | 2.08    | 1.209      | 114 | 2.99       | 1.327 | 57         | 1.72    | .921       | 122 | 1.95       | 1.12 |
| BG                                    | 119        | 1.49*** | .735       | 118 | 1.08***    | .417  | 115        | 1.03*** | .263       | 210 | 2.45***    | 1.46 |
| Σ                                     | 379        | 1.89    | 1.116      | 232 | 2.02       | 1.367 | 172        | 1.26    | .654       | 332 | 2.27       | 1.36 |
| A foreign customer's contact          | 261        | 5.03    | 1.011      | 114 | 4.96       | .866  | 58         | 6.14    | .511       | 122 | 4.80       | 1.31 |
| BG                                    | 119        | 6.40*** | .751       | 118 | 5.81***    | .653  | 115        | 6.37*** | .597       | 210 | 4.87       | 1.26 |
| Σ                                     | 380        | 5.46    | 1.133      | 232 | 5.39       | .876  | 173        | 6.29    | .578       | 332 | 4.84       | 1.27 |
| Support from the Chinese government   | 259        | 4.76    | 1.316      | 114 | 5.87       | .888  | 55         | 6.40    | .494       | 122 | 4.48       | 1.12 |
| BG                                    | 119        | 5.71*** | .741       | 118 | 5.92       | .764  | 115        | 6.30    | .499       | 210 | 4.29       | 1.24 |
| Σ                                     | 378        | 5.06    | 1.245      | 232 | 5.90       | .826  | 170        | 6.34    | .498       | 332 | 4.36       | 1.20 |
| Support from the foreign government   | 258        | 1.65    | .926       | 114 | 1.48       | .778  | 57         | 1.30    | .626       | 122 | 2.62       | 1.37 |
| BG                                    | 118        | 1.41**  | 1.015      | 118 | 1.34       | .527  | 115        | 1.10**  | .295       | 210 | 2.36*      | 1.21 |
| Σ                                     | 376        | 1.57    | .960       | 232 | 1.41       | .665  | 172        | 1.16    | .442       | 332 | 2.45       | 1.28 |
| Rich (a high income per capita)       | 261        | 5.72    | 1.305      | 114 | 5.42       | 1.038 | 58         | 5.07    | 1.349      | 122 | 5.10       | 1.35 |
| BG                                    | 119        | 5.89    | .998       | 118 | 5.74**     | .938  | 115        | 5.71*** | .886       | 210 | 5.16       | 1.26 |
| Σ                                     | 380        | 5.77    | 1.219      | 232 | 5.58       | .999  | 173        | 5.50    | 1.103      | 332 | 5.14       | 1.29 |
| Big (population)                      | 261        | 5.47    | 1.275      | 114 | 4.59       | 1.196 | 56         | 4.84    | 1.262      | 121 | 5.10       | 1.11 |
| BG                                    | 118        | 5.80*** | 1.034      | 117 | 4.74       | .957  | 114        | 4.96    | 1.258      | 210 | 5.07       | 1.11 |
| Σ                                     | 379        | 5.57    | 1.214      | 231 | 4.67       | 1.082 | 170        | 4.92    | 1.257      | 331 | 5.08       | 1.11 |
| The firm's product/service was better | 259        | 4.41    | .860       | 114 | 4.43       | .912  | 58         | 4.14    | .847       | 122 | 3.92       | 1.39 |
| BG                                    | 119        | 4.28    | .882       | 118 | 4.20**     | .780  | 115        | 3.75*** | .736       | 210 | 3.75       | 1.43 |
| Σ                                     | 378        | 4.37    | .868       | 232 | 4.31       | .853  | 173        | 3.88    | .794       | 332 | 3.81       | 1.42 |

|                                     |     |     |         |       |     |         |       |     |         |       |     |       |      |
|-------------------------------------|-----|-----|---------|-------|-----|---------|-------|-----|---------|-------|-----|-------|------|
| Good for production                 | NBG | 260 | 4.60    | 1.196 | 114 | 3.10    | 1.182 | 57  | 2.53    | .684  | 122 | 4.93  | 1.14 |
|                                     | BG  | 119 | 5.53*** | .973  | 118 | 2.86*   | .899  | 115 | 2.23*** | .465  | 210 | 4.82  | 1.11 |
|                                     | Σ   | 379 | 4.89    | 1.210 | 232 | 2.97    | 1.052 | 172 | 2.33    | .563  | 332 | 4.86  | 1.12 |
| Less risky                          | NBG | 261 | 2.59    | 1.158 | 114 | 2.95    | .920  | 58  | 3.22    | .702  | 122 | 3.25  | 1.20 |
|                                     | BG  | 119 | 2.67    | 1.082 | 118 | 2.81    | .765  | 115 | 3.06    | .753  | 210 | 3.22  | 1.15 |
|                                     | Σ   | 380 | 2.62    | 1.134 | 232 | 2.88    | .846  | 173 | 3.12    | .738  | 332 | 3.23  | 1.16 |
| Empty: no similar services/products | NBG | 259 | 2.54    | 1.035 | 114 | 2.57    | .872  | 58  | 2.55    | .882  | 122 | 3.52  | 1.30 |
|                                     | BG  | 118 | 2.47    | .903  | 118 | 1.98*** | .773  | 115 | 2.31*   | .583  | 210 | 3.29* | 1.18 |
|                                     | Σ   | 377 | 2.52    | .995  | 232 | 2.27    | .873  | 173 | 2.39    | .704  | 332 | 3.37  | 1.23 |
| Close to China                      | NBG | 261 | 1.83    | 1.464 | 114 | 1.98    | 1.439 | 58  | 2.02    | 1.584 | 122 | 2.34  | 1.37 |
|                                     | BG  | 119 | 1.53**  | 1.134 | 118 | 1.48*** | .771  | 115 | 1.37*** | .820  | 210 | 2.30  | 1.44 |
|                                     | Σ   | 380 | 1.73    | 1.375 | 232 | 1.73    | 1.173 | 173 | 1.58    | 1.171 | 332 | 2.32  | 1.41 |

\* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ , \*\*\*\* $p < 0.001$  based on the ANOVA and robust tests of equality of means (Welch and Brown-Forsythe). The results of Welch and Brown-Forsythe tests are used in the cases where the results of Levene's test are significant ( $p < 0.05$ ), because it means that the equal variances are not assumed and we have heterogeneity and cannot rely on ANOVA results



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# 10

## Intelligence Creation and Born-Global Patterns of Small Engineering Firms in Emerging Markets

Zizah Che Senik, Rosmah Mat Isa,  
Khairul Akmaliah Adham, and Ridzuan Md Sham

### Introduction

In the process of firm internationalization, intelligence on foreign markets is required. Intelligence can be illustrated as '*individuals' abilities to understand complex ideas, to adapt effectively to the world around them, to learn from experience, to engage in various forms of reasoning and to overcome a wide range of obstacles*' (Baron and Shane 2008, p. 80). Regarding the internationalization process of small and medium-sized firms, one

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Z.C. Senik (✉) • R.M. Isa  
Faculty of Economics and Management, Universiti Kebangsaan Malaysia,  
Bangi, Selangor, Malaysia

K.A. Adham  
Faculty of Economics and Muammalat, Universiti Sains Islam Malaysia,  
Nilai, Malaysia

R.M. Sham  
University of Kuala Lumpur, Bangi, Selangor, Malaysia

study described the internationalization intelligence process as *how* information and knowledge on international opportunities is identified, gathered, organized, and assessed (Che Senik and Md Sham 2011). Thus, in this chapter, we define internationalization intelligence as relevant cross-border information gathered by firms in support of their internationalization process.

Extant literature has indicated that reliable intelligence on targeted foreign markets enable the small high-tech firms to (among others things) recognize more international opportunities and be proactive toward international operations, as well as to accelerate their internationalization process. Viitanen and Pirttimäki (2006) suggested that relevant intelligence, for example on business, technology, product, social, and markets can substantially assist firms to strategize their international ventures by speeding up the process of product development, internationalization, and firm growth. Their study is supported by Amabile et al. (2013). All these facets of intelligence are consistent with the criteria of small high-tech firms, the knowledge-based firms in their creative pursuit of discovering and exploiting opportunities in foreign markets from inception (Bell et al. 2001; Knight and Cavusgil 2005; Madsen and Servais 1997; Prashantham and Berry 2004).

A review of the literature on internationalization reveals that diverse issues on internationalization have been discussed (i.e. Mejri and Umemoto 2010; Zahra et al. 2005). However, the subject of the internationalization process and intelligence creation within the born-global small high-tech firms in emerging economies remains unexplored. In fact, the empirical findings, which mainly involve larger firms in more advanced countries, are still fragmented (Ambos and Ambos 2009; Birkinshaw et al. 2006). This situation may impede the growth of the firms and industry in emerging economies, thus delaying their progression toward enhancing their expansion development. This in turn puts the firms located in emerging economies particularly at a disadvantage in comparison to their counterparts in the more developed economies.

In this study, we take the context of small high-tech firms in one emerging economy, Malaysia. The country, located in Southeast Asia, is in the process of transforming into a high-income and knowledge-based



country by the year 2020. For this purpose, it needs to develop the capacity of its small and medium-sized enterprises (SMEs) to become the key sector. SME is defined as ‘*an enterprise with full-time employees not exceeding 150 or with annual sales turnover not exceeding RM25 million*’ (NSDC 2011, p. 5–6). An OECD report in 2013 shows that the SMEs sector in Malaysia represents 99 % of total business establishments. The sector contributes 32 % of the country’s GDP, provides 59 % of employment, and constitutes 19 % of the nation’s exports (OECD 2013). Meanwhile, SME Corp (2014) categorized the SME sector into four main areas of business: services (90 %), manufacturing (6 %), construction (3 %), and agriculture and mining (1 %). The SMEs in the high-tech industry, which is the focus of this study, are firms operating within manufacturing and services areas, which comprised the most significant number of firms.

In tandem as an emerging economy, Malaysia is leveraging on high-tech industries (Bernama 2013) in its plan to serve as a centre for the global outsourcing in the high-tech manufacturing industries (MIDA 2012). Thus, the National Economic Advisory Council Malaysia (NEAC) suggested the SME entrepreneurs in Malaysia, especially engineer-entrepreneurs, should promote products on technical/knowledge-based industries as they are equipped with technical knowledge, as well as business knowledge due to their engagement with industries in their past working experience (NEAC 2010). This knowledge base enables them to acquire intelligence on business and product opportunities, as well as technological advances. It also prepares them to be innovative and creative in building their capabilities through product and technology developments, permitting them faster entry into international operations by becoming born-global firms.

Since the subject of the small, high-tech, born-global firms’ internationalization process is still an understudied phenomenon in emerging economies, coupled with a lack of empirical evidence and complexity of the issue, this study utilized multiple-case study methodology (Yin 2003). The main source of data was gathered through in-depth interviews with engineer-entrepreneurs of three Malaysian small engineering born-global firms. The purpose of this study is to seek a deeper understanding of the

intelligence creation in the internationalization process of small engineering born-global firms. The objectives are threefold: (1) to identify the characteristics and dimensions of the internationalization of small engineering born-global firms in an emerging economy; (2) to classify the types of internationalization intelligence; and (3) to understand how patterns of born-global influence the process of intelligence creation among small engineering born-global firms.

## Literature Review

### The Internationalization of Small High-Tech Firms

The internationalization of a firm is a complex process. Although there have been several theories and models of internationalization, there is none yet that can adequately describe the phenomenon (Etemad and Wright 1999): thus the insights must be drawn from several perspectives (Mejri and Umemoto 2010). In understanding the internationalization of small high-tech born-global firms, previous literature has emphasized four main approaches: international entrepreneurship (IE), international new ventures (INV) or born-global, the network approach, and the knowledge-based models (Che Senik 2010).

International entrepreneurship as defined by Zahra and George (2002) as *'the process of creatively discovering and exploiting opportunities that lie outside a firm's domestic markets in the pursuit of competitive advantage'*. This is an emerging field of enquiry that has created a lot of interest from scholars worldwide. Building upon the theories of entrepreneurship, the field of international entrepreneurship highlights internationalization as the process of recognition and exploitation of opportunity into a business that occurs cross-border (Shane and Venkataraman 2000). Further, McDougall and Oviatt (2000) describe that the international entrepreneurship domains may include co-operative alliances, corporate entrepreneurship, and independent entrepreneurship through exporting or other market entry modes, creation of new ventures, and venture financing. Based on these characteristics, Dimitratos and Jones (2005) described small businesses, which internationalized at a faster pace, as INVs, also known as born-global firms.

## Born-Global Patterns

Oviatt and McDougall (1994) defined born-global firms as those which *'from inception, seek to derive significant competitive advantage from the use of the resources and the sale of outputs to multiple countries'* (p. 49). Born-global carries other names such as 'international new ventures', 'committed internationalists', and 'knowledge-intensive firms, which are internationally focused' (see Bell 1995; Jones 1999). According to Luostarinen and Gabrielsson (2004), born-globals are firms that begin their globalization efforts immediately after their establishment, without any domestic or local operations. Or these firms pursue internationalization simultaneously while establishing strong foothold in their local markets. Or they are already well established in the domestic markets, but move toward a rapid and a more committed internationalization because of certain circumstances (Bell et al. 2001). Several authors suggest a time frame of born-global patterns, which can occur within three years of establishment (Knight and Cavusgil 2004), within six years (Oviatt and McDougall 1994), or extended to seven years (Jolly et al. 1992), and eight years (McDougall et al. 1994). Regardless of any description given, one distinguishing attribute of born-globals is a strong business network at both domestic and international levels (Oviatt and McDougall 1995).

Bell (1995) argues that the concept of born-global emerged due to some evidence of many firms entering into the international markets more rapidly, with some firms internationalizing right from the start. These firms avoid incremental patterns toward internationalization. Knowledge of the products and markets acquired from the internet (Gabrielsson 2005), as well as the change in mindset of entrepreneurs by becoming more entrepreneurial in their behaviour through being innovative, proactive, and risk-seeking (Lumpkin and Dess 1996), would eventually shape the pattern of their internationalization (Luostarinen and Gabrielsson 2004). The network approach emphasizes the firms' strategic links with others (Johnsen and Johnsen 1999), while international new ventures involves firms that internationalize from inception or at a faster speed by building competitive advantages (Oviatt and McDougall 1994).

Previous studies have related firm internationalization mainly to the multinational corporations and their process of internationalization, yet it is argued that internationalization can be the strategic actions of small businesses avoiding incremental process and penetrating into international markets at a faster rate (Mejri and Umemoto 2010). For the small businesses targeting high-tech and knowledge-based products, the internationalization arrangement is always the key goal of the firms because they usually engage in serving a niche market demanded by exclusive clients/customers, thus eventually they would internationalize from inception (Litvak 1990).

## Intelligence Creation for Internationalization

In general, intelligence includes information on everyday activities, personal, applied, and public information (Choo 1998). When we relate internationalization, intelligence, and entrepreneurship in the context of small high-tech born-global firms, it means how information and knowledge is acquired (such as identified, gathered, organized, and assessed) in order to pursue entrepreneurial international opportunities (Che Senik and Md Sham 2011). Hagen and Zucchella (2014) found that openness of the team in the born-global firms to learn from their colleagues and from their networks, as well as information available about the potential international markets accelerate their internationalization process.

The internationalization process of small and medium-sized engineering firms (SMEFs) has becoming an important issue for academic researchers (Bell et al. 2004; Shrader 2001; Zucchella et al. 2007). Robertson and Hammersley (2000) distinguish the SMEFs as firms that are equipped with an intellectual nature, employ mainly well-qualified human resources, and adopt advanced technology. Within these SMEFs, knowledge is the key asset that serves as a competitive advantage. The sales partners have the market knowledge and customer contacts, and they may be the only feasible way to get access to many markets. Thus, contacts with the customers are necessary for the company to gain knowledge about customer needs and preferences (Liisa-Maija Sainio et al. 2011). In acquiring business and technology intelligence to support this type of operation, entrepreneurs

of SMEFs need to understand the technological and market factors in the international environment. Liisa-Maija Sainio et al. (2011) also suggest that the companies can create value through technology capabilities, industry knowledge and the flexibility of the organization, thus they can accelerate the internationalization process.

Business intelligence, however, is still an infant concept, argued to be a poorly defined term, and the definitions have not yet reached consensus (Popovič et al. 2010). Based on Williams and Williams' (2007) definition, this study applies the concept of business intelligence as a set of information and analyses related to business operations that serve as the base for managerial decisions and actions. Regarding SME internationalization, we refer to business intelligence process as techniques or tools to get information about business opportunities that enable efficient and effective decision making (Hannula and Pirttimäki 2003; Viitanen and Pirttimäki 2006; Zucchella et al. 2007). It relates to acquiring information on what, who, when, where, and how, comprising of a variety of types of intelligence, including customer, competitor, market, technology, product, and environment (Tyson 1986).

The business intelligence process aims to: (1) produce general information or knowledge; (2) create organization-specific intelligence solutions to allow for a more efficient information utilization and to enhance intelligence on a firm's business environment; and (3) support understanding of an organization's strengths and weaknesses in their competitive situation (Pollard 1999). The advantages of having access to relevant business intelligence are that an SME is better able to manage its competitive situation, defend its competitive position (Thomas 2001), and eventually improve its performance by leveraging information assets within its key business processes (Williams and Williams 2007). The technology intelligence process, on the other hand, is a method of gathering information relevant to product development, innovation, and technological trends that most likely involves research and development (R&D) activities (Liao 2005; Lichtenthaler 2003).

However, English (2005) argues that in acquiring business and technology intelligence, people tend to deduce the information by their own free will, and subsequently act accordingly. We support this

notion; thus we propose that the engineer-entrepreneurs must seek business and technology intelligence activities to enable them to speed up the internationalization process. We also argue that the process of acquiring, gathering, and analysing information involves understanding the external environment as well as the internal situation of the company itself. Evidently, the existence of business and technology intelligence has significantly contributed to speeding up the process of internationalization of small knowledge-intensive firms (Bell et al. 2004).

The above review of literature highlights the importance of integrating business and technology intelligence dimensions in getting insights into the entrepreneurial activities of the born-global engineering firms in an emerging economy.

## Methodology

According to Thomas (2004), the selection of a relevant method is determined by the research problems and research questions. In understanding how intelligence is created in the internationalization process of small high-tech born-global firms, a qualitative research methodology was selected. This is because the subject is understudied (Laanti et al. 2007), it lacks empirical evidence (Andersen and Skaates 2004; Welch and Welch 2004), and the issue is complex (Coviello McAuley 1999; Zalan and Lewis 2004). In gathering data, we adhered to the guidelines suggested by Eisenhardt (1989) and Yin (2003), employing multiple-case study methodology based on in-depth interviews with three Malaysian small engineering born-global firms. Qualitative data allow researchers to gain richer explanations through a deep understanding into a phenomenon (Miles and Huberman 1984).

To identify the small high-tech born-global firms, the Federation of Malaysian Manufacturers (FMM) directories as well as the companies' websites were reviewed. The selected companies were chosen based on these characteristics:

1. They hired less than 300 employees with paid-up capital of more than RM49 million which is equivalent to USD\$17 million (Hashim and Wafa 2002).
2. They were owned by the Malaysian entrepreneurs.
3. They were committed to outward operations.

4. They produced high-tech manufacturing products in Malaysia.
5. They entered foreign markets in the early years of firm establishment.
6. They were located in the Small Medium Industry (SMI) zones.

Guided by these the characteristics, three SMEFs were selected, and they are disguised as *SwitchCo*, *SuperEnergy*, and *TeleTech*. The owners and managers of these three firms were asked if they would participate in the study and they agreed to be interviewed. The interviews were conducted at their firms, and their involvement in the study was kept confidential from the others. The interview protocols covered issues about:

1. the firms' internationalization process (i.e. first-time involvement, entry mode, market selection and coverage);
2. how the firm obtains intelligence on internationalization (i.e. sources, informants);
3. what kind of intelligence the firm needs to strategize its international operations; and
4. the impact that the sources of intelligence make on the firm's internationalization process.

All the interviews were recorded digitally and transcribed prior to the case analysis. After the analysis, case summaries were sent to the respective respondents for confirmation. These procedures are strongly recommended in the qualitative research to warrant research validity and reliability (e.g. Merriam 2002; Miles and Huberman 1994; Silverman 2010). The analysis was conducted specifically to identify patterns of internationalization, sources and types of internationalization intelligence, and its impact on the firms' internationalization.

## Results

### Firm Characteristics

The characteristics of the three small engineering born-global firms as well as their founders, disguised as *SwitchCo*, *SuperEnergy*, and *TeleTech*, are presented in Table 10.1.

**Table 10.1** Characteristics of the firms and their founders

| Characteristics                       | SwitchCo  | SuperEnergy   | TeleTech   |
|---------------------------------------|---|---|--|
| <i>Year of establishment</i>          | 1978  | 1992  | 1996   |
| <i>Ownership</i>                      | Family-owned company (100 % Malaysian ownership)  | International partnership – Malaysia (70 %), India (30 %)   | International partnership – Malaysia (80 %), others (20 %)   |
| <i>Location, size and annual sale</i> | Located in a designated industrial area in Kinrara, Malaysia<br>Employees: 80 workers<br>Annual sale: US\$2–5 million | Located in a designated industrial area in Shah Alam, Malaysia<br>Employees: 60 workers<br>Annual sale: US\$3–7 million | Located in a designated industrial area in Puchong, Malaysia<br>Employees: 30 workers<br>Annual sale: US\$8–10 million |
| <i>Type of manufactured product</i>   | Switch gear and switch box  | Cable joints, Power cable, and telecommunication accessories  | Electrical energy products & services, and medium voltage switchgears  |
| <i>Founder's academic</i>             | Electrical engineering  | Mechanical Engineering Masters in Engineering   | Mechanical Engineering   |
| <i>Qualification</i>                  | Local graduate  | Overseas graduate   | Overseas graduate  |
| <i>Founder's working experience</i>   | Has work experience in a multinational firm<br>About 40 years of working experience                                   | Has work experience in a state power company<br>About 40 years of working experience                                    | Has work experience in a multinational firm<br>About 35 years of working experience                                    |
| <i>Founder's age<sup>a</sup></i>      | Early 60s   | Early 60s   | Late 50s   |

Note: <sup>a</sup>The founder at the time of interview

As shown in Table 10.1, two companies were set up in the 1990s, except for *SwitchCo*, that was established in the late 1970s. *TeleTech* and *SuperEnergy* were owned by the Malaysian and international partners,



while *SwitchCo* was a Malaysian family-owned firm. All three were located in different designated areas for small and medium industry (SMI). *TeleTech* had 30 employees and annual sales of US\$8–10 million; *SuperEnergy* employed 60 workers and had annual sales of US\$3–7 million; and *SwitchCo* had 80 employees with annual sales of US\$2–5 million. Both the founders of *TeleTech* and *SuperEnergy* graduated in Mechanical Engineering from overseas, while the founder of *SwitchCo* was an electrical engineer who had graduated from a local university. With their ages ranging from late 50s to early 60s, they had a broad working experience as well as networks with people at domestic and international levels.

## Process of Internationalization Intelligence Creation

This section provides a brief description of the process of internationalization intelligence creation for each case company.

*SwitchCo* was a pioneer in selling and assembling switches for the gear and box industry, operating for more than three decades. At the time of its conception in 1978, the company was co-owned by two local partners, but they pulled out, leaving the electrical-engineer founder to manage the family business by himself. Back then, there were only two local players in the Malaysian market, although more competitors emerged later. Since its inception, the company had attempted to enter into international markets. However, lack of resources and expertise, especially in technology, was the main reason why the firm delayed going international. Since *SwitchCo* was unable to internationalize its products at the earlier stage, it strengthened its domestic position by setting a low pricing strategy enabling the firm to monopolize the local industry. *SwitchCo* began to internationalize after the economic downturn that affected Southeast Asia in the late 1990s. As a result of this crisis, many of *SwitchCo*'s business partners collapsed, pushing the company to venture out to survive. The internationalization process started through exporting, by being a supplier to some international contractors from Japan, introduced to *SwitchCo* through its business associates. By the late 1990s, *SwitchCo* had built up good image and reputation with these

customers, resulting in many enquiries about its products from foreign customers and other business associates. These customers preferred to purchase *SwitchCo's* products, (compared to Japanese products) because of their cheaper prices. In early 2000s, the company began to manufacture its own products through a licensing agreement with one multinational company. This product development strategy provides a broader opportunity for the company to penetrate into overseas markets, as well as promotes its brand for the global markets.

*SuperEnergy* began its business in trading mode in 1992 by supplying electrical equipment to Tenaga National Berhad (TNB), the state power provider in Malaysia. The founder was formerly an executive at TNB and had worked previously as an engineer in an electrical multinational corporation (MNC) based in Zurich. At the beginning of its operation, the company used the TNB branding, technologies, and support. After a year of its operation, in 1993, *SuperEnergy* began to venture internationally. *SuperEnergy* first built its international relations with a manufacturer in Singapore. This happened when the founder's former colleague from his previous workplace allowed him to utilize their technology. In the mid-1990s, *SuperEnergy* then began fabricating its products using technology from Europe enabling the firm to penetrate into the European market. In the late 1990s, *SuperEnergy* co-partnered with a Sudanese business associate. The company utilized the new partner's technology to expand into the South African market. By 2005, due to the founder's connection with many MNCs, *SuperEnergy* was able to link to 150 companies all over the world. By 2009, with its technical expertise as well as managerial strengths, *SuperEnergy* has leveraged its global partnership, networking and collaboration with big construction companies in Malaysia, the Middle East, Europe, and Africa. These internationalization strategies have become the base of developing its core competencies, in preparation for *SuperEnergy* to establish its own global brand.

*TeleTech* started its business in 1996 as a vendor to Tenaga National Berhad (TNB), the state power provider for Malaysia. *TeleTech* produced electrical energy products and services as well as medium voltage switch-gears. The owner became interested in producing the products due to his previous work experience, where he dealt with many engineering suppliers, both local and international. In late 1990s, which was about three years after the firm's establishment, *TeleTech* started venturing out

into international markets. From the founder's extensive travelling, participating in exhibitions, and attending workshops and seminars, he has created a wide network, enabling him to know more about other types of engineering products. *TeleTech* manufactured plastic-based products, utilizing a reverse cycle process, an advanced manufacturing technique, which was a cross-linked between a chemical bonding process and a radiation method process. This unique manufacturing technology was developed by a US company, with which its Indian partner was working. Through this partner, *TeleTech* became the first firm to bring the process to Malaysia. However, some of the products that *TeleTech* manufactured could not use the chemical process; in these cases, radiation has to be applied. For this purpose, *TeleTech* had to send those products to be manufactured in the Netherland. By 2010, the company began collaborating with the Malaysia Institute of Nuclear Technology (MINT) to conduct the radiation process for its products, resulting in the company being able to support radiation-based processes on its own. By the end of 2012, *TeleTech* had received the Certificate of Acceptance by the Malaysian National Electricity Board as well as by other international bodies permitting it to sell its products to local as well as many foreign markets.

## Types of Internationalization Intelligence

Based on the analysis of the internationalization intelligence creation of each firm, we found that the intelligence created by the firms can be divided into two types: business intelligence and technical intelligence. The analysis of *business intelligence* revealed several emergent themes; product, markets, competitors, customers, and business environment, which support previous literature (Tyson 1986). The study also identified some new findings regarding the business intelligence constructs which are *opportunities, pricing, local and international clients and suppliers, policy, rules and regulations, and international relations*.

All firms share six common factors of what they sought for in business intelligence such as opportunities, products, local and international markets, competitors, customer, and environmental. These factors are

crucial business intelligence for the internationalization of the three small engineering born-global firms. Meanwhile, both *SuperEnergy* and *TeleTech* agree that obtaining relevant information about local and international suppliers adds value to their business intelligence. On the other hand, *SuperEnergy* and *SwitchCo* agree that creating international relations supports gathering of business intelligence. The findings also reveal that although *SwitchCo* was operating at an international level much later than the other two firms, it emphasized getting information on pricing as its key business intelligence. As mentioned by the CEO of *SwitchCo*:

[...] At that time, since we were unable to internationalize the products, we learned how the competitors set up their prices. Based on that, we decided to set a low pricing strategy, so that we could monopolize the local industry.'

A unique factor that enables *TeleTech* to go international at a faster rate is its knowledge of the policies, rules, and regulations of the countries, as mentioned by its founder:

*'I believe that the information on the policies, rules, and regulations of the countries is very important. As for me I gain this information from my links with others [pause] for example my Indian partner who introduced me to the US company has all the information regarding the policies and regulations on foreign operations.'*

Meanwhile, the analysis of *technical intelligence* also revealed several emergent themes. The themes found in this study are technological, product development, innovation, and R&D, supporting the previous literature (Liao 2005; Lichtenthaler 2003). The study also identified some new findings regarding the technical intelligence constructs including *international certification*, *brand*, *latest trend*, and *technical pioneer*. All firms believe that technological and product developments are among the 'must have' factors in order to go international. But what speeds up the pace of the firm in going international is keeping up with the latest trends and becoming a pioneer in the technology. This is supported by *TeleTech*:

In the high-tech industry, to penetrate oversea markets, we have to make a difference; we have to adopt the latest trend in technology. In my case, I

managed to utilize the reverse cycle process, which is the first technology being applied in Malaysia.'

The analysis of the types of intelligence created for the internationalization process of each firm is presented in Table 10.2.

## Born-Global Patterns of Internationalization

Regardless of the year of firm establishment, all the three firms first entered international markets almost at the same time, between 1996 and 1997. In identifying the type of born-global pattern of each firm, several dimensions of internationalization were considered, as summarized in Table 10.3. The findings of the dimensions then enable us to ascertain the type of born-global patterns for each firm.

**Table 10.2** Types of intelligence in the internationalization process

| Types of internationalization intelligence created | Firm     |             |          |
|--|----------|-------------|----------|
|  | SwitchCo | SuperEnergy | TeleTech |
| <i>A. Business intelligence</i>                    |          |             |          |
| 1. Opportunities                                   | √        | √           | √        |
| 2. Products  | √        | √           | √        |
| 3. Local and international markets                 | √        | √           | √        |
| 4. Competitors                                     | √        | √           | √        |
| 5. Clients/customer                                | √        | √           | √        |
| 6. International relations                         | √        | √           | √        |
| 7. Business environment                            | √        | √           | √        |
| 8. Pricing   | √        |             |          |
| 9. Local and international suppliers               |          | √           | √        |
| 10. Policies, rules and regulations                |          |             | √        |
| <i>B. Technical intelligence</i>                   |          |             |          |
| 1. Technological                                   | √        | √           | √        |
| 2. Product development                             | √        | √           | √        |
| 3. Brand   | √        | √           | √        |
| 4. Innovation                                      |          | √           | √        |
| 5. R&D   |          | √           | √        |
| 6. International certification                     |          | √           | √        |
| 7. Latest trends                                   |          |             | √        |
| 8. Technical pioneer                               |          |             | √        |

**Table 10.3** Dimensions of internationalization

| Dimensions   | SwitchCo  | SuperEnergy  | TeleTech   |
|--|---|--|--|
| <i>Year of establishment</i>   | 1978  | 1992   | 1996   |
| <i>Foreign entry timing</i>  | First time: 1996  | First time: 1997   | First time: 1996   |
| <sup>a</sup> <i>Pace of internationalization</i>                                     | About 18 years  | Less than a year   | About 3 years  |
| <i>Degree of internationalization (measured by level of global sales commitment)</i> | 23 %  | 56 %   | 40 %   |
| <i>International markets</i>   | Japan; Sri Lanka; Pakistan; Dubai; China; African countries; Sudan; Vietnam | Sudan; Cambodia; Indonesia; China; Singapore; Middle-eastern countries | India, ASEAN Countries; Bangladesh; Middle Eastern countries |
| <sup>b</sup> <i>Pattern</i>  | Born-global again   | Inception born-global  | Rapid born-global  |

Note: <sup>a</sup>The year of firm establishment minus the first time of foreign entry.

<sup>b</sup>Type of internationalization.

*SwitchCo* began its first international activities after 18 years of establishment. This firm took a long time to internationalize due to both internal and external factors. Although it had made an effort to penetrate into overseas markets, the process was delayed because *SwitchCo*, being a family business firm (100 % Malaysian ownership), lacked the resources and expertise, especially on technology, preventing the firm from moving at a faster rate of internationalization. Moreover, the company also faced conflicts with founding partners, forcing the remaining founder to reorganize the firm. All these resulted in *SwitchCo* focusing on creating a strong domestic market foundation. However, once it began its international operations, *SwitchCo* was able to penetrate into big markets, such as Japan and China. Based on these findings, *SwitchCo* represented a traditional firm exhibiting a gradual pattern of internationalization by taking an extended period (18 years) to begin its first international activities. Its breadth of internationalization (10 countries) and depth (23 % of degree of internationalization) characterized the *born-again global pattern* as described by Bell et al. (2001). This pattern of internationalization is further explained by Gabriellsson et al. (2008, p. 47) as firms 'who attempt

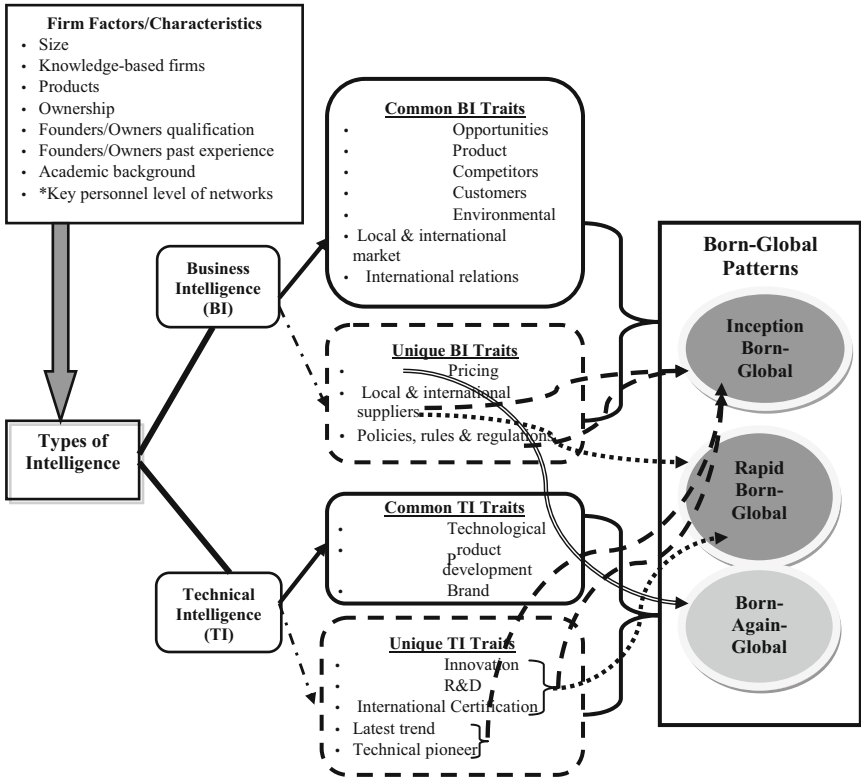
to internationalize, then turn to building up domestic support and later return to internationalization with great leaps, and a global vision’.

*SuperEnergy* started its foreign entry in the same year of the firm’s establishment. The founder, who owns 80 % of the firm’s share (refer to Table 10.1), took advantage of his acquaintance with international buyers and suppliers, as well as competitors and friends, while working with a multinational firm. Due to the firm’s global strategy as well as the founder’s international networks and collaborations from inception, *SuperEnergy* penetrated close and distant markets almost simultaneously after creation (within a year), and with a high degree of internationalization (56 %). The speed of *SuperEnergy*’s internationalization shortly after its establishment as a result of a high commitment to internationalize in both near and distant markets represents the theoretical definitions of a *born-global pattern* (Knight and Cavusgil 1996; Luostarinen and Gabrielsson 2004; Oviatt and McDougall 1997).

*TeleTech* was pulled into a number of international markets within four years of the firm’s establishment with the collaboration of its Indian partner. *TeleTech* penetrated into ASEAN (Association of Southeast Asian Nations) countries such as Thailand, Brunei, Indonesia, and Vietnam. Apart from the ASEAN countries, *TeleTech* also entered Bangladesh and Middle-Eastern countries including Qatar and Kuwait. Due to its depth of internationalization (40 %), breadth as represented by the number of countries (seven) all over the world, and speed (within three years), these indicators are similar to the characteristics of the *rapid born-global pattern* as suggested by Knight and Cavusgil (2004).

## Discussions and Conclusions

Our findings yield important insights into how SMEFs from an emerging market create intelligence in venturing out at faster pace via the born-global patterns. From the findings of the three firms, we learn that the SMEFs need to acquire, manage, evaluate, and exploit internationalization intelligence to penetrate into foreign markets, supporting the earlier findings by Che Senik and Md Sham (2011). Figure 10.1 illustrates



**Fig. 10.1** Internationalization creation of small engineering born-global firms (Note: The different dash lines indicate the unique traits specifying the different types of born-global patterns)

the intelligence creation of the internationalization of born-global firms based on the study of three Malaysian SMEFs.

The process of internationalizing the SMEFs through the born-global patterns requires intelligence (business and technical) that constitutes a number of internal and external factors. However, the types of intelligence created during the process of internationalization rely on the characteristics of the firms (i.e. ownership, founder’s qualification, types of products, academic background).

This study found that apart from the products that are high-tech based, an imperative factor is the exploitation of a wide-range of networks by



the founders/owners or CEO/key personnel, especially in building international relations. This is in line with previous studies that network relationships are significant to speed up the internationalization (Coviello and Munro 1997; Ellis and Pecotich 2001; Johanson and Mattsson 1988). In addition, these factors can create values which in turn provide competitive advantage for SMEs from emerging markets, which also support Liisa-Maija Sainio et al. (2011) that technology and know-how activities are the mechanisms for value creation.

Having technical knowledge, such as information relevant to product development, innovation, and technological trends, is one of the essential traits that accelerate the process of internationalization (Liao 2005). These findings support the earlier study that suggests that firms need to integrate both business intelligence and knowledge to help in making decisions, to gain competitive advantages, and to increase the firm's performance (Herschel and Jones 2005). This study also found that both business and technical intelligence are crucial in determining the born-global patterns for the small high-tech firms from emerging markets, especially regarding the speed, breadth, and depth of internationalization (Zahra 2005; Zahra et al. 2000). In sum, the characteristics of the firms differentiate the types of intelligence created during the process of internationalization, which in turn determines the patterns of born-global such as *born-global*, *rapid born-global*, and *born-global again* (Gabrielsson et al. 2008).

The findings obtained from the Malaysian small engineering born-global firms provide new insights on internationalization via a born-global pattern. In theory, this study contributes to the born-global approach through the discovery of the important traits of business and technical intelligence. Moreover, this study details the process of intelligence creation and matches it with the characteristics of the firms. This enables a prediction of the type of born-global pattern (such as *born-global*, *rapid born-global*, and *born-global again*) that suits the small high-tech firms from emerging markets.

In practice, the SMEFs have the capabilities to realize the born-global pattern of internationalization because of the nature of their products. Due to their dynamic environment and technological advancement, small high-tech firms should take advantage of the new technology,

advance the trends, and become pioneers in the market. In addition, small high-tech firms should equip themselves with new knowledge and become fast learners to adapt to the current demand and new situations. In terms of building international relations, the owners or founders of the small high-tech firms must make sure that they maintain their relationships with customers, suppliers, previous employers, etc.

Although this study is confined to three small high-tech firms, it makes a contribution to the knowledge of intelligence creation and the born-global pattern of small high-tech firms in an emerging market. Because of the nature of today's business and the importance of emerging markets to the world's economy, many firms are eyeing international ventures. Thus, future research should pursue more studies on intelligence creation in the context of the born-global, which should include other industries as they might contribute to a different perspective in understanding intelligence creation in the born-global internationalization process.

**Acknowledgement** We wish to acknowledge the Government of Malaysia and Universiti Kebangsaan Malaysia for their support and grant [Project Code: FRGS/2/2014/SS05/UKM/02/5].

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# 11

## Does Being a Member of the Cluster Matter in the Process of Value Creation Through Internationalization?

Vesna Sedoglavich and Marina Dabić

### Introduction

Small and medium-sized enterprises (SMEs) generally face tough competition in the countries where they are based. The ongoing process of globalization exerts further competitive pressure on value creation in these firms (Audretsch 2003). Value creation spreads over different levels (Lepak et al. 2007). Consequently, in a manner similar to large companies, more and more SMEs face the challenge of searching foreign markets for opportunities, which forces firms to change their strategies rapidly. At the

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V. Sedoglavich (✉)

Research School of Management, ANU College of Business and Economics,  
Australian National University, Acton, ACT, Australia

M. Dabić

Faculty of Economics and Business, University of Zagreb, Zagreb, Croatia  
Management Division, Nottingham Business School, Nottingham Trent  
University, Nottingham, UK



same time, competition among knowledge-based SMEs intensifies, as these firms strive to develop capabilities faster than their rivals (Teece and Pisano 1994), to maximize created values (Jensen 2001), make them sustainable (Ciasullo and Troisi 2013), and increase value creation through mission (Andersen 2014) or by project management practices (Laursen and Svejvig 2016). According Bowman and Ambrosini (2000:13) value creation is determined by:

‘the relative amount of value that is subjectively realized by a target user (or buyer) who is the focus of value creation – whether individual, organization or society – and that this subjective value realization must at least translate into the user’s willingness to exchange a monetary amount for the value received’.

It follows from this definition that there is perceived use value, subjectively assessed by the user (or buyer), and then the monetary exchange value, the price paid for the use value, is created.

The position of SMEs in the global economy becomes increasingly important due to their role as primary drivers of knowledge and economic advancement. In the context of eroding national boundaries, national governments in many cases have failed to create the encouraging business environments that such firms need. Consequently, the number of firms looking for opportunities in foreign markets on their own account is growing.

While most firms go through a process of internationalization by trial and error, some firms in searching for value creation established forms of collaboration to minimize the costs of learning-by-doing. Clusters of firms are one form of collaboration among companies. Over the past years, clusters have been attracting increasing interest from both academics and businesses. Several studies have looked into the performance of regional and industry clusters. Among companies, clusters have gained popularity due to their ability to create value synergies for companies involved. Particularly high-tech, science and knowledge-based clusters have attracted increased interests within the research community, businesses, and governments. These clusters create suitable grounds for the development of science-based industries, banding together hundreds of

firms of different sizes that work in a similar field. The knowledge and/or resources that these firms share are just some of the externalities that usually help them in their growth and development in both domestic and foreign markets (Dobrzykowski et al. 2010). The literature on the internationalization of research and development (R&D) efforts provides evidence that firms increasingly establish R&D activities in different regions for the purpose of benefiting from agglomeration externalities (Gassmann and Von Zedtwitz 1999). Firms that maintain a network of geographically dispersed R&D units seem very able to tap into local resources of excellence and benefit from the innovation advantages that clusters generate.

Surprisingly, few empirical studies have examined whether firms in regions that host a concentration of similar technological/innovation activities have actually been able to leverage their role in a cluster to enhance their presence in foreign markets. As far as studies exist, the empirical evidence is inconclusive. The purpose of this chapter is to provide new insights into the role of clusters in fostering the international exposure of firms. A better understanding of the role of clusters in the internationalization process could advantage firms that have ambitions to expand into foreign markets. The chapter asks the following key questions:

1. What actions are required to ensure the success of SME internationalization?
2. What is the role of a cluster in the whole process?

This study uses the concept of ‘internationalization’ and analyses the international actions of science-based SMEs that belong to the same cluster. It focuses on the circumstances surrounding the decisions that firms make in relation to internationalizing their operations.

The remainder of this chapter is organized as follows. First, the chapter discusses key issues in the relevant literature on the internationalization process, and the role of networks and clusters. Next, the chapter offers an explanation of the research method used, which is followed by findings and a discussion. The final sections conclude by emphasizing the main contributions to the literature.

## Literature Review

This section briefly reviews key issues in academic literature on the internationalization of companies, as well as literature on networks and clusters. Firstly, it discusses the internationalization of a firm as a firm-specific activity by drawing on the main schools of thought in the literature on business internationalization. Secondly, it elaborates on the internationalization of a firm as a cluster-specific activity by examining the relevant literature on industrial clusters, which leads to the formulation of specific research propositions.

### Selected Internationalization Process and Networks Literature

Previous studies on company internationalization have identified a number of factors that influence the choice of an entry mode for a selected market. Integrating perspectives have been provided by Dunning (1988, 1998, 2001) who proposed a comprehensive framework for entry mode selection. Several empirical studies have used this framework to explain the choice between joint ventures and sole ventures (Kogut and Singh 1988), licensing and sole ventures (Caves 1982; Davidson and McFetridge 1984), and foreign direct investment (Cho 1985; Dunning 1980; Kimura 1989; Sabi 1988; Terpstra and Yu 1988; Yu and Ito 1988). Other authors see internationalization as an incremental process of increasing international involvement, as firms acquire more foreign market knowledge (Johanson and Vahlne 1977, 1990). All of these differing approaches to internationalization sought to address the key question: ‘Why and how do firms internationalize?’ (Weisfelder 2001).

Studies that focus mostly on the ‘why’ question can be grouped into two major schools of thought: the eclectic paradigm on international production (Dunning 1988, 1998, 2001) and the extension of the transaction-cost theory (Coase 1988) to an international context (Hennart 1988, 1991). Dunning (1988) elaborates on the three central benefits that motivate firms to employ foreign direct investment strategies: ownership, location, and internalization advantages. Dunning (2001) integrates some

aspects of the eclectic paradigm with cluster theory, focusing on the incentives for multinational enterprises to gain entry into vibrant industrial clusters in order to harness location, ownership, and internationalization advantages.

The transaction-cost theory focuses on explaining the institutional organization of economic activity within a firm and, more specifically, the choice that firms make between 'make' it themselves or 'buy' it from other firms on the market (Williamson 1975). This theory has been expanded into an international context in attempt to explain why multinationals expand internationally and why they choose particular modes of organization in this expansion (Hennart 1988, 1991).

The literature that focuses predominantly on 'how' firms internationalize, is represented by, among others, two schools of thought: the Uppsala or stages theory of internationalization (Johanson and Mattsson 1988; Johanson and Vahlne 1977, 1990), and the 'born global' paradigm (Knight and Cavusgil 1996). The Uppsala model suggests that the internationalization of a firm proceeds through a number of stages as a firm acquires knowledge of foreign markets. The stages theory has been challenged by the emergence of a new research stream that has identified a type of firm called a 'born global firm' (Knight and Cavusgil 1996) or 'international new venture' (McDougall et al. 1994; Oviatt and McDougall 1994, 1997). These firms, which usually fall in the high-tech industries category, do not follow an incremental internationalization path; they are globally focused and follow an aggressive internationalization trajectory from their early stages of inception (Oviatt and McDougall 1994). The 'born global' perspective suggests that there is a number of 'small, technology-oriented companies that operate in international markets from the earliest days of their establishment' (Knight and Cavusgil 1996: 11). The managers of such companies view the world as a single, borderless marketplace from the time of the firm's founding, which is in contrast to more traditional theories of internationalization. Knight and Cavusgil (1996) identified six factors that contribute to the emergence of born global firms: the growing role of niche markets, the recent advances in process technology, the recent advances in communication technology, the inherent flexibility that small companies have, the internationalization of knowledge and technology, and the recent trend toward global networks.

Focusing on the internationalization of high-tech SMEs, some studies have argued that networking is a crucial factor, as it influences decisions and market choice (e.g. Sharma and Keller 1993). Firms within the same industry share a technical language and facilitate the transfer of complex, tacit information. Accordingly, networks that span across country borders can provide an alternative to exporting or investing. It gives firms the ability to rely on a local partner to accomplish information gathering and delivery of activities while maintaining the production function in the home market. An extension of this concept would be a full co-operative relationship with a local partner, in which both parties co-operate on all aspects of the process with a joint approach to facilitating sales and producing output. This strategy has been observed among some service firms, especially in the earlier stages of their internationalization, and some market research firms (O'Farrell et al. 1998). Studies that take a network perspective effectively argue that network relationships influence a firm's strategy and that these external contacts or relationships may drive, facilitate, or even inhibit a firm's internationalization process. The main elements of the application of network theory to the study of internationalization are, first, the formal and informal ties of firms, which can assist and restrict their internationalization process, and second, the theory holds that internationalization can be seen as a process whereby firms are 'sharing respective complementary, competitive advantages with other firms' (Etemad and Wright 1999: 6).

## Selected Industrial Cluster Literature

Studies that analyse the importance of networks have elements in common with a body of studies on the role of clusters in SME development. Porter (1998: 78) defined clusters as 'geographic concentrations of interconnected companies and institutions in particular field'. Several studies have analysed the reasons why firms prefer to be part of a cluster. For example, a cluster can provide a firm with role models and positive examples of successful operation (Fornahl 2003), while the existing networks of a cluster can provide firms with ideas and places to demonstrate their market and technological potentials (Saxenian 1994). Karlsson et al. (2005) analysed

the emergence of regional industrial clusters as the result of certain location advantages that a region offers. On the other hand, Karlsson et al. (2005) state that the advantages that clusters offer are not fixed over time, but can also be created on the basis of conscious decision-making by either private or public policy-makers. Consequently, policy may have a decisive role in a cluster's success (Johansson and Karlsson 2001).

A large body of literature suggests that sharing of tacit knowledge is facilitated by geographical proximity (Saxenian 1994). Ingram and Roberts (2000) confirmed that social friendship facilitated by geographical proximity, played a stronger role than formal ties in information transfer. Further, other studies found that location as part of the unique set of a region's resources influences performance (Bell and Zaheer 2007; Hervas-Oliver and Albors-Garrigos 2007; Perry 2007).

In addition, firms within a local region can become both competitors and complementors by developing a more flexible form of information sharing. Gordon and McCann (2000) suggest that innovation and productivity take place through multi-sector integration, industrial complexity and social mechanisms. Knowledge diversity within multi-sector partnerships enables partners to develop strategically focused innovations that go beyond product and process innovation (Gordon and McCann 2000).

Clustering of firms can be regarded as another way to foster collaboration among firms, as well as to create a common sense of direction. Available studies have generated extensive knowledge in relation to the functions and synergies created for firms engaged in clusters. However, despite the extensive literature on the importance of company synergies in order to survive and compete in the global marketplace, these studies have hitherto failed to explain the impact of relationships between firms within cluster on the internationalization process. This shortcoming may be partially attributed to the very nature of clusters, as most have spontaneously developed over time without any outside influence from government or other entities. Due to the recent recognition of the success of clusters, governments have attempted to stimulate the creation of clusters in regions where their potential has been recognized, or where clusters at early stages have been identified (Johansson and Karlsson 2001).

Building on Porter's (1998) definition and similar notions of a cluster, studies into industrial clusters have identified a number of positive externalities that cluster membership can have on the competitiveness of firms (Enright 1995; Porter 1990, 1998, 2000). Porter (2000: 22) hypothesized the following four kinds of major externalities that clusters generate: (1) location within a cluster provides a firm 'with superior or lower cost access to specialized inputs such as components, machinery, business services, and personnel compared to vertical integration, formal alliances with outside entities, or "importing" inputs from distant locations'; (2) location within a cluster provides a firm with superior access to all kinds of relevant information, such as technical or marketing information; (3) cluster locations can provide a firm with a number of 'marketing complementarities', such as firm referrals, joint trade participation and joint marketing delegations; and (4) cluster location facilitates a firm's access to institutions that otherwise would not be easy to access. In principle, such externalities benefit the competitiveness of firms in a cluster, as a host of studies that tested Porter's hypotheses have indicated. But a hitherto underexposed factor in these studies is how cluster membership impacts on the internationalization process of firms and how it shapes their international competitiveness. More specifically, there is no literature on the internationalization of firms in science-based industry clusters.

Accessing foreign markets is of high importance for SMEs due to the limited growth opportunities they may have within national boundaries, particularly in countries with small and medium-sized economies. This chapter addresses the supportive role of cluster membership regarding the internationalization process. Although much of the available literature supports the traditionally-held view that marketing activities are important elements in the success of a firm, the empirical literature on how the science-based firms manage their internationalization process is somewhat limited, particularly as applied to firms operating in a cluster. This lack may be partially attributed to the emphasis in past research on foreign market entry modes and the sequence of stages, rather than the managerial perspective. Thus, the overriding aim of this study is to enhance the international business literature by examining the strategies of the science-based firms that operate in a cluster, with particular emphasis on the role of the cluster in the process of internationalization.

## Methodology

This chapter focuses on the internationalization of small technology-intensive firms in a multiple-industries cluster in the state of Victoria, Australia. The research investigates the ways in which firms that participate in the Small Technologies Cluster Ltd. (STC) in the city of Melbourne have approached the process of internationalization. As described in the next section, STC is a rapidly growing cluster of new small-scale manufacturing firms and it represents collaboration between key stakeholders: universities, industry, and research groups.

Qualitative research is considered most suitable for the research enquiry. STC comprises a number of companies of different sizes and at different stages of development, which offers a degree of variation. This study uses a cross-case study method in which ten high-tech firms are investigated. Despite some variation, the firms in this sample are homogeneous along the following key dimensions: organization, belonging to the same biotechnology industry and the same cluster, and sharing the same goals in respect to research and development (R&D). All firms are involved in scientific discovery and technical development. They invest heavily in R&D and are organized along similar lines, in that they allow their scientists considerable autonomy to work on their projects and participate in the wider scientific community.

The study uses secondary data, as well as the interview method. Interviews were conducted with executives/owners and scientists/engineers from the companies in the STC during November 2013 and February 2014. Twenty respondents were asked questions related to their international experience and the role of the cluster in the internationalization process. The choice of the potential respondents was based on two accepted criteria for the identification of appropriate key respondents: (1) possession of sufficient knowledge of the domain being studied, and (2) adequate level of involvement regarding the issues under investigation (Campbell 1955). Before the interviews were conducted, introductory letters were sent describing the objective of the research project and emphasizing the confidentiality of the responses. We offered participating firms a feedback report on the research results in order to encourage firms to participate. The following section gives more detail about the cluster under investigation.



## Small Technologies Cluster

Small Technologies Cluster (STC) aims to promote innovation and entrepreneurial activity through the development of industry clusters. STC's objective is to grow new businesses and seed new industry opportunities through the development and uptake of small technologies.<sup>1</sup> The cluster is a recognized centre of excellence in micro-nano-bio technology research, manufacturing, and commercialization through the clustering of accessible skills, technologies, and capabilities. Product development capabilities in polymer micro-engineered systems (including microfluidics, bio sensors, cell and tissue devices) for health biotech, agri-food and aerospace industries; the development of micro- and nano-based technological solutions for commercial exploitation through professional project management leadership experience and IP management *for the co-ordination and management of multi-disciplinary, multi-partner teams*.

The cluster provides a range of services for its members: office/work space, access to a highly specialized workforce, specialist laboratories and equipment, technical development assistance, consulting advice, business planning, and introductions to potential customers/partners. Further, the cluster offers services, such as grant application assistance and industry linkages, aiming to provide an environment that encourages manufacturing using small technologies. Onsite engineering services allow for the production of the different sort of prototypes. Business space is established to allow an easy way to meet and communicate with people: the meeting rooms, library, and recreation room, where people share ideas, experience, and knowledge, and build networks.

*Victoria government support.* The future of Victoria's and Australia's manufacturing sector is recognized to be linked to its disposition and ability to innovate. Through new technologies and a highly skilled workforce, Australia can redefine its manufacturing sector and remain a

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<sup>1</sup> Small technologies are a convergent technology underpinned by nanotechnology (engineering on the scale of a billionth of a metre or at the scale of an atom), biotechnology, information technology, micro-technology (engineering on the scale of a millionth of a metre) and advanced engineering technologies. Small technologies is a key channel for innovation in products, services, and manufacturing processes and has the potential to impact on a very broad range of industry sectors.

global and competitive player. For this reason, the Victorian Government launched the Small Technologies Action Plan, investing \$10.5 million to deliver new initiatives aimed at increasing the adoption of small technologies by Victorian companies. The Action Plan has been delivered with the development of small innovative technologies in mind; the aim is to ensure companies continue to advance their innovations and provide support for local companies to enter international markets.

The development of small technologies is already driving transformation and innovation in products, services, and industrial processes. Small technologies have the potential to provide real benefits through medical advances and environmental benefits through innovations in areas such as pollution reduction. Even though some clusters such as the Small Technologies Cluster are currently linked to the support programmes of the Victorian government, it should be admitted that the Government has not been the one who initiated the location and the establishment of such clusters. Initiatives in the Victorian Action Plan for Small Technologies include:

- \$6.5 million for a Small Technologies Industry Uptake Programme to help businesses to apply small technologies to meet challenges, solve problems and improve productivity;
- \$2 million to investigate skills and education programmes needed to support this growth industry;
- \$2 million towards international investment, export promotion, conferences and events, and other projects.

Over the past decade, the Victorian Government has invested more than \$250 million in infrastructure to enable small technologies industries such as the Australian Synchrotron, the Melbourne Centre for Nanofabrication and the Small Technology Cluster. Microtechnology- and nanotechnology-enabled products are on the cutting-edge of science and engineering. Moreover, the government delivers a range of programmes to develop a skilled workforce for the state, working closely with industry to ensure that education and training programmes match current and future skills needs. However, the majority of companies have not taken advantage of the government Action Plan yet.

'We haven't really taken the advantage of any sort of government grants or anything like that, that we probably could have early on. We just weren't aware of a lot of things. I guess the local government should have done some advertising in that support that is available there. And also I guess help and support in actually applying for those kinds of things because it is something that we have little or no experience for applying for grants and things.' (Interviewee, F10a)

Previously there was not much information available to companies within the cluster about what kind of support the government could provide. Some things have changed, but not to any significant extent, as emphasized by our interviewee:

'Well, I guess it has changed a little bit considering we have made a few more contacts. We know more about what sort of things are available and some other contacts that have experience in applying and gaining government grants.' (Interviewee, F7b)

## Co-operation and Networking

Co-operation within the cluster took place not long ago:

'That is Cooperative Research Centre from Micro Technologies so sort of it would be a government and industry funded research centre and it was kind of what was present in this building before STC or [for] quite few years before and it was sort of partly run with the Swinburne University.' (Interviewee, 7b)

Networking is of the essence to SMEs and this has been emphasized continuously by the majority of the interviewees. One of the interviewees pointed out that being a part of the STC has been advantageous to his company:

'We did not know much about government grants like that, and STC has organized some crew to come in and have a talk to companies and explain things available. It was done by Australian Institute of commercialization. So, sort of organizing things like that. So, little gatherings, small conferences and presentations and things like that are all organized every now and then and makes it possible to meet some potential clients. It is a good opportunity for networking.' (Interviewee, F8a)

Co-operation among firms implied that the firms felt the need to co-operate in order to develop capacity building by subcontracting to other firms and to make better use of other firms' capacity:

'We and other cluster members meet quite often. There are quite few companies in the building that we collaborate with regularly. It is complementing our skill sets between various companies and I guess you can call it sharing load because we are all kind of small companies so depending on the size of the project that comes in. We can sort of easily negotiate to outsource work to other companies and they can do the same to us.' (Interviewee, F2b)

The co-operation is suggested to be through equipment sharing, which is proven to be cost effective as well:

'We also share some of the equipment. That happens more often actually. We do use and borrow some the other companies' equipment as well.' (Interviewee, F2a)

However, the initiative for co-operation is not part of any strategy by companies within the cluster, and there is no leadership as such, to give direction to co-operation. On the contrary, individual companies approach each other. So co-operation is not facilitated by the cluster per se, even though the cluster administration is in place:

'I guess it is just being individual companies approaching each other. I guess word of mouth about what people are doing. We had quite a few STC getting together out the front and perhaps one of the companies within the building would do a small presentation on what exactly they do and there is quite often new company moving in and just to get familiar with what is actually available in the building and what sorts of services or products they can provide. There is that little sort of information session type things. Mainly it is just individuals going directly to other companies and seeing how they can work together.' (Interviewee, F1a)

As confirmed by other firms within the cluster, not all firms feel the usefulness of the physical proximity of other firms in the similar/same field:

'We might share some equipment but we do not have any shared projects.' (Interviewee, F2a)

Exposure to the international market is not on the priority list of the companies in the cluster:

'There is not much international experience. I guess it is mainly indirectly through our clients. Most of our client base has been mostly just within Australia.' (Interviewee, F8a)

The role of local government in encouraging cluster members to work together is quite limited, and almost non-existent. Lacking the full implementation of government initiatives, as well as not fully taking advantage of the physical proximity of other firms in the cluster, and having the potential benefits from the cluster in mind, the investigation has been given quite a discouraging impression of the role of this particular cluster. Perhaps more weight could be given to this fact, bearing in mind the importance of the high-tech industry on the competitiveness of the region.

## Findings

The analysed data have revealed three main themes around which the findings were categorized: (1) the process of the internationalization and international strategies of the firms in the cluster; (2) the impact of cluster externalities on the internationalization of the firms; and (3) the informal inter-organizational knowledge sharing of the firms under the investigation.

## Internationalization Process and Strategies

Concerning the internationalization strategies of the investigated firms, we found that firms that had a *planned approach* to their overall strategy also tended to follow a planned approach to their internationalization strategy, while firms that followed an *emergent approach* also extended this attitude to their internationalization.

Table 11.1 indicates that about two-thirds of the firms followed an internationalization strategy that could be characterized as an emergent

Table 11.1 Internationalization strategies of the firms in STC

| Firms | Planned vs. emergent approach to internationalization | Stage of internationalization  | Dominant feature   |
|-------|---|--|--|
| F1    | Planned   | Export agent   | Cost factors: limited resources for sales personnel  |
| F2    | Emergent  | Export – no pre-determined international marketing and sales programme | Cost factors: limited resources for sales personnel and production capacity                                    |
| F3    | Emergent  | FDI, Export – semi-determined approach                                 | Followed US-based customers overseas; importance of localization   |
| F4    | Emergent  | Export – no pre-determined international marketing and sales programme | Word-of-mouth marketing to sell consulting services  |
| F5    | Planned   | Export and Thru Parent FDI; pre-determined sales programme             | Dominant firm in small, highly technical market; all actors known  |
| F6    | Emergent  | Export agent   | Dominant firm in small, highly technical market; all actors known; focus on foreign firms, not foreign markets |
| F7    | Emergent  | Export agent   | Sell products through medical and similar associations   |
| F8    | Emergent  | <i>Export – ad hoc approach</i>  | Provide highly technical service; get international business through trade shows, word of mouth, internet site |
| F9    | Planned   | Export agent – pre-determined programme                                | Primarily North American and European customers  |
| F10   | Emergent  | None   | Compete in a small highly competitive domestic market  |

strategy with an ad hoc approach, while approximately the other third had more of a planned approach (a traditional, systematic approach) to their internationalization strategy.

This is a quote from the interview of a typical emergent approach:

‘We got this business because someone from [a major company in the area] ... went to this company and was given a project ... They did not have the staff to do the project so we got it... We have no real international market plan; there is just too much market potential in Australia. We are in the States because of our contact.’ (Interviewee, F4a)

Examples of the planned approach are presented in the following quotes:

‘I think, first of all it is important to have people internationally. We have quite few based in the US. Our CEO is based in the US and our sales force is there as well. So the customer interaction is very important and cannot be done across the ocean so it has to be done face to face. And the second thing is that we have to have presence in those markets in trade shows and conferences and so on.’ (Interviewee, F3b)

‘We have been growing at a pace that we can control. It has been steady. We are not incurring a lot of debt. We have never gone worldwide, to speak of.’ (Interviewee, F10a)

‘We are the company that makes bio materials that are implanted into the body. So we sell to medical device companies that manufacture medical devices and they all happen to be outside Australia. So all our customer and client, all our business, is either in USA or Europe.’ (Interviewee, F9a)

The interview question: ‘What would you say is to be one of the major obstacles for the growth of your company overseas?’ yielded a very interesting answer, which was the general opinion of the majority of the interviewees:

‘I think that one of the obstacles is being here in Australia. Because quite a few companies ask to visit our process locally and check it. One of the obstacles is that we are far away and they cannot see us or visit us or similar.’ (Interviewee, F2b)

Since most of the companies are in specialized industries and are relatively small in size, it is expected that their internationalization approach is an extension of their overall strategy. Given that market research is associated with information and marketing costs, reliance on well-defined international networks is the key, as acknowledged by the majority of companies, a view which is strengthened by the various technical associations.

The emergent strategy with an ad hoc approach was strongly influenced by both the limited resources and the broad nature of their potential markets. Most of the firms possessed core competences in manufacturing or design in their industries. However, their international presence was achieved through agents, word of mouth or chance and pure luck. A more planned approach is evident with firms that use export as the route into foreign markets, mainly by using export/sale representatives.

## Exploiting Cluster Externalities

As the informants reported, cluster externalities had a positive impact on the internationalization process of the cluster firms; in explaining this, a particular emphasis was put on the reputation of the cluster, which substituted for company reputation in the case of small firms, which have not been long in the market.

Cluster reputation assisted the internationalization process of firms within the cluster: first, by allowing a firm to charge premium prices and position itself at the higher end of its respective market. The firms within the cluster are able to attract talented people to the area and it helps to generate 'a cluster of expertise', which can be drawn on by SMEs in their internationalization effort. Second, cluster reputation helps foreign parties trying to locate an international collaborator within the relevant field. Third, by facilitating the findings by customers: some of these firms are not actively involved in trying to locate and sell to foreign customers; some of them just wait to be discovered by prospective customers or by prospective agents at, for example, trade shows. Being part of a cluster facilitates the search by potential foreign customers and distributors for the right company to do business with.



However, some of the firms offered surprising answers to the question ‘What have you seen as being the advantage of being part of a cluster?’ For example:

‘Well, frankly we don’t deal with them that much. We do have once in a while couple of meetings with them but there is not much that we do with them.’ (Interviewee, F10a)

‘We don’t really see any real advantages. Well, frankly no. I think again it is the unique nature of our business and that our clients are all outside Australia. Sometimes we are not really aware of what is going on within Australia as such because we are focused on the USA because that is our main market.’ (Interviewee, F3a)

Despite the suggestion from the literature that cluster reputation can save the firm expenses involved in building a reputation of its own, where cluster reputation is the best surrogate in the case of a firm that does not have a reputation (Zyglidopoulos et al. 2006), some of the case firms seem to be unaware of the advantages that could come with being a member of the cluster.

## Informal Inter-Organizational Knowledge Sharing

The interviews conducted with company scientists and company executives identified two modes of informal knowledge sharing:

1. relation-oriented informal knowledge sharing, and
2. collaboration-oriented informal knowledge sharing.

These two modes differ in terms of their goals, the characteristics of the knowledge shared and the role of trust. The first one enables companies to identify and utilize each other’s technical expertise and facilitates the building of relationship and social networks that *might* lead to further knowledge sharing through both formal and informal channels, which is essential to the establishment of a more formal contractual relationship that could potentially lead to further collaboration. The second model of informal knowledge sharing is to build relationships to identify ‘potentially marketable technologies’, as one of the interviewees put it. In this

process more information is revealed and despite perceiving this way of knowledge sharing as useful, it could be dangerous because it can lead to information leaking and intellectual property violation:

Formalizing some of the relationships from a legal perspective would actually be a good idea. I do not think that this inhibits knowledge. It actually creates a better environment for the sharing of knowledge. So that people know there is contractual bond that keeps things confidential. More formalized relationships actually promote dialogue. You may not agree with me.' (Interviewee, F10a)

In addition to inter-organizational knowledge sharing, the firms we investigated had access to a specialized scientific infrastructure, a labour force and an informal network of firms in the cluster, which all had a positive impact on the internationalization abilities of the firms within the cluster. Although, admittedly, not all firms are equally active in knowledge and information sharing and not all of them equally benefit from it.

The empirical analysis of the communication systems between the firms within the cluster suggests that all of the firms have built the learning environment in which they share information related to R&D. On the other hand, having a strong focus on their core specialization and lack of people with a specialty in market research and marketing were identified as the main constraints when exploring new markets, particularly foreign markets:

'This was a small industry... Everybody knows everybody else. And when I need something here I know I can turn to them. It is just a phone call away.' (Interviewee, F1a)

## Discussion

R&D-based technologies, technology transfer, and the knowledge and experience necessary for planning, establishment and operation of production are all increasingly becoming fundamental elements of a firm's strategy. Since technology transfer involves the whole range of activities, its effective management is increasingly associated with continuously

acquiring and mobilizing knowledge and technological advances. Success depends on creating new knowledge and on having the capabilities to react quickly and effectively to change in the environment and to respond to new opportunities promptly.

Similar to innovation, development of new technology is an extensive, complex, and dynamic process which is affected by interactions between various factors deriving from many different sources. Firms active in knowledge-intensive technology fields are increasingly developing global R&D activities, with location choices to a great extent being determined by the technological capabilities present in a region. Agglomeration externalities present in technology science-based clusters, such as access to a highly skilled pool of labour and specialized suppliers and the incidence of localized knowledge spill-over, are expected to increase and enhance the innovative performance of firms located in such regions.

In addition, typically SMEs have problems in terms of resource acquisition, especially in relation to capital and management skills. Two key issues here were shortages of capital and managerial skills. Small firms typically do not have specialist executives to manage their marketing operations, nor do they possess a hierarchy of managers through which complex decisions can be filtered. Decision-making processes in high-tech, science-based SMEs are likely to be personalized involving ad hoc, based on individual perception, short-term horizons and prejudice. A shortage of management time means that firms will take short cuts rather than properly evaluating alternatives. The horizons of small firms are limited by managerial constraints and there is little 'global scanning' of opportunities.

The majority of the firms face a general problem of capitalizing on in-house knowledge. They need external funding to develop their ability to commercialize their innovative capabilities. Since going to market can be risky, firm-to-firm deals are often chosen to extend their range. The key technologies transferred are efficient small-scale technologies, specialized custom built or small lot production technologies, and 'opportunistic transfer' of technologies.

Moreover, the technological setting of a firm is found to be one of the most important elements in the case of R&D and science-based firms, because the most important resources of such firms are technological

competences, which can be effectively developed in firms regardless of their size. The findings show that the means of knowledge transfer in the firms within the cluster was very informal. Most of the companies made limited use of written instructions, partly because they have a limited number of people who are capable of codifying the technology. In addition, many of the skills in the case companies have been acquired through personal experience.

The international exposure of the science-based firms, and the impact of the networks found in this research, question the significance of the international exposure and international experience. This is in particular the case in explaining the internationalization process of firms from a science-based industry (Yli-Renko et al. 2002). Science-based firms seem to represent an exception to conventional export development processes (Leonidou and Katsikeas 1996). Although these firms are generally young, the internationalization issue is usually solved in a quick way through international distribution agreements that make their discoveries available to end consumers in the global market (Yli-Renko et al. 2002).

From the individual experience and perceptions of the case firms within the cluster, the following four conclusions can be offered. First, a firm's attitude towards international activities is determined by its overall strategy. On the whole, the strategic decision-making process was highly idiosyncratic. In some cases, commitment to international activities was reduced to allow the firm to concentrate on the domestic market while the effort in serving individual overseas markets also varied depending on a variety of conditions. Second, cluster externalities could have had more impact on the internationalization process of firms, had the firms been aware of the advantages that could come with being a member of the cluster. Third, networking plays an important part in the strategic decision-making process of the firms within the cluster. Firms within the cluster were in the same industry and share a technical language, which facilitates the transfer of complex, tacit information, or at least, makes it less complicated. Accordingly, networks can provide an alternative to a shortage of a range of staff, giving firms the ability to rely on a partner to accomplish information gathering and delivery of activities while maintaining the production function. The findings show that a network is a crucial factor in the success of small firms at all stages of their existence.

All case companies relied on networks and emphasized relationships as being important, although not necessarily the networks built within the cluster. The importance of networks and various relationships in the existence of SMEs is of vital importance for the survival of the firms, as in fact was the importance of actively creating new networks, mainly outside the cluster. Fourth, which concerns intellectual property protection, cluster firms use two modes of informal knowledge sharing – relation- and collaboration-oriented – which perfectly match the characteristics of the industry they belong to.

## Conclusions

This chapter brings together perspectives of what we know about the field of value creation through the international activities of small and medium-sized enterprises (SMEs) doing international business and the strategic management literature about SMEs and value creation. It proposes that being a member of a cluster is an invaluable asset at the firm's disposal. It carries out a comprehensive outline of the cluster concepts within value creation and proposes convergence on the conceptualization of value creation by use two modes of informal knowledge sharing, while also providing implications for practice. Moreover, the findings indicate potential relationships between this particular resource and the business activities of SMEs within the cluster.

The findings of our study suggest that in knowledge-intensive science-based fields, firms can enhance their overall technological performance by developing R&D activities in clusters that host a significant level of technological activity within the same field. The results also reveal that boundaries exist in terms of the effects of clusters on international activities. The observed diminishing effect might be caused by the insufficient critical mass of firms in terms of international activities within clusters, which focuses more on technological R&D activities.

Without further speculation, it is natural to conclude that time will most likely prove that the relations between firms will eventually extend in assisting them to enter foreign markets. Most small firms have limited prior international experience. As they expand internationally, they have

to invest a great deal of effort towards building supply and distribution channels. International expansion provides new market opportunities in which a firm can sell its product innovations. The results of this study should encourage firms to deliberately develop their relations with other firms within a cluster for that purpose.

While our findings are interesting within the framework of R&D activities, identifying the most effective mechanisms, such as collaboration with different interested parties within and outside the cluster, to benefit from knowledge created through science-based clusters' activities, might be highly relevant to ensure that firms actually do yield results in international markets. We do hope that our findings will inspire researchers to engage in such endeavours, particularly in investigating how cluster reputation assists the internationalization of firms and their competitiveness in international markets.

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# 12

## The Internet's Influence on Market Commitment, Uncertainty and Risk in the Internationalization Process of SMEs

Jonas Eduardsen and Reimer Ivang

### Introduction

How can small firms leverage the Internet when seeking to expand their business abroad? This question has been at the centre of academic inquiry ever since the introduction of the Internet. Yet, there has recently been a number of calls for more research to explore how the Internet as a global techno-social system can add value as a driver of internationalization in small and medium-sized firms (SMEs) (Plakoyiannaki et al. 2014; Reuber and Fischer 2011; Sinkovics et al. 2013). With this study, we aim to address this call for research. Drawing on the Uppsala internationalization process model (Johanson and Vahlne 1977, 1993; Johanson and Wiedersheim-Paul 1975) we explore how SMEs can leverage the Internet to create value when seeking to expand their business abroad

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J. Eduardsen (✉) • R. Ivang

Department of Business and Management, International Business Centre,  
Aalborg University, Aalborg, Denmark

by reducing the amount of risk associated with doing business in foreign markets. The Uppsala internationalization process model is one of the most extensively used theories within academic inquiry on SME internationalization (Coviello and McAuley 1999; Ruzzier et al. 2006) and highlights important factors which impact on the internationalization process (Fillis 2001).

Risk is a central concept in the literature on firm internationalization, including the Uppsala internationalization process model (Figueira-de-Lemos et al. 2011), where it is generally acknowledged that risk must be considered sufficiently low to allow international involvement to proceed (Liesch et al. 2011). The importance of risk as an explanatory variable of firm internationalization has been emphasized in a number of empirical studies. For example, previous research has found risk to influence internationalization propensity (Cavusgil and Naor 1987; Simpson and Kujawa 1974), degree of internationalization (Acedo and Florin 2006), speed of internationalization (Acedo and Jones 2007; Oviatt and McDougall 2005), and the number of countries in which the firm is engaged (Kiss et al. 2013). Risk is therefore often highlighted as a critical barrier hindering SMEs ability to initiate, develop, and sustain business operations in foreign markets.

While our knowledge and understanding of SME internationalization has increased in recent years, the true impact of the Internet on this phenomenon has yet to be fully examined (Bianchi and Mathews 2016; Plakoyiannaki et al. 2014; Sinkovics et al. 2013). The Internet arguably holds great potential for creating value and growth in organizations, by enabling them to increase their involvement in foreign markets (Morgan-Thomas 2009; Zucchella and Hagen 2012). The world has witnessed an increase in the number of SMEs doing business in foreign markets and one reason why we see more and more SMEs seeking business in foreign markets is presumably because of the introduction of the Internet (Acs and Preston 1997; Oviatt and McDougall 2005). The value of the Internet in supporting international growth arguably lies in its ability to reduce the cost of internationalization, causing resource-constrained SMEs to disregard their size-related constraints (Cavusgil and Knight 2015). However, the role and impact of the Internet on foreign market expansion is complex and by no means evident (Karavdic and Gregory 2005; Petersen et al. 2002). Some even argue that the Internet may have

a negative effect on firm internationalization, by causing firms to mistakenly believe there is no need for learning about the target markets through non-virtual means and causing rash foreign market expansion (Reuber and Fischer 2011; Yamin and Sinkovics 2006). Thus, there are conflicting viewpoints to be found in the literature, as to the role of the Internet in SME internationalization.

Furthermore, previous research has been criticised on several grounds for being subject to a number of limitations. First, on the grounds that it fails to draw upon a solid theoretical framework to explore and explain the role of the Internet in the internationalization process (Moen et al. 2008; Sinkovics et al. 2013). Second, empirical studies that focus on the role of the Internet in the internationalization process of SMEs are relatively scarce and most previous studies are conceptual in nature and often deal more with the potential than the reality of Internet use in practice (Eid 2005; Pezderka and Sinkovics 2011). Thus, much work still remains to explore the role of the Internet in the internationalization process.

We organize this chapter as follows. First, we define risk and conceptualize how the Internet influences risk by reducing market commitment and uncertainties in the internationalization process. Specifically, we conceptualize how firms can leverage the Internet to reduce the amount of risk associated with internationalization, by acting as a resource conserving strategy and reducing knowledge gaps. Second, we present and justify the methodological approach used, including the procedures and techniques used for collecting and analysing the empirical data. Third, we present our findings, followed by a discussion of the results in relation to earlier findings. Finally, the contributions and the implications of the study are discussed and a number of topics perceived as promising avenues for future research are presented.

## Theoretical Background

### Risk, Uncertainty and Market Commitment

Risk is central to internationalization (Liesch et al. 2011), where it refers to '*the dangers firms faced in terms of limitations, restrictions, or even losses when engaging in international business*' (Ahmed et al. 2002: 805).

For instance, risk is a cornerstone of the Uppsala internationalization process model, according to which the perception of risk influences firms' commitment to foreign markets (Johanson and Vahlne 1977). It is now well established in the literature that firms operating across national borders are confronted with a number of risks, some of which are unique to firms operating across national borders (Ghoshal 1987; Shrader et al. 2000). For instance, internationalization is accompanied by a number of risks, including, among others, foreign exchange risks (Batten et al. 1993; Jacque 1981), political risks (Bekaert et al. 2014; Jiménez and Delgado-García 2012; Kobrin 1979), country risks (Brown et al. 2015; Di Gregorio 2005; Luo 2009), and cultural risks (Hain 2011). SMEs therefore face a dilemma: on the one hand, internationalization provides them with an opportunity for growth, while on the other hand, internationalization exposes them to heightened risks, which may negatively influence their performance and well-being (Brouthers 1995; Prashantham and Floyd 2012).

According to the Uppsala internationalization process model, the amount of risk associated with initiating, developing, and sustaining business operations in foreign markets is dependent on market commitment and market uncertainty (Figueira-de-Lemos et al. 2011; Johanson and Vahlne 1977). The underlying logic is that the risk associated with foreign business operations increases as the market commitment and uncertainty increases. Large market commitments imply greater risk, as large market commitments create potential exit barriers and increase the significance of potential losses when engaging in international business (Figueira-de-Lemos et al. 2011). In addition, when uncertainty increases, the predictability of the outcome of an action is reduced and therefore risk increases (Miller 1992).

Market commitments refer to all those assets that a firm accumulates in a particular foreign market which can constrain its freedom of actions (Forsgren and Hagström 2007; Lamb and Liesch 2002). Market commitment is concerned with the size of resources committed in foreign markets as well as their transferability, i.e. country-specificity (Pedersen and Petersen 1998). Thus, commitment is best described as the *'the product size of the investments times its degree of inflexibility'* (Johanson and

Vahlne 2009: 1412). Market commitment increases concurrently with the *amount* of resources committed in marketing, organization, personnel etc. (Johanson and Vahlne 1977). In addition, market commitment increases as the degree of commitment increases because the country-specificity of resources increases, which makes them more difficult to transfer to alternative use (Andersen 1993; Pedersen and Petersen 1998).

It is possible to distinguish between tangible and intangible market commitments (Hadjikhani 1997). Tangible market commitments are *'those for which it is possible to plan or calculate both the input costs and output outcomes, such as the given examples of production plants, subsidiaries' offices, transportation vehicles or even other less obvious like suppliers' subcontracts'*, while intangible market commitments *'are those for which the input costs are quantifiable, but the outcomes difficult to estimate'* (Figueira-de-Lemos and Hadjikhani 2014: 335). Examples of intangible market commitments include personnel education, advertisement actions, managers' meetings, or relationships inside and outside the firm. Thus, a firm's market commitments can be made in tangible or intangible assets for specific foreign markets.

Market uncertainty, on the other hand, is concerned with *'the decision-makers' perceived lack of ability to estimate and predict the present and future, market and market-influencing factors'* (Hilmersson et al. 2015: 236). Uncertainty therefore has to do with decision-makers' difficulty in predicting the future and comes from incomplete knowledge (Beckman et al. 2004; McKelvie et al. 2011). While risk and uncertainty are often used as synonyms (Liesch et al. 2011), this suggests it is perhaps more correct to conceptualize risk and uncertainty as two conceptually different concepts (which are closely related). According to Yates and Stone (1992: 11), *'Every conception of risk requires that there must be uncertainty about the outcomes of prospective actions; if the outcomes are guaranteed, there is no risk'*. Thus, risk is best defined as a situation where the outcome is uncertain (i.e. uncertainty as an antecedent of risk) (Aven and Renn 2009; Sitkin and Pablo 1992).

It is generally acknowledged that internationalization involves a high degree of uncertainty, as firms are venturing into *'strange new lands'* (Maitland and Sammartino 2014; Oviatt et al. 2004; Schweizer et al. 2010).

Different sources of uncertainty have been discussed and investigated in the existing literature. As illustrated in Table 12.1, Miller (1992) distinguishes between three types of uncertainty when engaged in international business: (1) general environmental uncertainties, (2) industry-specific uncertainties, and (3) firm-specific uncertainties, which all act as sources of risk in the internationalization process.

Uncertainty may either be pure or contingent (Figueira-de-Lemos et al. 2011). While it is impossible to reduce or eliminate pure uncertainty, contingent uncertainty can be reduced with knowledge and skills as well as risk-controlling strategies (Knight 1921; March and Shapira 1987). According to the Uppsala internationalization process model, uncertainty is correlated with international knowledge (Johanson and Vahlne 1977), which has been shown to be a key resource leading to internationalization (Fernhaber et al. 2009; Reuber and Fischer 1997). Uncertainty has been used to refer to ‘*the lack of confidence about one’s knowledge*’ (Jauch and Kraft 1986: 782) and is arguably the result of a

**Table 12.1** Sources of uncertainty when doing business in foreign markets

| Category                            | Description  | Examples   |
|-------------------------------------|--|--|
| General environmental uncertainties | Uncertainties that affect the business context across industries                 | Political uncertainties<br>Government policy uncertainties<br>Macroeconomic uncertainties<br>Social uncertainties<br>Natural uncertainties |
| Industry-specific uncertainties     | Uncertainties associated with differences in industry/product-specific variables | Input market uncertainties<br>Product market uncertainties<br>Competitive uncertainties  |
| Firm-specific uncertainties         | Uncertainties that are unique and often internal to the firm                     | Operating uncertainties<br>Liability uncertainties<br>R&D uncertainties<br>Credit uncertainties<br>Behavioural uncertainties               |

Source: Based on Miller (1992)

disparity between the international knowledge *needed* and the international knowledge *possessed* by the firm for successfully increasing involvement in foreign markets (Hilmersson and Jansson 2012; Petersen et al. 2008). Viewing uncertainty as the result of knowledge gaps implies that uncertainty is reduced by increasing the amount of information available to the decision-maker (Lipshitz and Strauss 1997). Hence, risk is inversely related to market knowledge (Casillas et al. 2015).

SMEs seeking to expand their business abroad may lack *institutional knowledge*, which consists of knowledge of the institutional framework, rules, norms, and values, *business knowledge*, which refers to knowledge of foreign markets and opportunities as well as knowledge about local cultures, or *internationalization knowledge*, which concerns how to develop and execute an internationalization strategy and internationalize in different countries (Eriksson et al. 1997; Fletcher and Harris 2012).

It is well-established that firms are able to reduce uncertainty by acquiring tacit knowledge through experiential learning (Forsgren 2002; Johanson and Vahlne 1977). However, while a firm's experience is an important source of knowledge for internationalization, it is not the only one. While tacit knowledge acquired through experiential learning was previously considered to determine international involvement, recent research suggests that firms can rely on different sources of market knowledge and still reach similar levels of market knowledge (Åkerman 2015). Firms may also acquire the necessary knowledge by other means, including grafting (i.e. hiring people or acquiring business units), vicarious learning (i.e. from the experience of others), and external search (i.e. scanning the environment and conducting a focused search for new information) (Fletcher and Harris 2012; Huber 1991).

In addition, risk is related to the amount of resources committed and the transferability of those resources (Johanson and Vahlne 1977). Thus, firms can reduce the level of risk associated with internationalization by reducing the amount of resources committed or the level of vulnerability associated with adverse outcomes (Cho and Lee 2006). SMEs may actively reduce the risk associated with internationalization by selecting suitable resource strategies, for example by relying on entry modes that require low resource commitments, such as exporting, licensing or joint ventures (Oviatt et al. 2004; Sasi and Arenius 2012).



In sum, the relevant literature suggests that the risks associated with internationalization are correlated with uncertainty and commitment, which is why the risks associated with internationalization can be mitigated by reducing uncertainty through learning and information search, or reducing vulnerability by lowering the amount of resources commitment to foreign markets in terms of quantity and irreversibility.

## Internationalization of SMEs and the Internet

The importance of the Internet as both a market and a medium when seeking to increase involvement in foreign markets has been discussed ever since it first saw the light of day (e.g. Bennett 1997; Hamill 1997; Poon and Jevons 1997). The Internet is defined as a dynamic *'global techno-social system, based on a global, decentralized technological structure consisting of networked computer networks that store objectified human knowledge'* (Fuchs 2008: 122). Previous research suggests that SMEs have much to gain from effectively using the Internet when seeking to expand their business abroad (Cho and Tansuhaj 2013; Sandulli et al. 2012; Zucchella and Hagen 2012) and the introduction and advancement of the Internet has been referred to as *'the most important innovation in recent years for SME exporters'* (Mostafa et al. 2005: 292). Some even go as far as describing the Internet and the firm's ability to take advantage of the opportunities afforded by the Internet, as a necessary precondition for internationalization (Etemad et al. 2010).

A number of studies highlight how the Internet diminishes distance and enable SMEs to circumvent size-related barriers that have previously been hindering their ability to initiate, develop or sustain business operations in foreign markets (Clarke 2008; Mathews et al. 2012; Nieto and Fernández 2005; Tseng and Johnsen 2011). For example, previous studies have demonstrated how effective use of the Internet can reduce the constraining effects of liability of foreignness and resource scarcity (Arenius et al. 2006; Sasi and Arenius 2012) and be a major determinant of rapid internationalization (Loane 2006). Establishing an online presence may allow firms to reach customers that were otherwise inaccessible due to the temporal and spatial limitations of existing

distribution channels (Sheth and Sharma 2005). This, in turn, may lead to an increased number of unsolicited orders from abroad, due to an expansion of the firm's opportunity horizon (Berry and Brock 2004). As a consequence, firms are pulled into foreign markets, because of their greater visibility to international customers, who are using the Internet to search for products and services (Petersen and Welch 2003). Using the Internet as a platform for marketing may therefore directly result in international growth (Morgan-Thomas and Bridgewater 2004).

However, not everyone seems to share this optimistic perspective on the opportunities afforded by the Internet. Others have criticised existing research for being too positive and questioned the Internet's effectiveness in facilitating SME internationalization (Sinkovics et al. 2013). Instead, it has been argued that relying too much on the Internet as a means to support or conduct international business activities can have negative consequences for the firm (Reuber and Fischer 2011), by having firms diversify their international activities too much (Petersen et al. 2002) or creating a 'virtuality trap' (Sinkovics et al. 2013; Yamin and Sinkovics 2006). Thus, it is important to acknowledge that the Internet can both be performance enhancing as well as performance destroying (Geyskens et al. 2002), and why a more balanced perspective on the role of the Internet is needed that acknowledges both the positive as well as the negative consequences of the Internet (Reuber and Fischer 2011).

The Internet has very diverse applications and can be used across the entire value chain (Yamin and Sinkovics 2006). Broadly speaking, it provides SMEs with an information-intensive environment and may be used for disseminating, acquiring, and sharing information (Prashantham 2005). SMEs can use the Internet to conduct and support internationalization-related activities in three ways: (1) as a global marketing tool that can be used to disseminate and acquire information, (2) as a cost-effective transaction medium, and (3) as a tool to support customer service (Servais et al. 2006). In relation to firm internationalization, Moen et al. (2008) distinguish between using the Internet for information search, sales activities, and relationship development.

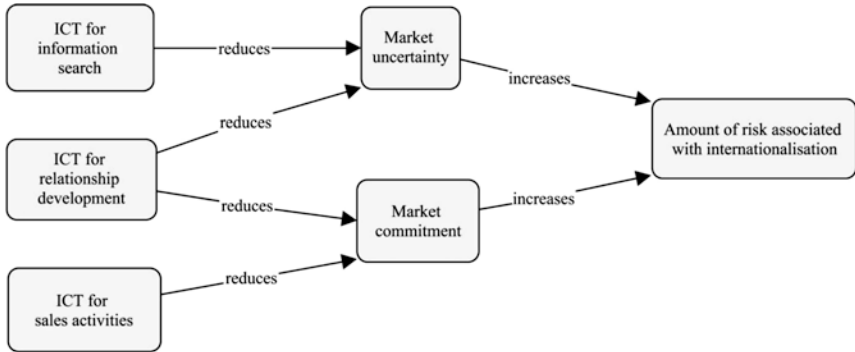
First, the Internet can be used to explore international markets. The Internet presents decision-makers with access to vast amounts of information and can be used to assist firms in acquiring information in order

to evaluate foreign markets, access information about competitors, and search for partners and customers (Moen et al. 2008; Nguyen et al. 2006). The Internet has provided new ways of accessing secondary data and collecting primary data, which makes it possible to reduce the resources required to conduct international marketing research (Samuel Craig and Douglas 2001). Thus, the Internet potentially enhances firms' marketing research capacity (Bianchi and Mathews 2016), by providing them with a means to collect a considerable amount of information about foreign markets (Kollmann and Christofor 2014) at relatively low costs (Loane 2006). Consequently, the Internet has the potential to drive international growth, as limited information about foreign markets is a major barrier hindering SMEs' ability to increase their involvement in foreign markets and is an important source of uncertainty in the internationalization process (Hilmersson and Jansson 2012; Leonidou 2004; Petersen et al. 2008; Petersen et al. 2003). However, the ability of the Internet to reduce uncertainty and increase knowledge about foreign markets is dependent on the ability of the firm to internalize and apply the information, by absorbing it and translating it into knowledge (Liesch and Knight 1999; Nguyen and Barrett 2006).

Second, the Internet may be used to create and mediate dialogue between the firm and customers (Brodie et al. 2007; Hamill 1997). For example, the Internet can be used to provide information about the organization, its products and/or establish a business image (Berry and Brock 2004; Servais et al. 2006). Using the Internet as a marketing channel has a number of advantages, the primary ones being reducing costs and enhancing reach (Harrison-Walker 2002; Loane and Bell 2006; Sheth and Sharma 2005). Using the Internet for sales activities arguably allow SMEs to reach customers that were otherwise inaccessible due to temporal and spatial limitations (Sheth and Sharma 2005). Kotha et al. (2001: 776) even suggests that, *'in principle, an Internet firm gains immediate access to international customers by virtue of launching a website'*. In addition, using the Internet as a marketing medium offers a very cost-effective way for firms to increase their reach (Loane 2006) and can reduce some of the costs associated with the internationalization process (Berry and Brock 2004). Thus, the Internet is considered a low-cost gateway to foreign markets (Loane et al. 2004).

Third, the Internet can be leveraged to develop and harness relationships, also referred to as virtually embedded ties (Reuber and Fischer 2011). The Internet, with its potential for interactivity, provides firms with opportunities for developing and maintaining network ties and can be used to build social capital (Prashantham and Young 2004; Sigfusson and Harris 2012). In addition, these virtually embedded ties can be created *'more quickly and at a lower cost than is possible through the development of physically based connections'* (Morse et al. 2007: 143). These Internet-assisted network ties are likely to differ qualitatively from socially embedded ties and to be much more functional (Etemad et al. 2010) and some argue that the Internet can be utilized to overcome the 'liability of outsidership' (Johanson and Vahlne 2009), by developing and maintaining relations with potential partners on the Internet to become insiders in relevant networks in foreign markets (Sigfusson and Chetty 2013). Researchers have also recognized that the Internet may provide an important tool in developing and maintaining relations between geographically diverse actors. Thus, the Internet may increase the range and diversity of network attachments.

The importance of informal and formal network relationships is increasingly being acknowledged in the literature on SME internationalization, where it has been argued that a lack of network relationships is likely to be an important source of uncertainty (Hilmersson and Jansson 2012; Johanson and Vahlne 2009). Network relationships have long been acknowledged for their ability to provide SMEs with access to critical resources, including knowledge (Yli-Renko et al. 2001). For example, network relationships can be used as conduits for information and knowledge flows to gain access to information about foreign markets through interactions with others (Agndal et al. 2008; Presutti et al. 2007), increase international exposure (Fernhaber and Li 2013), help identify foreign exchange partners (Ellis 2000; Zhou et al. 2007), and provide tacit knowledge about international business practices (Eriksson et al. 1997; Sharma and Blomstermo 2003). Thus, Yli-Renko et al. (2002: 281) concludes that *'the greater the social capital possessed by the firm, the greater will be its knowledge and therefore, the faster will be its international growth'*. SMEs can therefore utilize network relationships to control and reduce uncertainties, by acting as conduits of and access to knowledge



**Fig. 12.1** Overview of the Internet's influence on the amount of risk in the internationalization process

(Beckman et al. 2004; De Carolis and Saporito 2006). Thus, SMEs may acquire critical resources, such as knowledge, that are needed to internationalize, through online social capital formation (Sigfusson and Chetty 2013).

Figure 12.1 depicts a conceptual model showing an overview of the Internet's influence on the amount of risk associated with internationalization.

## Methodology

### Research Design

The main objective of this study was to explore how SMEs can leverage the Internet to create value when seeking to expand their business abroad by reducing the amount of risk associated with doing business in foreign markets. In addressing this objective, a case study approach was adopted because of its merits when dealing with this specific type of research question (Ghauri 2004). Additionally, given that the academic literature on Internet-enabled internationalization is limited and at a formative stage (Glavas and Mathews 2014; Reuber and Fischer 2011), a case study design was deemed appropriate (Eisenhardt 1989).

The objective when selecting cases were to select 'information rich' cases that were relevant to our study (Ghauri and Grønhaug 2010). Thus, criterion sampling was used to identify and select cases that fulfilled predetermined criteria (Sandelowski 1995). To be considered eligible for this study, cases had to meet two predetermined criteria. First, cases had to be classified as SMEs. In line with previous studies, the criterion used for defining SMEs was number of employees, as a proxy for firm size (McAuley 2010). The standard EU classification was followed, where SMEs are defined as firms with fewer than 250 employees. This is also the most frequently definition across OECD countries (OECD 2005) and is widely used in the literature (Agndal et al. 2008; Galkina and Chetty 2015; Hilmersson 2014; Moen et al. 2016; Pinho and Martins 2010). Second, cases had to be involved in international operations, that is, with exports or subsidiaries abroad.

To identify eligible cases, a database containing information on all registered companies in Denmark, including facts regarding ownership, turnover, balance sheets and size, was used. Given that the majority of companies in Denmark are classified as SMEs and given that Denmark is a small open economy, this screening procedure generated a large number of candidates. To select cases from this list of eligible cases, randomly selected companies were contacted by telephone and asked if they were willing to take part in the study. In addition, it was double-checked that the cases fulfilled the predetermined criteria. In total, 10 cases were selected. Background information on each of the case study firms, including details on firm age, size, products, export experience and top export markets, is presented in Table 12.2.

## Data Collection

For the purpose of this study we relied on semi-structured interviewing as the primary method of data collection. While there are various techniques available for gathering data, including surveys, observation and documents, the interview is the most important and common technique for gathering data in case studies (Myers 2009). This is particularly true when studying SMEs, where interviewing is likely to be the only way to

**Table 12.2** Overview of case companies

| Pseudonym | Year of establishment | No of employees | First export | Global orientation | Products                                   |
|-----------|-----------------------|-----------------|--------------|--------------------|--|
| Case A    | 1991                  | 70              | 2004         | Regional           | Ventilation units                          |
| Case B    | 2003                  | 16              | 2004         | Global             | Business intelligence solutions            |
| Case C    | 2003                  | 12              | 2009         | Regional           | Clothing and jewellery                     |
| Case D    | 2001                  | 40              | 2001         | Regional           | Food products for industrial market        |
| Case E    | 2003                  | 15              | 2003         | Global             | E-learning software                        |
| Case F    | 2004                  | 25              | 1992         | Global             | Software for project design and management |
| Case G    | 1987                  | 24              | 1988         | Regional           | Clothing                                   |
| Case H    | 1983                  | 42              | 1984         | Regional           | Clothing                                   |
| Case I    | 1993                  | 158             | 1993         | Global             | Advanced wireless solutions                |
| Case J    | 1993                  | 20              | unknown      | Regional           | Mixers for food industry                   |

obtain information from key decision-makers (Bell et al. 2004; Carson 1995). In addition, interviews provide a unique opportunity for researchers to gain access to key decision-makers and their mind-set (Welch et al. 2002; Yeung 1995).

To ensure that the interviews share a given focus and ensure cross-case comparability, the actual interview was conducted based on an interview guide, which was organized into five parts. The first part captured information regarding the company background, such as when the company was founded, the company's ownership and current size in terms of employees and turnover. This information was supplemented with information from annual reports, company brochures and corporate websites. The second part specifically aimed at capturing information regarding the internationalization patterns of the company, such as when

the company first started to internationalize, how the internationalization process developed over time and the percentage of revenue coming from overseas markets. The fourth part captured information about the company's decision-making processes with respect to internationalization. The final and fifth, part was focused on capturing information about the role of the Internet in the internationalization of the firm. During the interviews, the decision-makers were asked questions regarding their experiences with using the Internet for supporting or conducting international business activities when increasing their involvement in foreign markets as well as their assessment of the impact of the Internet on SME internationalization.

All interviews were conducted in the period from January 2013 to December 2013 and each interview lasted about 90–120 minutes. The informants used for the purpose of this study was corporate elites, including Chief Executive Officers, Owner-managers, Vice Presidents and Directors of Sales (Welch et al. 2002). All interviewees therefore had an in-depth knowledge about their firms' international operations, including how the firm's internationalization had developed over time, and they had had a direct impact upon the decisions related to the internationalization strategy.

All interviews were recorded and eventually transcribed verbatim to help overcome natural constraints of memory and allow for a more thorough examination of the content of the interviews.

## Data Analysis

The aim of the analysis was to identify how participating decision-makers interpreted the Internet and its role in firm internationalization.

When analysing the data, we used 'pattern matching' as an analytic technique to compare our empirically observed patterns with those predicted by our conceptual framework (Gibbert and Ruigrok 2010; Yin 2009). As a first step in data analysis, each transcript was read and statements or actions that reflect the decision-maker's assumptions, knowledge, or expectations related to the role of the Internet and its implications for firm internationalization were highlighted. The purpose



of this process was to increase familiarity with the data, in order to gain a more holistic understanding of it, before starting to condense the data (Braun and Clarke 2006).

The next phase of analysis involved data condensation. In order to condense the data, while preserving the ‘essence’ or meaning of participants’ perceptions or experiences, we relied on coding. This process involved assigning ‘*a word or short phrase that symbolically assigns a summative, salient, essence-capturing and/or evocative attribute for a portion of language-based or visual data*’ (Saldana 2013: 3) and allowed us to overcome cognitive constraints and discover patterns in the data that were not otherwise visible (Auerbach and Silverstein 2003). The actual coding of the data involved both inductive (i.e. data driven) and deductive (i.e. theory-driven) coding (Fereday and Muir-Cochrane 2006; Kvale and Brinkmann 2009), as this provided the benefit of giving the study focus and making sure that the coding was linked to the specific research questions, while still allowing room for new insights to emerge (Bazeley 2013).

NVivo 10 was used during all phases of coding, which allowed us to address the issue of de-contextualization (i.e. the possible problem of losing the context of what is said), which is one of the most commonly mentioned criticisms of coding (Bryman and Bell 2015). As argued by Gibson and Brown (2009: 189), ‘*[t]he contexts in which people speak are fundamental to the meaning which they are creating. By removing that context from the analysis, researchers remove the resources that would enable them to understand why the speakers said what they did or, perhaps more accurately, “why they said it how they did”*’. However, by using NVivo, a link between the coded material and the source of the coded material was always retained so that it was always possible to go back to the source in order to understand the context more accurately (Bazeley and Jackson 2013).

## Empirical Findings

### Impact of the Internet on Knowledge and Uncertainty

As was mentioned earlier, uncertainty results from a disparity between the knowledge needed to successfully increase involvement and operate in foreign markets and the knowledge currently possessed by the firm, also

referred to as a knowledge gap. Our findings illustrate how the Internet as a global techno-social system storing objectified human knowledge has enabled many SMEs to reduce the levels of uncertainty associated with international business by providing access to a number of information sources to support decision-making.

During the interviews, all decision-makers seemed to recognize the value of the Internet as a source of information. It was generally acknowledged that the Internet had reduced information barriers by increasing the amount of foreign market information available to firms. For example, the CEO of Case I, a globally oriented company developing and producing advanced wireless solutions, emphasized the importance of the Internet as a source of international knowledge and as a means to close knowledge gaps: *'We acquire most of our knowledge from the Internet one way or the other. The amount of information available there is incredible. Of course we also receive information by talking to our customers, but typically they give a hint and then you investigate further'*. Similarly, when reflecting upon the consequences of the Internet on information availability, the CEO of Case F argued: *'You have definitely got better opportunities to keep yourself up-to-date, without that big of an effort'*. Thus, it was acknowledged that the Internet could assist the firm in acquiring appropriate knowledge and hence allow firms to make more informed decisions.

Most case firms were actively using the Internet as a source of knowledge. However, it was mostly used in a non-systematic way to perform ad-hoc focused web-searches. Firms were mainly using the Internet for seeking and acquiring business knowledge, including knowledge of foreign market conditions and opportunities as well as knowledge about the behaviours, resources, and capabilities of suppliers, competitors, and local clients. There was a broad consensus that the Internet provided quick and easy access to information and knowledge that was previously inaccessible or too expensive to afford. As a CEO commented: *'It is easier to qualify leads. It is easier to research people on LinkedIn, Google, or Twitter to find out who they are, what their company is about and their references. So desk research is definitely easier'* (Case E). Thus, the Internet was reducing the amount of risk associated with internationalization, by providing firms with a knowledge-building tool and reducing the uncertainties accompanying internationalization.

One important function for which the Internet was being used was for *identifying and evaluating international opportunities*. The Internet was generally considered to increase firms' alertness to new possibilities on international markets and increase their awareness about new opportunities. The Internet was seen as offering new opportunities to conduct exchange with new customers and partners in foreign markets either through *deliberate search* or *accidental discovery* (i.e. serendipity). Deliberate search refers to identifying international opportunities through a purposeful, rational, and systematic search, while accidental discovery refers to the process of identifying international opportunities without any systematic search and may result from heightened entrepreneurial alertness (Ardichvili et al. 2003; Zaefarian et al. 2016).

First, our findings provide evidence of deliberate search for international opportunities through the Internet. As part of their deliberate search for business knowledge and to identify international opportunities, firms engaged in different activities. For example, the Internet was leveraged to develop and harness relationships and to build social capital. A good example of this is Case B, a small company developing business intelligence solutions. In order to expand into new foreign markets or to grow existing foreign markets, they use the Internet proactively to increase the range and diversity of their network ties, by identifying and connecting with potential customers and partners online. They used the Internet actively to tap into their existing network and identify opportunities to bridge relationships, establish bonds with foreign networks and seek further opportunities abroad. As the Owner-manager of Case B explained: *'we use the Internet proactively as a vehicle for identifying potential customers. When you have a limited customer segment, you know that they will have specific job titles and work in a specific category of companies. Then LinkedIn is very effective, as it allows you to quickly identify potential customers by filtering by job title and geography ... LinkedIn is also a good tool for developing and expanding your network. When I sell something to someone, there is a good chance that this person is connected to similar people in different companies and different countries. So this gives me an opportunity to discover new potential customers'*. In addition, the Internet was used to do research on foreign markets. For example, Case J obtained a lot of valuable market-related information from the Internet when first

expanding into the French market. The company has used the Internet to learn more about the French market, including the size of the market, potential competitors and the most promising potential customers and partners.

In addition, there was also evidence of accidental discovery of international opportunities through the Internet. Such accidental discovery of international opportunities was driven by the increased exposure made possible through the Internet, which triggered serendipitous internationalization. All firms utilized the Internet to promote their products, with the main purpose of making the company more visible in international markets. This, in turn, made the companies become aware about potential international opportunities, as the number of unsolicited orders from foreign markets increased. For example, accidental discovery was the main driver of internationalization in the early stages of its foreign market expansion process for Case B. As explained by the Owner-manager in Case B, the company was being pulled into foreign markets early after being established, through its online presence: *'Actually, in the beginning, we did not have a plan to internationalize. In the beginning our internationalization was based on our website. We created a corporate website and soon after we started receiving unsolicited inquiries from abroad.'*

Firms were also found to be using the Internet as a means to reduce competitive uncertainties, which are related to the unpredictability of the actions of existing and potential competitors (Sutcliffe and Zaheer 1998). Our findings suggest that the introduction and diffusion of the Internet has greatly improved the SMEs' competitive scanning capacity, as the ability of firms to gain information about competitors has been increased because of the advancement of the Internet. A good example is Case A, a company producing and selling ventilation units. The CEO noted: *'The Internet allows us to get a quick overview of the competitive situation ... our capacity to quickly identify the competition that we face has been significantly strengthened with the introduction and diffusion of the Internet'*. In addition, the Owner-manager in Case G also noted the potential of the Internet as a resource for reducing competitive uncertainties: *'Our sales team is increasingly using the Internet to find competitors' information ... They can find everything on the Internet ... The Internet is a very good source for findings information about customers, competitors and so forth'*.

Hence, these findings indicate that the Internet has greatly improved SMEs' ability to understand the competitive arena.

Others specifically used the Internet as a means to cope with uncertainties related to collectibles. Several informants commented on how they have used the Internet for credit assessments, in order to reduce the risks of doing business in other countries. For example, the Owner-manager of Case C, a small company designing women's accessories, noted how the Internet was used for coping with credit uncertainties: *'We also use the Internet to quickly check existing and potential customer's payment history and financial information. I use this homepage, where I can see business credit reports to get an overview of the company and its wellbeing'*. Similarly, the CEO of Case D, a food manufacturer selling to the industrial market, also used online channels to safeguard against the risks associated with credit uncertainties: *'We have a subscription to Dun and Bradstreet, where we can check a company's financial scores and payment history before we decide on the credit terms'*.

While it was generally acknowledged that the Internet presents the opportunity for SMEs to acquire appropriate knowledge, which is fundamental to successful internationalization, a number of interviewees emphasized that it required significant resources to acquire and absorb information via the Internet and translate this information into knowledge. Thus, while the value of the Internet as a source of knowledge was recognized, many SMEs were not leveraging this opportunity to its full potential, as they were lacking the resources necessary to internalize the information available on the Internet and translate it into knowledge. As a CEO commented: *'We would use the Internet more systematically to generate insights about market trends if we had the resources. All the information you desire is available on the Internet, but it requires a lot of resources to find, given the amount of information available online'* (Case A). Thus, while the Internet has increased information availability, SMEs still need resources and infrastructure in order to leverage and capitalize on the increased information availability.

In addition, our findings suggest that the usefulness of the Internet as a source of information and knowledge in the internationalization process is perhaps associated negatively with perceived uncertainty. During one of the interviews it was noted that the value of the Internet as a tool

for marketing intelligence and competitor analysis was related to psychic distance. Psychic distance refers to *'the perceived differences between the characteristics of a firm's domestic environment and those of a foreign country [that] generate uncertainties among business decision-makers'* (Child et al. 2009: 200). As noted by the Owner-manager of CASE G: *'If we were going to expand into China I would not rely that much on the Internet as a source of information. It would of course be one source of information, but it would require deeper market research. I would not be worried about using information sourced via the Internet if we are expanding into European markets, as we are used to travel to these countries, have a lot of people inside the company who has a lot of knowledge about these countries and the culture is not that different from us. It is a completely different culture in China. It will be a bigger move for us to start doing business in China'*. Thus, the Internet was deemed useful when seeking information about markets that are psychically close to the domestic market of the company, while other sources of knowledge were considered more useful, when the perceived differences between the host market and domestic market was high. This suggests that as uncertainty increases due to higher psychic distance, the efforts required for market research increases. This is interesting, as it suggests that the Internet is perhaps only useful for reducing uncertainties, if the uncertainties are not perceived as high in the first place.

## Impact of the Internet on Market Commitment

As was mentioned earlier, the amount of resources committed in foreign markets and their transferability has a significant impact on the amount of risk accompanying internationalization, as it determines the size of loss that a decision entails, if things go wrong. Based on this study's findings, it appears that the Internet holds the potential to reduce the amount of risk associated with doing business in foreign markets through reducing the costs incurred by SMEs seeking to expand abroad.

Our findings demonstrate how the firms were able to leverage the Internet as a means to reduce internationalization costs, by providing them with a cost-effective way to enhance reach and build awareness compared to traditional communication methods. Almost without

exception, the case SMEs were actively using the Internet for building awareness about the company and its products. There was a broad consensus among the decision-makers that the Internet afforded companies a cost-effective way to do this. The Internet was believed to reduce firms' global marketing costs, as building awareness about the company and its products through online marketing made it possible to reach foreign customers more cheaply. Hence, the Internet was found to be useful for removing or reducing some of the traditional internationalization barriers, including communications costs. For instance, the CEO of Case C described how using the Internet as a marketing channel has reduced resource-related barriers by providing the firm with a cost-effective marketing channel: *'Indeed the Internet has provided us with a number of opportunities for increasing our involvement in foreign markets. Today, our marketing budget is close to zero, because we do not have any advertisements in magazines. Instead we use our website and social media such as Facebook and Instagram ... If we did not have these new opportunities for marketing our products, we would be ruined'*. Similarly, the Owner-manager of Case H, a family-owned international brand selling menswear and womenswear, explained: *'you can easily use a large amount of resources when expanding into foreign markets ... but in relation to resources, the Internet has changed a lot. Now we are launching a new platform in Italy and the Middle East, which we can do for a small amount of money ... There are a lot of things you can do, which are costing us nothing'*.

In addition to allowing firms to promote themselves globally at minimal costs, the cost of launching every additional international website was also reduced when using the Internet actively as a vehicle for conducting online business in foreign markets. For instance, the Owner-manager of Case H noted how it only required minimal localization efforts, such as translating the content to create an online presence in foreign markets, once the firm had already invested in a corporate website or e-commerce platform: *'Today, we have our own e-commerce platform, which we can duplicate very easily. We only have one guy working on this. It is costing us nothing compared to what we can actually do, so it is a very important area for our company'*. Hence, the Internet was proactively used by the majority of companies to reduce the costs associated with marketing activities; online marketing allowed firms to promote themselves globally at minimal costs.

In addition, the Internet was found to increase transaction efficiency, by reducing the search costs associated with obtaining information on potential foreign customers and partners. A decision-maker at Case E noted how the Internet had improved the opportunities for identifying as well as evaluating potential foreign customers and partners: *'Well you can, it is easier to qualify, it is easier to research people on the LinkedIn, Google, Twitter, find out who they are and what is their company all about, what are their references'*. Hence, through the Internet, companies' experienced better opportunities for identifying and evaluating potential foreign customers and partners, such as export intermediaries and suppliers. In addition to reducing search costs, the Internet also reduced the costs of adverse selection.

The Internet both reduced the costs associated with identifying international opportunities and helped SMEs reduce the costs directly associated with spatial distance. For instance, Case F utilized the Internet as a distribution channel, meaning that actual product fulfilment took place online. The CEO of Case F explained how the ability to use the Internet as a distribution channel had allowed the company to reduce its distribution costs: *'It has become less expensive to distribute our products compared to previously, where we had to send our products physically by mail. In addition, when you have customers in foreign markets, this can easily become expensive. We also needed to send every software update physically. It also took a lot of time to pack all the packages. So from that perspective, it is much easier and cheaper today, where you just have to push a button'*.

Therefore, to conclude, SMEs were able to reduce international operating costs, thus reducing the amount of resources committed to foreign markets and the risk accompanying internationalization. The Internet was used as a resource-conserving strategy, providing a low-cost gateway into foreign markets; it consequently had a significant impact on amount of risk associated with doing business in foreign markets.

## Discussion and Conclusions

According to the results of this study, SMEs seeking to expand their business abroad have much to gain from leveraging the Internet. The analysis of the ten case companies shows that the Internet can add value as a driver



of internationalization in SMEs, by reducing the amount of risk associated with doing business in foreign markets. Overall, the value of the Internet as a driver of internationalization is to a large extent related to reducing uncertainties accompanying internationalization by increasing the exposure of decision-makers to foreign market knowledge through *accidental discovery* or *deliberate search*. In addition, the Internet was also found to reduce competitive uncertainties related to the unpredictability of the actions of existing and potential competitors by improving SMEs' competitive scanning capacity.

Our findings also demonstrate how the Internet was central to reducing the costs of doing business in foreign markets. For instance, the Internet was found to reduce search costs significantly, by providing companies with better opportunities for identifying and evaluating potential foreign customers and partners, such as export intermediaries and suppliers. Hence, the Internet was considered an important tool for identifying and evaluating international opportunities. In addition, the Internet was found to reduce the costs related to marketing activities, as online marketing allowed firms to promote themselves globally at minimal costs. The results of this exploratory study therefore highlight the potential of the Internet as a coping mechanism for reducing the risks accompanying internationalization, enabling SMEs to commit to internationalization and increase involvement in foreign markets.

In general, the results of this study seem to support and verify the growing number of empirical studies highlighting the value of the Internet as a driver of internationalization in SMEs. For instance, the results of this study appears to support recent empirical research documenting how different export barriers may be lessened by the use of the Internet, making accelerated internationalization feasible for even small firms (Loane and Bell 2006; Plakoyiannaki et al. 2014; Sinkovics et al. 2013).

In line with this study, previous studies have also found the Internet to be an important tool for decision-makers to seek information on countries, markets, competitors, institutions, and customers, in the face of perceived knowledge gaps (Bianchi and Mathews 2016; Mathews et al. 2012). The results of this study also revealed how SMEs took advantage of the information rich environment provided by the Internet to reduce a number of uncertainties accompanying internationalization.

Thus, the findings also support growing empirical evidence demonstrating how SMEs use a mixture of means to acquire knowledge, including external search (Casillas et al. 2015; Fernhaber et al. 2009; Fletcher and Harris 2012).

However, our findings also contribute to existing literature by highlighting contextual factors, which may help explain under what conditions the Internet can add value as a medium for SMEs to obtain information about internationalization and foreign markets. For example, our findings suggest that resource-scarcity is an important barrier for SMEs to take advantage of the knowledge-creating potential of the Internet, as internalizing the information available on the Internet requires significant resources. In addition, our findings also suggest that the Internet is most useful as a medium for knowledge acquisition in situations of low to moderate uncertainty. Thus, as uncertainty increases, the knowledge-creating potential of the Internet decreases. This finding is supported by previous research showing that higher levels of uncertainty generally elicit more intensive efforts to acquire information on relevant events occurring outside the company in order to guide the company's future course of action (Boyd and Fulk 1996; Daft et al. 1988; May et al. 2000; Sawyerr 1993). In addition, previous research shows that decision-makers rely more on personal sources of information (e.g. friends, family members, and close business associates), when the perceived uncertainty is high (Elenkov 1997; McGee and Sawyerr 2003).

Our findings also contribute to existing literature by demonstrating how the Internet was mainly used as an information source in the internationalization process to acquire business knowledge, while it was less frequently used to acquire other types of knowledge, including institutional knowledge and internationalization knowledge. This suggests that the Internet cannot replace other knowledge sources, but should rather be used in combination with these.

Furthermore, the results of this study also demonstrate the potential of the Internet as a means to mitigate the risks associated with internationalization by reducing the costs of doing business in foreign markets. This result is consistent with previous studies showing that the Internet can be used as a resource-conserving strategy (Arenius et al. 2006; Sasi and Arenius 2012), allowing even firms with limited resources to become

international ventures at an early stage of their development (Luo et al. 2005). This finding supports the argument that the Internet can provide a low-cost gateway into foreign markets (Gregory et al. 2007; Moen et al. 2004; Sigfusson and Chetty 2013) and strengthen the firm's internal resource base, by freeing up resources for their international business (Berry and Brock 2004).

While a number of precautions have been taken during the different phases of this study to increase the trustworthiness of the findings, the results are not without limitations. While these limitations potentially affect the quality of the findings and their ability to answer the research question, they also represent opportunities for future research.

First, due to the qualitative and exploratory nature of the study and the fact that only a limited number of SMEs were included in the study, the statistical generalizability of the findings is limited, as this requires a large, random sample (Tsang 2014). Consequently, further research is necessary to test the results of this study with a larger sample. In addition, it may be necessary to replicate this study in various national contexts and industry sectors. In addition, this approach may also contribute by highlighting contextual factors, which may help explain under what conditions the Internet can be used as a means to reduce risk.

The results of this study also open the door to other promising and interesting research avenues. The results point to the need for further studies that explore the relationships between using the Internet as a means to conduct international business activities and uncertainty, market commitment and the amount of risk accompanying internationalization. First, while the findings show how the Internet has the potential to reduce the uncertainty associated with doing business in foreign markets, increased information availability may potentially also lead to overconfidence (Petersen et al. 2003). Overconfidence is a cognitive bias which involves the failure to recognize the limits of one's knowledge and may result in inaccurate perceptions of personal abilities and lower quality decisions (Busenitz and Barney 1997; Shepherd et al. 2015). Studies within the field of psychology are now starting to show how the Internet and attendant increased information availability, influence cognition, and produce a sense of false confidence (Fisher et al. 2015; Ward 2013). Thus, one promising avenue for future research is to examine how using

the Internet for closing knowledge gaps influences managerial cognition, including overconfidence.

Second, while this study's findings show that the Internet is considered an effective tool for identifying and evaluating international opportunities, future research may look specifically at how the Internet has provided new and enhanced ways to create and capture international opportunities.

Third, future studies should examine the outcomes of using the Internet as a means to deal with risks when doing business in foreign markets. For instance, future studies could examine its impact on performance, as reliance on the Internet arguably may result in overconfidence and rash internationalization (Petersen et al. 2002; Reuber and Fischer 2011). Hence, a positive impact on firm performance cannot be taken for granted. In addition, future studies may examine the impact on internationalization patterns (i.e. scope, speed, and extent), since risk has been considered to be a major barrier to foreign market expansion (Liesch et al. 2011).

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# 13

## Industry 4.0 and SMEs in the Northern Jutland Region

Arnim Decker

### Introduction

Being located in the Northern periphery, the economic structure of the Northern part of the Jutland Peninsula in Denmark is characterized by a relatively large proportion of firms operating in diverse industrial sectors. A minor proportion of those are high growth companies with a significant presence on international markets. Local firms operate in a diversity of industrial sectors, which are characterized by medium to high technological intensity. According to the Danish government, Danish firms cannot compete with foreign competitors based on low salaries alone because they will be undercut by international competitors who enjoy a lower cost base. In parallel, since the last financial crisis, Danish firms have struggled with the issue of low productivity, which does not justify

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A. Decker (✉)

Department of Business and Management, International Business Centre,  
Aalborg University, Aalborg, Denmark



the relatively high levels of salary. Because Northern Jutland, being part of Denmark, falls into the category of a knowledge-based society with a good educational infrastructure, Industry 4.0-related opportunities can provide a significant boost to the local economy if tackled in the right way and contribute to market development and international expansion. However, a variety of factors, such as relative distance to important markets and potential industrial partners, can pose a challenge.

## Historical Background

The term Industry 4.0 refers to the previous steps of industrialization, which have up to now taken place. Synonyms for depicting the term Industry 4.0 are Internet of things or Industrial Internet, which are more commonly used in the English speaking world. At the end of 18th century, the process of industrialization was initialized by a proliferation of steam and hydro power mechanization that gradually replaced human powered production and traditional muscle-driven agricultural production. With coal as the main means to power mechanical production, craftsman workshop production started to be driven out by new process innovations (for example, the industrial weaving loom for textile production). Steamships and railways opened up new modes of organizing logistics over large geographical distances. Then, during the second wave of industrial processes starting at the end of the 19th century, coal based mechanization was replaced by electrification. This resulted in a push towards intensified industrialization, characterized by mass production and new forms of organization. Innovation in increased efficiency in production (pioneered by early management thinkers like Frederick Taylor), exemplified by the conveyor that Henry Ford pioneered, resulted in a profound social change, including the rise of a middle class and an increase of the general standard of living. In the after-war period, during the 1960s–70s, the third wave of industrialization set in with the introduction of semiconductors and proliferation of electronics. Computers became increasingly more ubiquitous, facilitating the transformation towards the information based society. Innovations in electronics and information technology led to new modes of industrial production, innovative materials, and the organization of global value chains.

There is an emerging consensus that we are now about to enter a new period of industrialization, thus the term Industry 4.0 has been introduced. The fourth wave is a consequent continuation of the third wave of industrialization. For increasing efficiency in increasing manufacturing operations, traditional concepts have mainly reached their limits in terms of further room for improvements. Techniques like lean production, just-in-time production, and flexible or agile manufacturing are already established and implemented in the organization of competitive firms. Yet, in comparison to the changes, which are expected to arrive in the wake of Industry 4.0, the state of the art of production technology has up to this point only reached intermediary development. Just as the three previous waves, where each wave led to fundamental changes in industry structure, the fourth wave which is now settling, has the potential to cause fundamental shifts in industry structure, yet again leading to significant increases in efficiency. Industry 4.0 is the promise of further increases in efficiency that need to tackle upcoming challenges like population growth, scarcity of resources, and overuse of the environment.

## **What Distinguishes Industry 4.0 from the Previous Wave?**

At present, we are experiencing a period in which information technology (IT) is increasingly transferred and integrated into manufacturing technologies. Within the Industry 4.0 framework, manufacturing equipment will be enabled to act intelligently and autonomously, including the ability to transfer information between machines without human intervention. Innovative technologies like wireless sensor networks, cloud computing, or embedded systems create room for product, process, and service innovations (Wang et al. 2016). While the automation of production processes constituted the dominating paradigm in the previous stages of industrialization, with Industry 4.0 the focus is now shifting towards integration of the network into production processes by leveraging IT and network technologies. Within this new and emerging paradigm, physical systems are merging with cyber systems. Tangible systems are starting to become one with the virtual sphere. The promise is

the ability to provide more value oriented and customer-centric products and services with a higher degree of efficiency.

One of the main distinctive characteristics of Industry 4.0 production processes is the conversion from linear towards networked structures. As opposed to mere automation of stand-alone manufacturing equipment with rigid interfaces and linear chains of consecutive and static workflows, the implementation of new types of network structures has new and far-reaching consequences. The expected result is an increased capacity to flexibly react to changes in the external environment and to accommodate volatile market conditions. By establishing network interconnectivity, it is becoming possible to flexibly connect production processes across large geographical distances and many national boundaries. Three drivers for Industry 4.0 have been identified: a first driver leading to implementation of Industry 4.0 is the perspective of an improved and more efficient governance of vertical and horizontal value chains and value networks. A second driver is the expected benefits resulting from network connectivity that can be implemented into products and related services. Such innovations create opportunities for new product categories and improved customer benefit. A third driver is the opportunities for business model innovations based on Industry 4.0. Successful new business models can serve as a transmitter for new technologies and in new markets.

## Related Technologies

**Cloud computing:** this technology involves the ability to access and process large amounts of data in real time. It also gives access to software-based functionalities on an ad-hoc basis, comparable to application programs (apps) that can be uploaded on a smart-phone when needed. This accelerates the trend towards software as a service, not a product, which is bought for a long-term use. In this way, implementation of cloud computing facilitates the exchange of data and services as needed. The next expected step in the evolutionary process is the establishment of networked connectivity between humans, machines, and other objects. This process will lead to a fusion of real world and cyberspace resulting in a new type of Internet of things. One direct result will be a very

significant rise in the amount of exchanged data, resulting in the need for increased storage capacity for data and a robust, wide, bandwidth network infrastructure to support the data traffic that will be generated.

***Cyber physical systems:*** a system of physical entities controlled by computational elements. Hardware devices are equipped with computational intelligence that enables them to communicate and cooperate with the external environment. A multitude of such elements constitutes cyber physical systems. Smart manufacturing equipment and resulting products are enabled to act flexibly and autonomously, including the ability to anticipate events, for example, when they will be needed. To incorporate advanced functionality, smart products need to be equipped with actuators and sensors that enable them to communicate with the outside world and through the network. Cyber physical systems are becoming visible in areas such as health care, aerospace, energy, or traffic management.

***Applications in the automotive sector:*** network technologies are becoming increasingly ubiquitous and are now used in a variety of settings. In the automotive industry we are currently experiencing a convergence of the physical world and the cyber sphere. The mobile telephone as a central hardware device is becoming more intelligent as a result of the implementation of diverse software and multiple network interfaces. Vehicle drivers can use their mobile telephones for navigation by downloading road maps on their devices. Some of the software-based maps are created by voluntary users in a collaborative networked effort (for example, Open Street Map). Through their GPS-enabled telephone devices, traffic participants can determine their own location and that of other drivers through the network cloud. These technical solutions help to find the best way to their destination. They contribute to avoiding traffic congestions and provide information about critical situations, for example, traffic incidents. The new technology enables drivers to coordinate mutually, which contributes to an improved overall traffic flow. The more drivers that participate in the network, the more attractive it becomes for outsiders to join and participate. It is thus anticipated that motor vehicles will communicate autonomously, without driver intervention. Being part of a wide-spanning network, vehicles as autonomous machines could coordinate on a mutual basis. In this way, network effects can be created (Iacobucci and Hoeffler 2016; Gaudeul and Giannetti 2013).

These technologies are currently developed by firms in the automotive sector, but the potential is also to attract players that are newcomers in this sector. Interestingly, established players in the IT industry have started to develop their own automotive solutions. Such efforts indicate that firms in the IT sector will emerge as new competitors to established vehicle manufacturing firms. Presently, we are still in the early development stages of these new technologies. Early stages of fermentation are usually characterized by trial and error in which not all innovations will survive and some proposed solutions will be discarded again (Abernathy and Utterback 1978). A large number of users enhance the value of the network and creates positive network effects. Network-based innovations are expected to be more frequent in the future, and in applications beyond the automotive sector. Through added network capabilities, objects which up to now have been of a passive nature can adopt proactive and independent properties through integration of new technologies like micro-controllers, sensors, or actuators. Currently, the automotive industry appears to be one of the industrial sectors where these scenarios are becoming reality in the mid-term future. With regards to production process and the smart factory, it is not yet clear how production processes will look like in the more distant future, but changes will eventually take place there as well. Current expectations are that networked product and related services will become entirely autonomous which will have revolutionary value-in-use in processes of production and value creation.

**Smart factory:** intelligent industrial networks connecting machines which are based on plug and produce technologies, low cost automation and virtualization of production. Smart factories include innovative interfaces between humans and machines. The result will be information that can be automatically exchanged between machines or machine components. Smart factories handle relevant information during the entire lifespan of a product, including after delivery to the customer. At this stage, smart products continue to transfer relevant information to the producer for quality control. Data transferred back to the producer can be valuable as useful input for developing the next product generation. For example, taxi drivers accumulate more mileage than the average user, so they will also be the first to experience quality problems which

may occur during the lifetime of the vehicle. Such information can be of significant value to the manufacturer, so that uncovered defects can be corrected and corrective measures can be taken even in the ongoing production process. Process-related information which is collected during the purchasing phase can be used and updated during the fulfilment phase.

Technological advances like artificial intelligence, robotics, or nanotechnology provide the necessary preconditions for innovations such as 3D printing or drones. These innovations, in turn, have the potential to revolutionize the production processes. They are potentially exponential technologies which initially develop rather slowly and gradually over a period of time, but at some point they may lead to dramatic improvements in performance. From an investment perspective, the potential of such technologies is difficult to estimate since it is difficult to foresee if and when they would enter into the acceleration process.

Within the organization, a system of knowledge management supports the integration of diverse sources of information through open standards. For example, a crew that sets out to repair an off-site device has access to all relevant and necessary information so that they can take the correct spare parts with them. With regards to machine-to-machine interactions, an exemplary smart factory can be composed of back-end servers for background data storage, unifying structures for connectivity of sensors and actuary networks, control devices, intermediary application for communication, and firm-wide data networks. Furthermore, there are interactions at the human-to-machine level. The user interface of the machine should enable human actors, while shielding them from the complexity of the underlying structures and operations. Humans need to be enabled to understand the smart factory operations and to control them. The interfaces could be controlled, for example, by touch-screens, voice controls, or gestures so that human operators will experience their work rather as a positive collaboration with the system. Another application where the physical and virtual realms are coming together is the virtual or augmented reality. The diversity which Industry 4.0 allows for offers an attractive setting for new developments and opens up the potential for value creation through new business model innovations.

## Vertical and Horizontal Integration

**Vertical integration:** intensification of digitalization has the potential to change the way vertical integration is organized. Smart factories as cyber-physical production systems flexibly adapt to changing conditions through rapid reconfiguration of the value chain. As a result of intensifying digitalization, manufacturing equipment will no longer be operated and controlled by human intervention. Instead of being operated by humans, intelligent and social machines interact in a flexible manner. Connectivity to other machines is created through sensors and actuators. By forming a network, they become the communication hard- and software to enable machines in a smart factory to communicate without human intervention. Smart factories can autonomously reconfigure, increasing competitiveness and serving customers more rapidly and individually with customized products. The network of mutually connected manufacturing machines controls the availability of resources and pre-empts bottlenecks. In this way, storage-related costs can be minimized. Upcoming problems, as well as wear and tear, can be detected in time, and for subsequent analysis the system provides logging functionality. Such a system will be more resource efficient and therefore more sustainable than traditional factories because material, energy, and human resource can be employed in a significantly more efficient manner.

**Horizontal integration:** Horizontal integration results in the expansion of the value chain in a horizontal direction. Through Industry 4.0, substantial changes can be expected to take place at the level of horizontal integration. This aspect of Industry 4.0 merits considerable consideration and attention since the future developments can be a source of new opportunities and innovative business models, but they can also present substantial strategic risks to firms. With regards to horizontal integration within the Industry 4.0 context, expectations are that an array of upcoming issues will need to be solved, for example in the legal sphere, as firms engage in new ways to compete and collaborate. Trust and governance-related issues are expected to result in new and innovative management techniques to handle future modes of organizing

the value creation process. In terms of firms' internationalization pattern and behaviour, new modes of horizontal and vertical integration can result in new forms of international exchanges with an expected change in patterns of international exchange and increased international integration.

In the prevailing literature, the term horizontal integration is associated with the pooling of different firms that at the same stage of production are under one and the same management. By pooling resources, a firm can benefit, for example, by creating economies of scale at the organizational level in market management. Increased horizontal integration creates the potential to optimize the flow of production and information.

Within Industry 4.0, horizontal integration of the value chain is expected to take new forms and shapes. As new technologies blend traditional hardware with computational intelligence into technologies like wireless networks and cloud computing, a new generation of global value chain structures is expected to emerge. The benefit will be an increased capability to serve customer requests not just with regards to the end product, but also at earlier stages of the value creation process. Affected activities will be new product development, planning, flexible adaption of production at the level of volume management and production variety, and so on (Schlaepfer et al. 2015).

***Data collection and sampling:*** Industry 4.0 holds the promise of upcoming business opportunities and the potential to create new types of business models that innovative firms and entrepreneurial start-ups can profit from. Of similar significance are expected to be the consequences for traditional firms, which will find themselves in situations where they will be exposed to substantial opportunities but also challenges and risks. For example, with increased transparency and decreasing costs of conducting transactions, traditional producers may become exposed to the risk of commoditization, which has the potential to drive down product prices in a significant manner, putting the existence of the firm in question at risk. To mitigate these types of risk, firms need to be able to identify innovative mechanisms for mitigating the risks, for example by introducing new type of services to complement the existing product offerings.



## Degree of Readiness for Industry 4.0 of SMEs in the Metal Processing Sector of Northern Jutland

In this chapter, we gauge the degree of readiness for Industry 4.0 of SMEs in the metal processing sector of Northern Jutland. By accessing a public database, we chose a random sample of firms in the selected sector. The database returned 78 companies from this sector. Out of these companies, we chose every 12th firm, to obtain a sample of six companies.<sup>1</sup> We also ensured that all companies are owned by investors based in Denmark. In the first sample, one company turned out to be a subsidiary of a Singapore-based company.<sup>2</sup> We excluded this company and instead chose the one which came immediately after on the list returned by the database. Therefore, we shall discuss six companies, which are located in Northern Jutland. The data we rely on were exclusively collected through means of desktop research. To find additional information, we visited the websites of the respective firms and other openly available sources. On their websites, all firms we investigated gave a sufficient overview of their product portfolio, which allowed us to draw conclusions about the technology involved. We also considered visiting the firms for interviews, but refrained from doing so for several reasons. Firstly, the Industry 4.0 related developments are still in the initial phase. The concept is now beginning to be intensively debated, in particular at the level of academia, different institutional actors, political decision makers, and individual firms. In some cases, potential interview partners in firms may not yet have heard about Industry 4.0, or have misunderstood the concept. In other cases – and this is a point of discussion in this study – Industry 4.0 may not be relevant in the immediate future.

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<sup>1</sup>We searched in the category with the Code 280000, which represents those companies that manufacture machines and related equipment. We also limited our search to the area of Northern Jutland; thus we only discuss firms from this region (in Danish: Fremstilling af maskiner og udstyr i.a.n).

<sup>2</sup>The Singapore-controlled subsidiary Den-Jet Nordic A/S was replaced by Reo-Pack A/S.

## Case Studies

### Case 1: Fransgard Maskinfabrik A/S

*General characteristics:* Fransgard Maskinfabrik A/S is a machine-building company located in the rural Western part of Northern Jutland. The company produces a range of forest machines for towing, mowing, and transporting harvested tree logs. The company also produces harvesting equipment which can be used as an add-on for mounting on tractors. Additionally, the company produces machinery for road building and maintenance equipment, for example, levellers, spreaders, or snow blowers and machines for removing snow. All products are mounted on tractors and powered by electric motors or by hydraulic technology with electricity supplied from the carrying tractor. Enhancing the functionalities of tractors, the product range is of a reliable, rugged, and durable quality. IT intelligence is not implemented, as all items basically serve as add-ons, which are mechanically mounted on tractors. The company employs 40 people, and has in the last five years shown a solid and stable income situation and a positive balance sheet.

*Internationalization:* Fransgard Maskinfabrik A/S has no foreign subsidiaries, but about 90 % of production is exported to a large variety of foreign markets (Table 13.1).

*Vertical integration:* as material input, Fransgard Maskinfabrik A/S sources standard input such as pre-processed steel, electrical and hydraulic components, as well as supplementary input. In the future, suppliers may change their modes of operation, which could also affect the way in which the company sources input to the production processes. Products are processed by manually operated production equipment, and apart from these there is little automation in the production process. The production floor is mostly operated manually, apart from IT office equipment.

**Table 13.1** Fransgard Maskinfabrik A/S

| Number of employees | Gross income (in mln euro) | Equity (in mln euro) | Balance (in mln euro) |
|---------------------|----------------------------|----------------------|-----------------------|
| 40                  | 2.5                        | 2                    | 5                     |

Source: Based on data from NNErhverv (2015)

Finished products are then shipped to intermediary dealers which are, as we mentioned, mostly located abroad. In terms of vertical integration, we see little immediate scope for implementing cyber physical production processes, either at the level of the upstream supply chain or in manufacturing processes, as the company's products apparently have no or few IT-related components. With regards to the downstream supply chain, international distribution may be affected by general changes in the way international distribution is organized.

*Horizontal integration:* Fransgard Maskinfabrik A/S produces rugged and solid dedicated equipment sold to customers in the primary sector in agriculture and forestry through a network of internationally and geographically distributed dealers who act as intermediaries. The company is embedded in the agricultural and rural area of Western Denmark and rooted in the local community. The company could expand horizontally through collaboration with external partners who have the same position in the global value chain as it has, or by mergers and acquisition. It is doubtful if there would be any immediate apparent strategical logic in expanding horizontally. With quite a diverse product range, the company's internal processes are not highly automated. It is therefore unlikely that economies of scale or scope could be achieved. Since IT is mostly absent, there is apparently little potential for the inclusion of digital technologies into physical components.

*Major findings:* due to the nature of the value chain where Fransgard Maskinfabrik A/S is active, both from the vertical and horizontal perspective, the prospect for the implementation of Industry 4.0-related practices is limited in the short- and medium-term future. Depending on future initiatives of suppliers and subsequent changes in business practices towards the upstream direction of the global value chain, the company may have to adapt its modes of operation. Looking at the downstream direction of the value chain, for the time being customers will probably keep their conservative stance, so changes can only be expected in the long-term future. With geographically widely dispersed end customers in the primary sector (agriculture and forestry), market change can be expected to be slow. In the short- and mid-term Fransgard Maskinfabrik A/S will probably not need to adapt to Industry 4.0-related changes, which limits future potential in this direction. On the positive side, the

company does not seem to be exposed to significant risks brought about by Industry 4.0, since it has a solid position in its market niche. The extensive export activities and the nature of intermediaries as well as end customers also contribute to solidifying the position of the company.

## Case 2: Teksam ApS

*General characteristics:* Teksam ApS specializes in dry-cast concrete machinery production. The company is located near a deep water seaport in the relatively remote North-Western part of Denmark. Specializing in processing technology for dry concrete, the company is a supplier to the construction industry and specializes in producing machinery for complicated concrete shapes and forms. As its main competence, the company produces machinery that can accommodate the customer's need for highly modularized elements. Opposed to the wet-cast concrete variety, which comes in liquid form before drying out, dry-cast concrete is used in applications where buildings and structures need to be formed in more complex shapes and forms. Dry-cast concrete is used when there should be a flow around objects, for instance when there is a need for reinforcement. At the company's technological core is the technology, which implements unidirectional vibrations in the machinery products. In particular, dry-cast concrete is used in applications where it is necessary to create a range of identical pieces with one and the same form. One of the advantageous properties of dry-cast concrete is the ability to create specific shapes for dedicated applications in the construction sector. As one example, dry-cast concrete is used to build solid road barriers, which are sometimes used to redirect traffic or to separate driving lines. There are many possible applications for this technology. It is possible to produce concrete benches or channeling elements that can be used to conduct water as outflows flow parallel to roads or highways. With 20 employees, the company has a differentiated product line consisting of steel material, hydraulic technology, and electronics which are operated through manual controls. In the last five years, the company has demonstrated a positive performance although the income situation has been declining. Although equity could be preserved, the declining balance sheet indicates a reduction of external debt.

**Table 13.2** Teksam ApS

| Number of employees | Gross income (in mln euro) | Equity (in mln euro) | Balance (in mln euro) |
|---------------------|----------------------------|----------------------|-----------------------|
| 20                  | 0.35                       | 0.4                  | 1.1                   |

Source: Based on data from NNErhverv (2015)

*Internationalization:* Teksam ApS has built up a network of agents and collaboration partners in diverse geographical locations like the USA, Canada, Mexico, and India, and including various partners in European countries. The company also attends international trade shows (Table 13.2).

*Vertical integration:* essentially, Teksam ApS is (similar to Fransgard Maskinfabrik A/S) a metal processing engineering company. In the upstream value chain direction, the company is sourcing processed input material in the form of steel and other products needed to construct vibration-based dry-cast concrete machines: electrical motors, hydraulic components, etc. With a relatively small base of employees, the company constructs a line of quite complex products. On the shop floor, work is conducted manually without much automation, which is typical of SMEs in this size range. The company has been successful in building up mid-level technological competences in vibration technology for dry-cast concrete which gives competitive advantages and potential for value creation. From the upstream value chain position, where standard input is sourced, Industry 4.0-related initiatives will most likely come from the supplier side. For Industry 4.0-related development prospects, the most interesting opportunities may be identified in the downstream direction of the value chain. The company's products are serving the construction industry and can be employed for building infrastructure projects.

*Horizontal integration:* Teksam ApS is serving the construction and public infrastructure sectors where large-scale projects are frequent. As Industry 4.0 gains track, there might be a need for new type of buildings and public infrastructure where individual custom design is required. The company is able to produce specialized modularized components which may be very specific to the individual case. Today, construction projects are handled in standardized ways, for example, there could be a larger lead constructor

who is working with a number of sub-suppliers. In other cases, smaller suppliers can collaborate on a larger project. Because of its specialization and special competence it has built up, the company could participate in such types of Industry 4.0-related construction projects where there is a need for firms who are able to deliver specific and modularized input.

*Major findings:* it is reasonable to assume that the construction and infrastructure sector may become affected by Industry 4.0. For suppliers of input who contribute in the building processes, there may be attractive new opportunities as a result of changing modes of collaboration between firms that contribute to input. These opportunities came as a result of changes in the vertical and horizontal structures of the global value chain. In the future, Industry 4.0 will most likely make an impact on the construction industry. For example, architects can use software programs for architectural design and organization, which can send calls for bids to potential suppliers. If Teksam ApS develops the ability to implement corresponding digital interfaces to receive bids, the company could profit substantially from upcoming Industry 4.0-related opportunities. To be able to profit from such opportunities, the company needs to be able to adapt to future changes and requirements. In particular, the company needs to upgrade its product line to provide IT interconnectivity where it has not, at this point, built up the relevant competences. For a smaller company like Teksam ApS, this can be a substantial challenge due to ingrained traditions but also due to availability of relevant competences in the local labour market.

Teksam ApS is located in a remote area with a seaport where the competences of the local population may not be in line with the company's future requirements in terms of employees' qualifications. If the company were located in the Danish capital of Copenhagen, where there is a larger workforce with relevant competences, these types of challenges might be easier to overcome.

### **Case 3: Reo-Pack A/S**

*General characteristics:* Reo-Pack A/S is a company specializing in packaging technologies for large-scale merchandise. Reo-Pack A/S produces

**Table 13.3** Reo-Pack A/S

| Number of employees | Gross income (in mln euro) | Equity (in mln euro) | Balance (in mln euro) |
|---------------------|----------------------------|----------------------|-----------------------|
| 55                  | 0.35                       | 0.8                  | 4                     |

Source: Based on data from NNErhverv (2015)

equipment for automated pallet wrapping, handling, and labelling. Being located 50 km south of the regional capital of Aalborg in the rural Western part of Northern Jutland, the company has 55 employees. In terms of product lines, the company has special competences in wrapping pallets which are used for handling larger and heavier quantities of merchandise. There is also machinery for handling and wrapping pallets and products like large paper rolls. Another machine in the product line wraps waste paper in large chunks. Wrapping takes place with plastic foil, which is wrapped around the product with a palette underneath for stability and ease of transportation, for example, by fork lifting equipment.

*Internationalisation:* with subsidiaries in Germany and Great Britain, Reo-Pack A/S has exported to more than 25 countries (Table 13.3).

*Vertical integration:* as a mechanical engineering company, Reo-Pack A/S sources pre-processed metal components, hydraulic technology, and electronics including electrical motors. From the upstream perspective – just as is the case in the companies we discussed above – Industry 4.0-related initiatives can be initiated by suppliers or by the company itself. The range of suppliers is diverse and the company is sourcing internationally. Given the industrial sector where the company is active, specific opportunities may come up. Due to new individualized products and services, individualized packaging solutions will be needed (Jazdi 2014). Industry 4.0 will lead to new systems in distribution and procurement, where flexibility becomes important to serve individualized customer needs. As a small and flexible company, it will be able to draw substantial benefits if it is able to adjust internal processes so that customers can be served individually. This means that Reo-Pack A/S needs to build up competences to produce adaptable packaging machines with interfaces that support individualized product configurations along the stages within the value chain. Large industrial firms are most likely to start new initiatives in this direction and given that these can be developed, sufficient negotiating power will follow suit. On the factory floor

the company is not deviating from the practice of relying on automated machines and manual handling of the shop floor, just as is in the case of the other firms discussed in this chapter.

*Horizontal integration:* For Reo-Pack A/S substantial opportunities can evolve through Industry 4.0. As a relatively small player, the company can collaborate with other players who compete at the same horizontal stage of the value chain. As existing manufacturing systems are becoming increasingly decentralized, the result will be an increased decomposition of classical production hierarchies leading to decentralized self-organizations (Lasi et al. 2014). In this scenario, there will be greater demand for flexible solutions to handle and package diverse products and related services. Reo-Pack A/S could become an interesting collaborator with similar companies in the packaging engineering sector. In this way, potential customers could profit from distributed and diversified offerings, which could be flexibly adapted to changing market requirements.

*Major findings:* Industry 4.0 holds the potential for new options by integrating a variety of application systems. For this to become possible, partners in cyber-physical networks need to continuously act upon real-time information in market environments that are changing rapidly. In cyber physical systems, the flows of tangible goods are a mirror transfer of digitalized information across data networks. In general terms, this increases the need to make the logistics more versatile in order to handle physical products, so that tangible products can be handled in efficient and flexible processes. Specializing in packaging technologies, Reo-Pack A/S can profit from upcoming opportunities if it is able to link its own system (production and end products) into the information flow. For example, the company's packaging systems would wrap a range of flexibly manufactured items according to specified sellers' instructions. One item in a production line would, for example, be stored in a local warehouse, while the next one would be sent overseas by ship freight. According to the destination of the products, there will be varying requirements and different packaging techniques and related input materials. Therefore, Reo-Pack A/S will need to build up competences for equipping its packaging machines with computational intelligence so that it can respond to individual customer requirements. It will be critical for the company to find qualified personnel with competences in IT in order to be able to profit from the new opportunities.



### Case 4: Dansk Varmepumpe Industri A/S

*General characteristics:* through a dense network of dealers in Denmark and Norway, Dansk Varmepumpe Industri A/S offers terrestrial heat solution for end customers. To serve their market segment, the company offers a range of geo-thermal heat pumps and related equipment. The company also develops and commercializes technologies to combine geo-thermal with solar energy. Dansk Varmepumpe Industri A/S has competences in offering complex solutions to satisfy individualized and specific customer needs. Customers are in the business to business (B2B) as well as in the business to consumer (B2C) market segments. Through a network of dealers, the company reaches out to end customers to deliver turn-key solutions through its dealer network.

*Internationalization:* Dansk Varmepumpe Industri A/S relies on its extensive dealer network in Denmark. In terms of international presence, the company has a less dense (compared to Denmark) network of dealers in neighbouring Norway (Table 13.4).

*Vertical integration:* being embedded in the supply chain, Dansk Varmepumpe Industri A/S can profit from flexible sourcing of inputs. If a sufficient degree of modularization and automation can be achieved, the company will be able to serve individual customer requests. The company needs to focus on sustainability and resource efficiency in the design of its own manufacturing process, as well as on the implementation of customer-centred products and services. In the future, market demand can be expected to be more individualized and fragmented (Lasi et al. 2014). To satisfy expected demand, the company strives for increased modularization with clearly defined interfaces to improve its own product lines. The company could benefit from a higher degree of modularization in two ways. Firstly, on the shop floor modularization would facilitate flexible and, if possible, automated production. Production of specific modules could be sourced from third parties. Secondly, the implementation of a

**Table 13.4** Dansk Varmepumpe Industri A/S

| Number of employees | Gross income (in mln euro) | Equity (in mln euro) | Balance (in mln euro) |
|---------------------|----------------------------|----------------------|-----------------------|
| 31                  | 0.69                       | 2.5                  | 3.6                   |

Source: Based on data from NNERhverv (2015)

modular system would help to satisfy specific customer requests in terms of functionality and scope of the products and services.

*Horizontal integration:* if successfully managed, Dansk Varmepumpe Industri A/S could profit from opportunities stemming from the emergence of cyber-physical systems. In the energy sector, such developments are already clearly visible. For example, the spot price of energy (for example, in the form of electricity) is determined by future expected developments in the energy market. Such developments can be weather or predicted availability of energy sources. For example, the company could develop technologies, which enable installations to anticipate market expectations autonomously and adapt energy management correspondingly. Through modular technology, there will be opportunities to cooperate with horizontal partners in building up cyber-physical systems. In this way, smaller companies can link up to compete against larger competitors in the industry.

*Major findings:* the green energy sector, in which Denmark is among the technology leaders, offers attractive prospects. In the long run, the need for resource efficiency will increasingly return to the political agenda and potentially lead to new policy initiatives pushing for new technologies with a potential to develop new type of products and services. The need to find flexible solutions for energy consumers who have different requirements offers potential for successful future business development. Dansk Varmepumpe Industri A/S, in developing and selling solutions for the application of terrestrial heat for heating buildings, can create opportunities through developing collaborative solutions with other firms who offer similar or complementary green technologies. These could be firms in the solar energy sector or trading companies that specialize in trading spot and future contracts for electricity supply. Such types of collaboration can lead to new cyber-physical systems where hardware functionality merges with computational intelligence, thus offering substantial future potential for a small company like Dansk Varmepumpe Industri A/S.

### **Case 5: Jydsk Løfte- og Maskinteknik ApS**

*General characteristics:* specializing in the manufacture of lifting and handling equipment, Jydsk Løfte- og Maskinteknik ApS is located in the industrial area of the town of Hobro, close to the highway that links

Aarhus to the Northern Jutland regional capital of Aalborg. The company produces hand tools for more comfortable lifting and handling for simple muscle power driven applications that can be useful in logistic distribution centres where a multitude of packets need to be handled in a comfortable way by operating personnel. Apart from such relatively simple tools, the company has built up special competences for vacuum driven lifting technology for lifting materials like steel-sheets or glass panels. Based on its specific competences, the company offers solutions to equip commercial buildings and warehouses with crane installations for lifting and handling diverse merchandise. With these technologies, even heavy items, which could not be lifted by human power, can be handled in an easy and swift way by one single person. The lifting equipment can be highly customized to a specific client's needs. For example, repetitive tasks like moving heavy panels around on the factory floor can be solved by the robots the company produces. These robots can be deployed in scenarios where humans should not work because of security or health-related considerations. In addition to its product offerings, the company offers an after-sales service to maintain the installations during their life cycle (Table 13.5).

*Vertical integration:* similar to the above discussed cases, Jydsk Løfte- og Maskinteknik ApS sources pre-processed metal products, as well as a range of other input components like electrical equipment and other special material. As a result of Industry 4.0, there will be increasing requirements for new modes of organizing new systems in distribution and logistics. This offers new opportunities for business development, but being a small company with limited experience in IT technologies and implementing computational intelligence, the company will be challenged to update its capabilities. If it can manage the upgrading efforts and successfully move into becoming an integrated player in new cyber-physical systems, the company has the opportunity to occupy attractive market niches.

**Table 13.5** Jydsk Løfte- og Maskinteknik ApS

| Number of employees | Gross income (in mln euro) | Equity (in mln euro) | Balance (in mln euro) |
|---------------------|----------------------------|----------------------|-----------------------|
| 35                  | 1.8                        | 0.68                 | 1.42                  |

Source: Based on data from NNERhverv (2015)

*Horizontal integration:* Jydsk Løfte- og Maskinteknik ApS is mainly integrated to the upstream and downstream side of the supply chain. With its product specialization, the company needs to find methods of cooperating with other firms at the same horizontal level of the supply chain to complement its own capabilities. With increasing integration of product intelligence into existing physical products, the company could move into production of modular components that could be interconnected with the products of other firms at the horizontal level to offer specific and individualized solutions to customers on the downstream side of the value chain.

*Major findings:* although Jydsk Løfte- og Maskinteknik ApS does not have exclusive competences, being an SME with a high degree of flexibility and a focus on services, the company has the potential to successfully compete within Industry 4.0 scenarios. The company is exposed to competition from large internationally-oriented specialists in robotics for handling merchandise where it will not be able to compete in all application scenarios. Therefore, the company needs to find and occupy a market and operational niche in a decentralised scenario where it can successfully operate and be shielded from larger competitors. Due to its small size and flexibility, this firm has the ability to develop solutions for specific customer needs. As is the case with other firms in this sample, there is a need to develop additional competences in IT. As computational intelligence will be merging with physical systems, the company risks being left behind if it is not able to upgrade its competences to integrate computational intelligence into the existing systems to link into upcoming networks based on cyber physical technologies.

### **Case 6: Nordmark Maskinfabrik A/S**

*General characteristics:* Nordmark Maskinfabrik A/S takes a position as a sub-supplier to the heavy machinery construction sector, for instance the windmill industry. The core competence of the company is in CNC (Computerized Numerical Control) processing of heavy items of up to 80 tons. The company has the capabilities for effective mass production, but can also process highly specific and customized single orders.

**Table 13.6** Nordmark Maskinfabrik A/S

| Number of employees | Gross income (in mln euro) | Equity (in mln euro) | Balance (in mln euro) |
|---------------------|----------------------------|----------------------|-----------------------|
| 70                  | 5.7                        | 4.9                  | 12                    |

Source: Based on data from NNErhverv (2015)

The company has specialised in 3D (three dimensional) form processing and accumulated competences in precise production of complicated prototypes. The company acts as a consultant in the areas of design, development, and construction of complex technologies in machinery technology. The company operates out of three main production sites, two in Northern Jutland and a third – in Mid-Jutland south of Aarhus. Moreover, there are more than 20 CNC treatment centres the company can draw on, which enables it to deliver to the entire European market. It also offers services in quality management as well as storage. The company is continuously investing in new technologies and additional production capacities (Table 13.6).

*Internationalization:* Nordmark Maskinfabrik A/S exports to European markets.

*Vertical integration:* in the vertical value chain, Nordmark Maskinfabrik A/S currently takes a position between machine construction companies from which it purchases production equipment and is a supplier to producers of heavy industrial equipment. In this position, it acts as an intermediary, creating links by producing intermediary products. To bridge the link between the upstream and down-stream supply chain, the company also acts as a designer for prototypes and provides a variety of consulting services. The company acts as a facilitator by offering warehousing services. In this position, the company has a double function as a producer of intermediary industrial input, and perhaps more importantly, as a conduit for technical and process knowledge within the supply chain.

CNC provides tool marking machines which can produce metal workpieces with very high precision. CNC machines are controlled by means of CAD (computer aided design) programs. With CNC and CAD, Nordmark Maskinfabrik A/S already has a technology in place which has the potential to be integrated into more wide-spanning Industry 4.0 applications.

*Horizontal integration:* CNC and CAD technologies can facilitate global value chain integration at the vertical level. Likewise, these

technologies offer the potential for horizontal integration, which has not been fully exploited. As a strategic facilitator, Nordmark Maskinfabrik A/S is currently linked to the upstream and downstream of the supply chain, with little horizontal connections. As Industry 4.0 starts to gain ground, there is a potential for increased expansion of the supply chain in the horizontal direction. With expected individualization of demand and increasing negotiating power of buyers, it could become an interesting proposition for the company to work with firms who have complementary product offerings. The requirements for increasing individualization from the buyer side can make it attractive and necessary to collaborate with other specialists at the same horizontal level in order to complement the individual competences of each firm with the aim to better serve customer requirements.

*Major findings:* among this sample, Nordmark Maskinfabrik A/S is perhaps the company that shows the most interesting potential for Industry 4.0 development. Acting as a producer of intermediary industrial input that complements its offering with other knowledge intensive services, like consulting, where a high degree of technological and logistical proficiency is required, the company may eventually shift to a position of provider of specific knowledge and play out its competences in its field. As both producers of mechanical engineering production machines and assemblers of heavy industry move into Industry 4.0, the company has the potential to act as a channel for transmission and coordination of the upstream and downstream side of the value chain. As conditions become more complex as a result of technological changes and increasingly specific end customer demands, the company could create new horizontal links to enhance the performance and functionalities of its intermediary production as well as develop and enhance knowledge intensive services.

## Conclusions

We find that Industry 4.0 offers opportunities to all investigated companies, although to varying degrees. These companies have a solid technology, which is proven and accepted in their respective markets. The degree of technological intensity differs between the companies: with products that are mechanically mounted on tractors Fransgard Maskinfabrik A/S

has not implemented digital interfaces in its products and there is apparently no immediate reason why it should start doing so. Therefore, in the sample Fransgard Maskinfabrik A/S is probably still the most distant from Industry 4.0. As a machinery supplier to the construction industry, Teksam ApS has potential for Industry 4.0-related developments. Teksam ApS technology helps customers in the construction industry to create and shape specific shapes and forms, offering interesting market development potential if Teksam ApS is able to initiate the necessary technological trajectory. These two firms source input material from suppliers of pre-processed input materials such as steel sheets. They also source manufactured components such as electrical motors and hydraulic equipment. Here Industry 4.0 potential may be limited, at least in the mid-term, unless the suppliers change their practices and start implementing new innovative technologies, which may force the firms in our sample to react and likewise update their supply chain in line with the Industry 4.0 framework.

Specialising on the market for logistics solution, Jydsk Løfte- og Maskinteknik ApS and Reo-Pack A/S have both in their own way promising potential, since Industry 4.0 demands technology with flexibility in packaging and handling. These two companies offer technologies which are technically solid but do not live up to future requirements in terms of IT integration. In this sense Nordmark Maskinfabrik A/S is already much ahead on the learning curve since this company is in possession of and able to handle diverse IT technologies. Dansk Varmepumpe Industri A/S also has interesting potential since it is well positioned to link into upcoming networks of green energy supply.

All of these companies have, albeit to a varying degree, potential for the adoption of Industry 4.0 oriented development. However, we also identify significant hurdles the companies need to overcome if they want to be successful players in future Industry 4.0 developments. With the exception of Nordmark Maskinfabrik A/S and Dansk Varmepumpe Industri A/S, who are already mastering digital technologies, all other firms have no or little relevant IT capabilities. This can turn out to be a problem for the future, as technologies increasingly move into Industry 4.0 applications. To achieve integration of physical hardware and computational intelligence, the companies need to learn how to implement

the necessary hard- and software interfaces so that they can link up into cyber-physical systems. In this area, the main challenge will be the identification of sufficiently qualified personnel with IT competences. None of these companies has the required technological competences, and we can expect that it will be difficult to fill this gap. To conclude, we identified a number of challenges the companies need to overcome:

- Add computational intelligence to existing operations and products.
- Streamline the vertical value chain, in particular operations on the shop floor.
- Collaborate with new partners at the horizontal level to complement their offerings which could be necessary to satisfy future individualized customer demand.

Industry 4.0 can create substantial changes in negotiating power between the implied parties, and these issue has yet to be explored. A firm with sufficient negotiating power may, through implementation of Industry 4.0, improve its negotiating power. Industry 4.0 will lead to open standards and increased transparency. Openness can bring third party competitors into the frame when standards and operational interfaces become increasingly transparent.

For all companies, the question is if and when to initiate Industry 4.0 development. The companies could start implementing Industry 4.0 independently of the suppliers. This would most likely happen through changes in the downstream value chain. Such changes could be triggered by substantial changes in the industries in which the companies in this sample are active. Naturally, the question is when and in how this will occur. As we discussed in the introductory part of this chapter, new cyber-physical production systems will lead to new ways of serving customers not only through adapting and individualizing components, but also in the product development stage, the planning stage of production, as well as the production processes themselves. Such changes would naturally have a significant impact on the way the companies in this sample organize their internal value chain. Moreover, Industry 4.0 changes have the potential for new business model innovations. New opportunities for organizing the value creation process



can attract new entrants with innovative ways of organizing their operations, which might then threaten incumbent industry players.

As we saw, all companies are niche players in their respective markets and are currently showing satisfactory success and stability. With one exception where internationalization is limited, they show a substantial international presence, which can provide additional stability. All firms enjoy satisfactory performance but it also becomes clear that their resource base is relatively limited. If the companies are not capable of financing the necessary upgrade of operations to accommodate Industry 4.0, they may be left behind and other competitors will take advantage of upcoming opportunities.

A second significant problem is the availability of qualified personnel. If the firms in our sample engage in Industry 4.0, they need to significantly upgrade the competences of their staff, in particular with regards to IT. As firms start to engage more in Industry 4.0, the scarcity of IT competences may become more accentuated in future. Demographic changes and international competition might make it more difficult to find personnel with the required competences. As a high taxation country and with a language that is relatively difficult to learn for many foreigners, finding a qualified workforce in the international markets may be an uphill battle for Danish SMEs, in particular if they are located away from urban centres, which are currently seen as attractive places to live. Political decision-makers should therefore put Industry 4.0 on their agenda now for designing the right steps to secure future development.

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# 14

## Value Creation in an SME from a Traditional Industry: It All Adds Up

Svetla Marinova and Marin Marinov

### Introduction

Value creation in small- and medium-sized firms (Moore and Manring 2009) is often associated with their operations in global value chains or global production networks (Chetty and Holm 2000). In this process, companies exchange inputs and/or outputs with domestic and foreign firms in dyadic transactions while value is sequentially added in a way that is not clearly identified, just as when more sophisticated activities are performed transactional value is added until the final customer is reached (Ritchie and Brindley 2000; Kumaraswamy et al. 2012). Nevertheless, there is little discussion of how value is created or derived throughout these transactions. Instead, in line with neoclassical economics, it is generally assumed that value is created through firms' participation in value chains and, ultimately, 'consumed' by individual customers. The marketing literature has been exploring value creation as a process creating

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S. Marinova (✉) • M. Marinov  
Aalborg University, Aalborg, Denmark

value for the customer to use or co-created with the customer based on his/her preferences. Moreover, research by Vargo and Lusch (2011) and Akaka et al. (2013) has prominently developed a service-ecosystems perspective that places centrality to context in value creation, developing the ideas of service exchange, integration of resources, value co-creation, and value-in-context (Akaka et al. 2013). The concept of value creation has also been embraced and made central in the understanding of the nature of marketing by the American Marketing Association (AMA) so that the product is no longer the object of exchange between a firm and its customer, but it is an offering, a bundle that creates value for the immediate customer, various parties that make the bundle happen, and the society at large. The AMA definition of marketing adopted in 2013 is: 'Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large' (AMA 2013). Business model researchers place value at the focus of a firm's business model (Zott et al. 2011) and as such value transcends inputs, outputs, partners (suppliers and buyers), and determines the company's costs and revenue, thus making value the backbone of each business organization. Strategic management literature also adopts the concept of value in accordance to Porter's Value Chain of a firm, which looks at all primary and support activities that through sequence and interplay create the margins for the firm and enable it to function and grow (Rindova et al. 2010). Meanwhile, innovation research claims that firms create value by increased and more effective research and development (R&D) (Sirmon et al. 2007), through explorative and exploitive innovation (Gupta et al. 2006), therefore, emphasizing a specific activity and a company or even a national platform that enables firms to create value. Consequently, academic literature, in spite of its specific perspective, shows an evident consensus in developing the notion that value is central to the purpose of any business and is essential to the business, its business network of suppliers, customers and stakeholders, and to satisfying the customer needs and wants (Payne et al. 2008).

This chapter explores the ways in which value is created in a small and medium-sized enterprise (SME) operating in a traditional industry that appears to satisfy a basic need for clothing, which has become

differentiated by turning the basic need into an image, an identity and an aspiration, moving into the realm of fashion. Yet, marketing is not discussed as such, rather the focus is put on the understanding of how the company and its partners create ‘benefit’ or ‘worth’ for themselves and for the customer. Value creation in international operations is explored from the perspective of a lead focal firm in a global network. Therefore, a firm-focused perspective to value creation is taken, trying to unveil the role of this firm and its network attachments in the value creation process. Thus, this chapter explores the process of value creation at firm level in the context of a lead SME taking into consideration its partner network attachments.

## Theoretical Background

Value in the context of SMEs is indeed about the ‘utility’ they create. The concept of ‘utility’ goes back to Adam Smith (2003 [1776]) and the economic marginal utility theory that emerged on the foundations of Smith’s work (Kauder 1965). The value in business activities has developed on this basis with the attached interpretation of mostly the worth created in business transactions for the exchange parties. However, if we go back in time to the philosophical reflections of Plato on value in *The Republic*, created back in 360 BC, value is much more than transaction value. It is about intrinsic value and extrinsic, instrumental value with the latter being things that are needed (instrumental) to gaining other things that are good to have (Plato 2007). This arguably leads us to the understanding that value can be both intrinsic and extrinsic and these two concepts do not exclude, rather they complement, one another. The intrinsic value in Plato’s thought is much related to internal worth or ‘goodness’ of a person, something deeply internally embedded that shapes one’s morale and beliefs. The extrinsic value is associated with things and, therefore, it exposes the importance of the ‘thing’, which could be an object, a product, an activity, or anything that is external to a person and brings some instrumental value for that person. In addition, the worth itself is a matter of perception, the perception of the person who gets the worth of the ‘thing’ and thus has a subjective evaluation and interpretation, which

may or may not be shared by other persons. In line with this, Holbrook (1999) categorizes three dimensions of user value, i.e. (1) intrinsic-extrinsic, (2) self-oriented versus other-oriented, and (3) active-reactive. The intrinsic-extrinsic dimension is applied when a product is valued because of its qualities as an end product or is a means that helps someone gain something else. A self-oriented versus other-oriented dimension relates to the value of the product to the end user or because of its worth to someone due to the reactions of others. The active-reactive dimension is about the involvement of a person in the value of the product. Based on these dimensions, Boztepe (2007) has identified four groups of value: utility (convenience, quality and performance, and economy), social significance (social prestige and identity), emotional (pleasure and sentimentality), and spiritual.

Scholars have long played with this value terminology in axiology (the philosophical study of value) (see for example, Bengtsson 2004; Mattsson 1992; Hartman 1967) and offered various extensions to the interpretation of value. For instance, Hartman (1967) proposes that value should be seen as systemic, i.e. it is defined by a system and thus it exists within the limits set by that system and therefore is conditioned by it. Marx (2011 [1867]) also sets value within contextual boundaries as he suggests that value exists in use and is realized in the process of consumption. Such an argument deserves attention as it purports that value exists in time and space, it can manifest itself in a context and in use. In this, we can then associate value created by a firm in certain space and time, value created within interactions with various network attachments that is difficult to imitate, and thus derive the same value in another firm, within a different context. In extending the arguments about the relationship between value and context, Giddens (1979) and Chandler and Vargo (2015) point to the interplay between individuals and the context in which they exist, thus mutually constituting each other. Giddens' (1979) perspective suggests that within a specific context individuals are engaged in exchanges with others, thus people and things are connected in different ways and things can be a resource for some people, while being liabilities for others in the same context. Thus, social structures shape contexts and context enables social structures within which value emerges and benefits its constituents. This premise is really important in

our argument as this chapter does not seek to explore the exchange value that our case context presents, rather we are going to see how value is created and co-created within a specific context of relationships and how this value shapes the context. Thus, we move away from what Bagozzi (1978) discusses as exchange value whereby a company produces a product that it exchanges with a customer, i.e. in which a transaction one type of value is exchanged for another type of value, which has been the object of study in most business and marketing investigations (with more recent exceptions in marketing thought by Vargo and Lusch 2004, 2008, 2011; Lusch and Vargo 2006, who introduced a service-dominant logic perspective as a new dominant logic for marketing).

Holbrook (1999) suggests that value is an interactive, relativistic preferred experience and customers participate in the creation of that experience. Such an approach has been adopted by the service-dominant logic developed by Vargo and Lusch (2004) who see the customer not only as part of the experience, but who participates in the acquisition and usage of the experience in which companies can offer value propositions and then it is the customer that determines, co-creates and gains the value in a specific context – at a certain place and time. While the service dominant logic has been mostly applied to firm-end customer value creation, Vargo and Lusch (2008) propose that value is not created by a single party, rather, it is created by the integration of resources pertaining to various parties involved in an exchange process (Chandler and Vargo 2015). This specificity is notable, as in value creation within a mutual service provision, all parties can be both in the role of providers and customers (Vargo 2009). Such transactions create a system of network attachments for value creation instead of a linear, chain-resembling sequential flow of value creation where every next part of the chain adds up value and thus value added grows as purported in global value chain studies.

Based on the above laid conceptual and theoretical underpinnings and embracing the meanings of intrinsic and extrinsic value, the value creation in a clothing company, provisionally called ClearBlue, is investigated taking into consideration its network attachments. The name ClearBlue is fictitious as the identity of the firm has to remain anonymous due to the requirements of the mutually agreed ethics code between the company management and the researchers. The company operates in the United

Kingdom promoting British design. It is present in numerous big mid-upper-market retail outlets, has its own boutique and outlet shops, and since the financial crisis of 2008 it has applied an Internet selling platform. The company serves the mid-upper segment of the clothing market by relying on brand, region-of-origin design and quality. It started as a small creative designer-led company to become later an internationally recognized clothing brand name.

## Methodology

The objective of this chapter is to unveil the complexity of value creation in its context. Consequently, we adopt the systems approach through which we can analyse the elements of the contextually defined reality that are mutually dependent on each other and thus identify the parts, the linkages between them, and their interactions. We apply a critical realist perspective, which while accepting that reality exists independently of an observer, maintains that the world is socially constructed (Welch et al. 2011) as the observation is by its nature a subjective interpretation of reality (Easton 2010). Thus, we aim to explain ‘the entities and the mechanisms that connect and combine them to cause events to occur’ (Easton 2010: 122) by considering their dependence on the context, as in other contexts the same mechanism may lead to different outcomes (Sayer 2000). In the typology of theorizing from case studies by Welch et al. (2011) our critical realist case study refers to a contextualized explanation as we ‘are concerned with accounting for why and how events are produced’ (Welch et al. 2011: 749).

As we are looking at how value is created within a network attachment system, where resources are used for the benefit of other actors and simultaneous exchange processes occur across actors in complex service-providing and value creating relationships (Chandler and Vargo 2015), we apply an inductive theory building approach in which an initial set of empirical observations lead to generally applicable theorizing which can be refined using subsequent new data (Dyer and Wilkins 1991). The firm for the case study was intentionally chosen in view of the objective of the research through implementing sampling strategies required by



inductive research. As suggested by Miles and Huberman (1994), we selected an information-rich case of an SME in a traditional, garment, industry in a developed market economy considering that the value that such SMEs create, control, and capture is more substantive compared to similar SMEs in emerging markets and even more so in less developed economies. The case company, a British SME, treats its garment production as fashion emphasizing the leading role of design. It creates value through exchanges with network attachments in its home market and internationally. Moreover, the British garment sector has experienced a shift from traditional production of clothes to fashion where more transaction value can be captured. Data were collected in 2015 through in-depth interviews with an owner (O), General Manager (GM), Marketing Manager (MM), Brand Manager (BM), Lead Designer (LD), and the Lead Buyer (LB) of the firm. We asked questions based on an interview guide, observed the work of the designers, and used documentary evidence. Company records and publicly available data sources complemented the case data that were used for the analysis. The case data were described in a narrative form and explored by comparing theory in extant literature and emerging from the data constructs (Yin 1984) in order to ensure in-depth case analysis (Miles and Huberman 1994) that served as a basis for construct identification and conceptualization of the emerging patterns within the case. Although we apply a focal actor perspective (see Halinen and Törnroos 2005) we aim not only to describe sequences but also to identify patterns (Pettigrew 1992) and the underlying mechanisms that inform the patterns (Pettigrew 1997). In such an approach, holistic explanations become most important where the generalization is analytical (Yin 1984), and leads to theoretical propositions (Easton 1998).

## Research Findings

The focus clothing company has been driven by the brand, the concept it is selling to the market and in this it is characterized as a niche company with a differentiated focus strategy that emphasizes its own style and image. All its activities and functions are aligned with this. Its organizational

structure also supports its activities by allowing greater focus on the core competence of the company. As such, the well-established global brand is the fundamental pillar around which all types of value are created in the firm. The firm output is not production of clothing; rather, the company is brand-driven with its appropriate support structure:

‘We create a brand, a concept, an aspiration, an idea, consistent communications with customers, an image...we live with the brand.... and we have a different organizational structure compared to a production company. Of course...we have a commercial structure with commercial activities for sales, licenses, royalties and the like; and a corporate part with HRM, finance, etc. The heart of the firm is the creative part, the brand; the mind, I suppose is the corporate part.’ (GM)

‘We design, buy and sell clothes, different line of clothes, but I would like to think that we are a brand company. At least, I think this is what we have become over time.’ (O)

‘The brand and our networking skills, the way we work with all our partners makes the business what it actually is.’ (MM)

The shift from a manufacturing to a brand focus has led the company to outsource and offshore all its production and support activities and focus on its core activity. The change in focus has strengthened the work of the company with its customers, which has increased its ability to co-create emotional and utilitarian value, value-in-use with the customers as they not only monitor, but also share experiences. This development came about as a result of the financial downturn in 2008, when the company realized that to withstand competition and financial pressure, it had to increase its flexibility and engage closely with the market.

‘Since 2008, we have outsourced IT, part of the financial processes, part of the production, fabric sourcing... we have focused on the core business: product, service...product, service and design, sales, marketing design, sales, marketing...we do a lot from it...and it’s difficult, really difficult in a crowded market, but now we work very closely with our customers (B2B) [business to business] and we follow up our B2C [business to consumer] customers and their ideas and feedback, and we work together with our suppliers as well. They want to experience our brand, to be part of this brand, to be in Britain...’ (O)

‘We have had some designs suggested by customers, colours, too...we have also changed some clothes as a shape...as they fit better the changing shapes of our customers want.’ (LD)

‘Social media has given us direct access to the voice of end customers, which is great, ...we are engaging with them to know their experiences.’ (MM)

A key consequence of the company’s shift of focus is its increased agility, which gives it the opportunity to respond and foresee changes, to deliver new lines of fashion faster to the business and end customers. This approach is also in line with the thinking about the international market, which is where the key contacts are, those that can make it possible for them to realize the transaction value. In order to do this the company does not have a product sales approach, instead it bundles products and services in an offering. Moreover, such thinking about the market and the consequent flexibility are enabled by the nature of the firm as a design and sales platform for fashion clothing.

‘We are very focused, very, very focused...in this way now we can talk about our product and the whole idea is becoming more flexible – to respond to the customers, to scale up and down, to answer to new trends faster – the international market for us is our agents, distributors, end clients...those with whom we work...otherwise, the market is our categories – I mean from a product perspective, but we try not to sell a single product, instead we try to sell a complete image, an offering, several products and a competent service bundled together to create that image...we have to be extremely flexible as a design and sales platform for clothing, ...we are a design and ...sales platform.’ (BM)

‘Our core business is design...design ...British design... design living in our brand. And our logo...when you are looking at the logo...well, you understand the history and our pride in our brand...everything is about the brand and the logo...easy to say, hard to do...and we cannot do it without our suppliers, customers, buyers, without our staff and our partners. We are sailing in the same boat together.’ (MM)

The company is engaged in various formats of internationalization, direct exporting, Internet sales and shipping, has sales representative offices, agents and distributors, but has divested from own production

facilities overseas. Thus, it has become clear that value is created in the first place by the global brand and working together within 'a complex net of relationships'. The GM described his role as someone who has to fine tune all relationships and make sure that all details in production and quality are agreed and delivered upon, as well as always keep in contact with the customers, agents, and distributors. In this sense, the company has to integrate the efforts of the network of relationships to deliver value to the market, the network partners and itself. Moreover, the Brand Manager added that the network cannot be closed, rather it should allow for new creative, sales, and production input.

'You are asking about how internationalization creates value...well we have a globally recognized brand, this is for us a global brand, a brand with a global appeal and customers all over the world – here is one level of internationalization; next we have designers we source in – another level, then we have suppliers – this is a different type of internationalization, and then we have agents, sales offices, distributors, we work with fashion retail chains, and we have our own stores overseas. It is a complex net of relationships – and we have to be all happy together....difficult...at times.' (O)

'My role is to co-ordinate, integrate, fine-tune all activities, inputs and outputs, I feel I lead an orchestra, ...it leads to many sleepless nights and long working hours...it is a globally dispersed orchestra where we are creating a distinctive music, ha, ha...enjoyable, isn't it?...' (GM)

'We have to be open, flexible to bring in new designers, new ideas, new concepts, new partners, but we are also careful...we have to know that we can work with the new partner and there will not be big issues. We are in Russia and China, doing very well, but we have great partners in these countries...so it is difficult, but for us, it is very good. And we did not say, no...we tried, it worked and we are doing great there...yes, we are open ...and some new partners come, some others may not be very active for a while or may leave, close their shops, but then we find new ones...' (BM)

'Oh, competition is tough, really tough,...a lot...and we need to be very, very, very flexible, otherwise we shall die...like many other small firms...' (LB)

The openness of the partner network and the importance of design were also brought into the interview by the Lead Designer.

‘Design for us is very important, we need to have specialists in each category...and it is difficult to get the best designers internally, so we need to get this special knowledge from outside – outside our country mostly to keep the British authentic appeal...so we find this knowledge and then work with the designer...we share concepts, we compare models, we design together a style ...actually, designers design, but together with us...what our brand needs...and they sell it to us, but we know what we are buying...if they don’t sell - they don’t earn money...’ (LD)

‘It is about us together...the brand cannot go without the designers, ... you know, they cannot go without us...and it is a team...not sitting under one roof, but all the time we play and sing together...it is a concert and if there are problems, nobody will enjoy it...no, no,...’ (MM)

The General Manager and the Lead Buyer discussed the issues above by adding reflections on the whole process that requires a joint effort and a lot of integration of efforts, processes, and relationships.

‘We have buyers sitting here for each clothing line – they work with our suppliers, saying what we want, what price, what material, sizes, colour – OK and then they work with us and we work with them to make the best sample to take to the spring-summer and autumn-winter fairs. There we get the customers and we have them all in...we say: what a nice piece of clothing, fantastic, great... Then they like it or want some changes, we can decide if we can make them and agree with them...six months later we get the product in our warehouse, pack it, send it ...it is all like ....putting all together as it adds up and then we all get great satisfaction...and the wallet is full.’ (LB)

‘Five years ago, it was come in, take a look, do you like it...and all done...see you in six months. Now it is getting much more integrated with our customers ...to reduce the time of holding items in stock or on the shelf, so we know all the time how goods are performing, what is needed, when new ones have to come in, what is preferred....it is highly integrated...we follow all these key performance indicators...not because we or our clients want, ...the bank wants...otherwise, it will close their business... so we need to be integrated.’ (GM)

The Owner, the General Manager and the Brand Manager were very much questioning the control function of the focal firm in the network of relationships.

‘It is not about control, ...no...no...no, ...nobody wants to be controlled...it is about agreement, talking it through, discussions, finding solutions and then to contract....and of course some of it has become more like friends – people we know and work with closely...we cannot control, but we say what we believe in and then, they say and then we find a way’. (GM)

‘Of course we have to control quality and make sure quality is as we want it, we visit, we talk, we exchange many e-mails....and finally, we do quality check before we ship it here’. (O)

‘On the basis of our experience, we have developed a supplier manual... we apply the procedures everywhere...we always have access to the suppliers... we can always bring an agent and say ‘Make a test for this or that’, but we just want to secure CSR, quality as needed, otherwise, we are partners as long as our wallets....you know the wallet is very important...if it’s full then we are all OK.’ (BM)

The geographic spread of the firm is quite extensive and the MM commented on it. Moreover, he was confident that emotional value is created across markets with customers who support the brand and identify with it.

‘Where we create value...good question: in England, Scotland and Wales, in Northern Ireland, so in the UK, ...then we are in Germany – across Europe, Canada, the US, the Middle East, South Africa and some other African countries, although modest presence there, even in China, Australia, Russia....there are some specifics, but...it’s all ClearBlue brand, it lives, it gives satisfaction, identity, ...this British identity, which people like and respect...and when we make many sales and people like us, some of those can really associate with the brand will contact us and want to be our agents – they like the brand, like the design, we all promote and live with this brand... interesting...’ (MM)

‘...[T]he brand is a lifestyle: British lifestyle: a feeling of nature, beautiful nature, understatement, sophistication, quality, authenticity...and then all customers and partners buy in that universe...’ (BM)

## Discussion and Conclusions

Global value chain (GVC) and supply chain management (SCM) research rest on the presumption that SMEs are usually suppliers of larger lead companies (Arend and Wisner 2005). This assumption is even more pronounced for SMEs in which suppliers and buyers are dispersed all over the world and which serve global customers. There is little research from the perspective of an SME as the focal firm of a global value chain. In reality, lead SMEs in the garment industry exist and play a focal role in their supply chain, at the same time dealing with global partners of various size and country-of-origin. Such SMEs usually operate as fashion brand-led companies that set trends and operate independently, promoting utility and emotional value for their customers. The latter is deeply engrained into the DNA of the firm, in its belief and value system that transcends those involved in the value chain. Using Gereffi's (1994) conceptualization of global value chains, we find out that our case firm plays the role of a lead brand integrator in a brand-driven chain: designing, controlling, directing, and integrating the chain. In addition, ClearBlue plays a pivotal role as a broker (Miles and Snow 1986) in the value chain, co-ordinating the activities of various designers and independent companies.

The dynamics of the global fashion market dictate where ClearBlue's global brand resides, and requires that co-ordination be agile and thus fluid. Hence we would rather use the term orchestration, because the signals from the market and the way design is handled do not allow for static co-ordination, instead they demand a fluid orchestration.

In this orchestration, the most useful linkages for ClearBlue are not necessarily those that are well-established over the years, especially on the design side, but those with creative new ideas that may be less known but can 'live and feel' the brand emotional value. Hence, the company works with a combination of strong and weak ties that can bring new ideas and innovation value to the firm. This shows that weak and strong ties can complement each other, not necessarily because of the ability of weak ties to secure new connections to other social networks (Granovetter 1973), but more so to allow access to new ideas that can refresh the emotional value created by the firm.

The fluid orchestration required by ClearBlue signifies that a value chain or a supply chain structure representation, with an SME at the top of the value chain co-ordinating and controlling the chain of actors and value added activities, may not be the most appropriate structure that reflects how ClearBlue creates value. Instead, fluid network orchestration creates agility and allows the company to keep its brand vitality and meet ever changing market demands.

Harris and Wheeler (2005) discuss the role of networks in supporting firms operating in global markets. They suggest that networks provide information on business opportunities and business partners in international markets, they transfer knowledge, introduce possible business partners, provide marketing opportunities, legitimate a firm in foreign markets, allow firms to learn and develop their skills, and may also inhibit the internationalization of a firm. From the perspective of value creation in the internationalization of ClearBlue, we can suggest that internationalization is what keeps the firm alive and growing. Transaction value is created in global markets; emotional value satisfies customer needs across the globe, design as a basis for the emotional value is sourced internationally, as well as production, and buyers enable transaction value and value-in-use. Meanwhile, in the process of design innovation, fabric supply and production, in retail and marketing, ClearBlue works with designers, agents, and suppliers across national borders, from near and afar, co-creating the emotional and transactional value of their brand. Here co-creation is more so in the form of orchestrated participation, where inputs from each network partner deliver the final transaction value in the consumer market space. In addition, ClearBlue is in direct experiential relationship with buyers in the consumer market space across the world, where the company and its consumers co-experience the brand, co-creating the brand along all its product extensions. In this regard, internationalization for ClearBlue is not hampered by the limits of its network attachments, instead its network is open, inclusive, and reaching out. While Johanson and Vahlne (2009) outline that if SMEs are outsiders to networks, they may find internationalization rather difficult, ClearBlue orchestrates a network that is not static, it is changing, agile, incorporating new actors, where strong ties exist, yet, new ties are embraced and flourish and co-create emotional transaction value and



value-in-use. Consequently, the internationalization of ClearBlue cannot be restricted by its network because of its fluidity and the ability of the focal firm to orchestrate its network attachments to co-create value. We find similar views expressed by Schweizer et al. (2010) who argue that firms can internationalize because an actual or potential partner is found across national borders while modes of foreign market entry remain of secondary consideration. Therefore, we suggest the following:

**Proposition 1** Internationalization of a focal SME is network embedded and performed as an orchestration of a fluid open network to enable the continuous co-creation of value with network attachments.

The presented case study offers an insight into what actually internationalization means for the analysed firm. It seems that it is its life-line, and its shapes and forms may be considerably different. ClearBlue uses a multiplicity of internationalization formats: insourcing, off-shoring and outsourcing, own sales offices (shops) or agents, a global Internet-enabled sales platform, and exporting and strategic alliances with key buyers. Thus, the position of the focal firm becomes one of a global orchestrator, who builds and co-ordinates network ties in an open and fluid network structure, where the contribution of each network partner in the value creation process is far more important than the internationalization mode. Such a view of internationalization is closer to the views of global mindset, yet, emphasizing the integration of action and purpose, for value creation rather than the attitude alone. Thus, we suggest the following:

**Proposition 2** Opportunities in international business are not so much reliant on country-specificity, but more so on relationship-specificity and network-specificity (Johanson and Vahlne 2009), on multiplicity of internationalization formats and on the focal SME's ability to orchestrate an open network.

The brand has been at the core of the ClearBlue's network of value creation. There have been continuous analyses, criticisms, and redefinitions of the significance of branding as a platform used by firms for value creation based on the functional and emotional attributes of a

product/service offering and on the customer perception of these notions (Marinova 2014). The ClearBlue's brand is its most important asset, defining the emotional value and value-in-use, as well as ultimately affecting the transaction value of its offerings. As such the brand is at the foundation of the firm's innovation strategy and is constantly driving the orchestration capabilities of the focal firm which can ensure that value is co-created by suppliers, customers, and end users.

The globally established ClearBlue brand sustains the company's relationships with customers and suppliers and creates its own brand emotional experiential space, in which customers from around the world live by expressing their inner value system and identity, rather than just satisfying their needs. For ClearBlue the brand is 'eternal', while its products and designs have a shorter life span. The brand impersonates the emotional value, where the material and ideational co-exist in an image with a radiating allure and aspiration, both for the firm, its network, and its customers. Consequently, the network and the customers are not exogenous to the brand value creation; they are endogenous (Mertz et al. 2009). Hence, we suggest the following:

**Proposition 3** The emotional value created by the firm, its network, and customers is impersonated in the global brand, notwithstanding the multiplicity of internationalization formats and supported by the global network orchestration capabilities of the firm.

Value creation in the case of ClearBlue is driven by design (Buchanan 1985) that enables the firm to bring new product/service offerings to the customer within a short period of time. Cagan and Vogel (2002) contend that design creates value opportunity classes, which include emotional appeal, aesthetics, identity, ergonomics, impact, core technology, and quality, that contribute to the overall experience of a product/service offering and relate to its value. According to them, the higher an offering scores on each class, the greater its value to customers is. Moreover, customers engage in user-product interaction (Jensen 2001), during which they establish and develop a relationship with certain properties and benefits of the product/service offering. In this process, design creates those visible cues that indicate meanings (Boztepe 2007), which reinforce the utilitarian, social, and emotional value to users exhibited

by their behaviour. Usually, design uses various means, including colour, shape, feel, ingredients, and symbols as cues to communicate value. This communication should make sure that there is ‘interplay between designers’ intentions and users’ needs, perceptions, and goals’ (Heskett 2002: 54). Consequently, Boztepe (2007) proposes that developing the capacity of objects for value could define the role of design in value creation.

The design in ClearBlue is defined by the social and emotional value of the brand and ClearBlue’s British identity, yet it is not internalized as a function. Instead, within the open network of ClearBlue, design is sourced in from and co-created with various designers that live the ClearBlue identity, which is spiritually and emotionally embedded in the British Isles. Communicating through design overarches its sources and creates a regional, i.e. British, design platform. In that sense, design is internationalized bringing in regional uniqueness and expertise, while production and distribution are globalized. Moreover, the focal firm becomes a trading platform for internally and internationally sourced design and in that the fluid orchestration capability of the firm is far more important than control over design. Hence, we propose the following:

**Proposition 4** An SME orchestrates internal and international design inputs in order to develop its capacity to co-create utilitarian, spiritual, emotional, and social value within its network attachments.

The customer base of ClearBlue does not position the firm in either the B2B or B2C market. The company serves both markets through the combined use of different channels that allow for global customer reach. For example, some markets are served via own space in retail chains, others through agents or big buyers, others through franchising or own shops, others through an Internet enabled platform, or any combination of these. The key to the choice of these channels is how the customer can add or co-create value through design input, brand support and enhancement, and product, service or experiential feedback, as well as transaction value. This means that although ClearBlue is an SME, it has direct access both to its business and end customers, who engage with the firm in creating and enhancing the utilitarian, social, and emotional value of its product/service offering. Therefore we state the following:

**Proposition 5** The direct relationship of an SME with its B2B and B2C customers allows the firm to co-create greater emotional, social, and utilitarian value with its customers, and thus increase the transaction value of its offerings.

To conclude, this chapter has endeavoured to explore the perspectives of value creation using the case of a company that is set in a traditional industry, which has a global value chain and serves a global market, where SMEs may find themselves under enormous pressure to operate and survive. The case company shows how value can be created through orchestration of a global network to ensure the long-term future of a brand driven by British design and operating in a highly competitive mature industry.

The internationalization of a focal SME with high-value added activities in an international network represents a complex phenomenon in which network attachments work together to co-create the emotional, social, spiritual, and utilitarian value communicated through the brand to global customers, who also participate in value creation. Value creation is not stifled or limited by the network; instead, it can be empowered by the orchestration capabilities of the focal firm of a fluid open network of strong and weak ties that are globally dispersed and supported by a multiplicity of internationalization formats.

Further research may explore the specific mechanisms for value co-creation in an SME global network of suppliers, buyers, and customers. Such research requires extensive interviews with different network partners in order to differentiate the specific ways in which spiritual, social, emotional, and utilitarian values are created and co-created and how context affects these values.

An interesting research direction may be to explore how SMEs effectively compete against their larger, better resourced competitors through multiplicity of internationalization formats in global open networks where value-in-context, value-in-use, and transaction value are consistently created.

In light of the opportunities offered by the Internet platform, the process of value co-creation with customers and consumer engagement strategies may also bring greater insight into value-in-use, which can benefit internationalized SMEs as consumers may have similar values but their behaviour may vary.

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# 15

## Sustainability and Corporate Social Responsibility in Internationally Operating SMEs: Implications for Performance

Lasse Torkkeli, Sami Saarenketo, Hanna Salojärvi,  
and Liisa-Maija Sainio

### Introduction

Concepts relating to corporate sustainability (CS) and corporate social responsibility (CSR) have remained vastly under-explored in international entrepreneurship literature. The recent reviews by Jones et al. (2011) and Peiris et al. (2012) do not find a single study of CSR and indicate that sustainability is discussed in the traditional sense of the word in the literature (i.e. referring to the competitive advantage of companies), rather than as social responsibility and sustainability in a more holistic sense. The latter refers to the ‘triple-bottom line’, i.e. business that is sustainable from the point of view of the firm – profit, of the society – people, and of the environment and ecology – planet (see Elkington 1997). Moreover, in the *Journal of International Entrepreneurship*, only one paper

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L. Torkkeli • S. Saarenketo (✉) • H. Salojärvi • L.-M. Sainio  
School of Business and Management, Lappeenranta University of Technology,  
Lappeenranta, Finland

© The Editor(s) (if applicable) and the Author(s) 2017  
S. Marinova et al. (eds.), *Value Creation in International Business*,  
DOI 10.1007/978-3-319-39369-8\_15

359

(Kirkwood and Walton 2010) has during this decade considered the role of sustainability-related practices in international entrepreneurship. That study explored ecopreneurs in New Zealand through a case study, but we still do not have a clear view on whether it is worthwhile for internationalizing SMEs to invest their time and resources to develop socially responsible and sustainable business practices for foreign markets, as extant research on these topics in the context of international business overall tends to focus on large multinational enterprises (MNEs) rather than on small and medium-sized enterprises (SMEs) (Jamali et al. 2009).

While the research on CSR and sustainability in the activities of internationalizing enterprises has remained scarce, there are several reasons why this context is important to highlight. Firstly, internationalizing SMEs are resource-constrained by nature, lacking marketing resources (Knight and Cavusgil 2004). Thus, they may face distinct trade-off decisions in how to balance their resources towards internationalization and developing CSR and sustainability-related practices. Second, CSR in the SME context presents a unique phenomenon (Morsing and Perrini 2009; Perrini 2006), and SMEs also face distinct challenges when engaging in sustainable practices (Gelbmann 2010). Small firms also tend to view environmental practices as a burden rather than them being conducive to successful business (Revell and Blackburn 2007). All of these findings indicate that the impact of CSR- and sustainability-related practices on successful internationalization of SMEs is ambiguous and in need of further study.

Therefore, in this chapter, we seek to highlight these phenomena further by exploring the implications of sustainability for the performance of internationally operating SMEs. We continue in the next section by discussing the admittedly few extant publications dealing with the phenomena of CSR and sustainability in the context of SME internationalization and, due to its absence in the international entrepreneurship literature, we concentrate on how CSR and sustainability are viewed in the SME context in general. Subsequently, we introduce the research methodology, with the empirical results and discussion thereof provided further on. We conclude by assessing implications and limitations of the results, as well as potential future research avenues suggested in the present study.

## CSR and Corporate Sustainability in the Internationalization of SMEs

### CSR in the SME Context

The extant research on corporate social responsibility (CSR) as a construct could be criticized for being fragmented, considering that CSR has been defined and conceptualized in a multitude of ways in different streams of academic literature, which has created lack of clarity (see Dahlsrud 2008). Holme and Watts (1999) define CSR as '*a duty of every corporate body to protect the interest of the society at large*', and we, while adhering to this definition, also note that CSR can be extended not only towards the society as a whole, but can also be focused on customers, employees, or the government (see Turker 2009). CSR is often examined through the theoretical background of institutional theory (Freeman 1984; Donaldson and Preston 1995), where organizations are recognized to manage a host of relationships with key stakeholders (e.g. customers and company shareholders, the local and national government, and the larger general public). A major implication therefore is that different type of shareholders, beyond the owners of the company, are considered important and taken into account when developing strategies (Neely et al. 2002) as the company aims to conform to the expectations and norms of different type of shareholders (Maignan and Ferrell 2004).

Much of the literature on CSR has been conducted in the context of large companies (Revell and Blackburn 2007). Research has often found CSR to be a unique phenomenon in management of SMEs, and most of the extant studies in the area have been mainly conceptual (e.g. Ciliberti et al. 2008; Gelbmann 2010). CSR may be distinct in the SME context both theoretically and managerially. In terms of theory, Perrini (2006) has suggested that when studying the impact of CSR in the SME context, distinct theoretical approaches may be needed, with Murillo and Lozano (2006) further highlighting the difficulties SMEs have in trying to conceptualize CSR in the first place. In terms of practical management of companies, Gelbmann (2010) has noted that communicating CSR- and sustainability-related practices to the stakeholder may be particularly challenging for SMEs due to their characteristics. Indeed,

Perrini et al. (2007) also find that smaller firms tend not to incorporate CSR as formalized strategies, whereas larger conglomerates may do so.

Still, the few empirical results on the ways in which CSR impacts financial and growth outcomes in SMEs have tended to find a positive association. Longo et al. (2005) found that engaging in CSR practices may increase SME growth. Similarly, several other studies have also linked increased CSR-awareness to better financial performance (Buciuniene and Kazlauskaite 2012; Torugsa et al. 2012). In the context of internationalization, we identify two types of CSR that may be particularly relevant. One of these is the CSR exhibited by internationalizing SMEs towards their customers. As SME internationalization has been recognized to be network-driven (Johanson and Vahlne 2009; Johanson and Mattsson 1988; Coviello and Munro 1997), we might expect that extending socially responsible corporate behaviour towards customers would enable further exchange of knowledge through these relationships and consequently, increasingly successful internationalization. Here, we refer to 'CSR towards customers' (Turker 2009) and posit that:

H1: The higher the corporate social responsibility of SMEs towards customers, the better their international performance.

A second type of CSR that could be expected to be beneficial for the global success of internationalizing SMEs might be CSR towards society. As outlined by Turker (2009), CSR towards society captures the willingness of a company to respond to the needs of the larger public, whether at national level or at local community level. Accounting for the needs of the local culture and for the expectations of the local employees, buyers, and institutional actors, is crucial when internationalizing, since distinct foreign markets may require SMEs to adapt to the cultural and societal expectations of that target market (e.g. Meyer and Skak 2002; Zhou et al. 2007). Internationalization at its core demands companies to adapt to the expectations of the target market at the product level (Knight 2001) as well as by aiming to adapt to the needs and expectations prevalent in the target market. In addition, internationalizing SMEs tend to lack resources, and often marketing resources in particular (Knight and Cavusgil 2004). Thus, exhibiting socially responsible behaviour may be a way for companies to achieve cost-efficient marketing (Jahdi and Acikdilli 2009).

For internationalizing SMEs, these potential benefits may mean that positive word-of-mouth at the societal level offers them the possibility to commit their main resources elsewhere, for example to activities leading to successful foreign operations. Therefore, we also hypothesize that:

H2: The higher the corporate social responsibility of SMEs towards the society, the better their international performance.

In addition to CSR, exhibiting sustainable behaviour through strategies related to minimizing the ecological footprints of the company and its products should be assessed in the context of internationalization. For instance, Aragón-Correa et al. (2008) found that SMEs that are most proactive with their sustainability-related practices achieve higher performance. Sustainability can be achieved, for instance, through environmental innovation (Biondi et al. 2002), highlighting the fact that the extent of sustainability in companies may reside both at the product and at the overlying strategic level. Revell and Blackburn (2007) refer to 'environmental performance', and note that some managers may be reluctant to proactively improve it. However, here we are investigating how sustainability-related practices in SMEs impact their *international* performance and investigate sustainable practices at the company level. Environmental strategies may help SMEs increase their exports in general (Martín-Tapia et al. 2010), and therefore we suggest that adapting sustainable practices at the product level may also enable SMEs to internationalize more successfully:

H3: The higher the level of sustainability-related practices in SMEs, the better their international performance.

## Research Methodology

### Data Collection

We collected the empirical data during May–September 2014 via a cross-sectional web-based survey of Finnish SMEs. We drew up the initial list of firms to be contacted from the Amadeus online database, including

the following industry sectors: forest industry, chemical industry, metal industry, other manufacturing activities and mining and quarrying, energy supply, water supply, waste management, and construction. This list resulted in 1130 SMEs in total, each of which were then contacted via phone and asked to participate in the survey.

During this process, we aimed to exclude non-suitable firms such as those without independent decision-making capacity (e.g. recently acquired by a larger company and/or made into a sub-branch or a subsidiary) and this resulted in the exclusion of 78 firms. Moreover, a total of 311 of the contacted SMEs declined to participate, citing lack of time as the most important reason for refusal. Similarly, despite several attempts to reach the most relevant decision-makers in the SMEs, 306 were not reached during the data collection process. In our opinion, a likely reason could have been the timing of the data collection: late June and July tend to be holiday season in Finland, which limits availability of both employees and executives at work.

The survey was developed by a group of researchers who translated the adapted scale items from literature to Finnish. A professional language editor was then employed to conduct a back-translation. The back-translated survey questionnaire was then compared with the original one in order to ensure that the items in the survey retained their intended meaning throughout the process. The questionnaire was then pre-tested with two managers in order to ensure that it was understandable to potential respondents.

The responses from the SMEs who had been contacted and who had agreed to participate in the survey were tracked down and two rounds of reminder e-mails were subsequently sent to those who had not responded: one round two weeks after the first contact, and another a week before the data collection was concluded.

The data collection process resulted in a total of 148 responses (14 % response rate, 148/1052). While we do not consider such a response rate a particularly high one, we note that it being above 10 %, there may not be much difference in possible non-response biases for any surveys with less than 80 % response rate (see Rogelberg and Stanton 2007). We further consider the length of the survey as a potential reason for the low response rate.

Of the final respondents, 61 % (91) have international operations and thus constitute the final sample for the purposes of this study. These SMEs had 58 employees on average, who were 34 years old on average, and the SMEs had been operating internationally for 20 years, on average.

## Measure Development

We adapted the measure for CSR from Turker's (2009) study. Specifically, we used a 7-point Likert scale to measure both CSR to society and CSR to customers, and applied principal component factor analysis with the varimax rotation method to develop the final scale measures used in the analysis. The resulted two-factor solution captured a total of 70 % of the total variation, with the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) of 0.75 and Bartlett's test of sphericity being statistically significant at the 1 % risk level. The factor loadings and communalities of the scale items are illustrated in Table 15.1. These two factors had Cronbach's alpha values of 0.90 and 0.73, respectively.

As the extant literature does not go into detail on scales measuring the attitudes towards environmental sustainability in SMEs, particularly in the context of international entrepreneurship, we included a set of items partly adapted from Carter et al. (2000) from the context of environmental purchasing, but also included an exploratory set of our own items in order to help develop such a scale. The resulting one-factor solution captured a total of 64 % of the total variation, with KMO value of 0.78 and a significant Bartlett's test ( $p < 0.01$ ), and the Cronbach's alpha value for the resulting measure was 0.86, indicating sufficient reliability. The factor loadings of the individual items varied between 0.7 and 0.9, with the communality values all being in the 0.5–0.8 range. The final scale items for the sustainability measure were as follows:

- We pay much attention to the environmental hazards resulting from the manufacture of our products.
- We apply a lifecycle analysis when we assess the environmental friendliness of our products.

**Table 15.1** The results of the PCA for the CSR scale

| Items  | CSR to society | CSR to customers | Communality |
|--|----------------|------------------|-------------|
| Our company participates in the activities which aim to protect and improve the quality of the natural environment | 0.88           |                  | 0.78        |
| Our company makes investment to create a better life for future generations  | 0.86           |                  | 0.75        |
| Our company implements special programmes to minimize its negative impact on the natural environment               | 0.82           |                  | 0.67        |
| Our company targets a sustainable growth which considers future generations  | 0.88           |                  | 0.80        |
| Our company contributes to the campaigns and projects that promote the well-being of society                       | 0.76           |                  | 0.59        |
| Customer satisfaction is very important for our company  |                | 0.83             | 0.69        |
| Retaining customers is the most important priority in our organisation   |                | 0.79             | 0.66        |
| Customer satisfaction guides our company's goals   |                | 0.79             | 0.63        |

- Our products are part of the process of reducing environmental hazards and/or climate change.
- Preventing damage to nature is a central goal of our business activities.
- Production that saves natural resources is a central goal of our business activities.

For measuring international performance, we similarly used a subjective performance measure consisting of 7-point Likert-scale items accounting for managerial assessment on the degree of success that the SME had achieved in light of its internationalization. The one-factored result of the principal component analysis explained 79 % of the total variance, with a KMO value of 0.92 with Bartlett's test of sphericity again significant at the 1 % risk level. In addition, the resulting seven-item scale exhibited sufficient reliability (Cronbach's alpha = 0.95). Therefore, we deemed the measure for international performance sufficiently reliable and valid to be applied in our analysis. The final scale items were:



- Generally speaking, we are satisfied with our success in the international markets.
- We have achieved the turnover objectives we set for internationalization.
- We have achieved the market share objectives we set for internationalization.
- Internationalization has had a positive effect on our company's profitability.
- Internationalization has had a positive effect on our company's image.
- Internationalization has had a positive effect on the development of our company's expertise.
- The investments we have made in internationalization have had a good pay-back.

Finally, we also included relevant control variables by controlling for firm size (the number of employees) and firm age (in years). The descriptives and the correlation table of the variables used in the empirical analysis can be seen in Table 15.2.

## Results and Discussion

The overall results of the hypotheses testing are illustrated in Table 15.3. The regression model including only the control variables (Table 15.3, model 0) was statistically significant, ( $F = 6.98, p < 0.01$ ) with both the size ( $\beta = 0.27, p < 0.05$ ) and the age ( $\beta = 0.23, p < 0.05$ ) being positive and significant. Therefore, model 0 indicated that both size and age predicted

**Table 15.2** The correlation table of the variables used in the analysis

|                             | Mean  | Std.d. | 1             | 2     | 3     | 4             | 5            | 6 |
|-----------------------------|-------|--------|---------------|-------|-------|---------------|--------------|---|
| 1 CSR to society            | 4.21  | 1.37   | 1             |       |       |               |              |   |
| 2 CSR to customers          | 5.91  | 0.90   | 0.10          | 1     |       |               |              |   |
| 3 Sustainability            | 4.03  | 1.41   | <b>0.69**</b> | 0.15  | 1     |               |              |   |
| 4 International performance | 4.20  | 1.40   | <b>0.40**</b> | 0.20  | 0.15  | 1             |              |   |
| 5 Number of employees       | 58.26 | 52.31  | 0.21          | 0.04  | 0.14  | <b>0.28**</b> | 1            |   |
| 6 Company age (years)       | 33.76 | 25.35  | 0.10          | -0.01 | -0.01 | <b>0.20</b>   | <b>0.26*</b> | 1 |

Note: \*\* $p < 0.01$ ; \* $p < 0.05$

**Table 15.3** Results of the hypotheses testing applying linear regression analysis

| Independent variables                      | Model 0 (controls only) |               | Model 1 (international performance) |               |
|--|-------------------------|---------------|-------------------------------------|---------------|
|  | $\beta$                 | t-value       | $\beta$                             | t-value       |
| CSR to society                             |                         |               | 0.50                                | <b>3.62**</b> |
| CSR to customers                           |                         |               | 0.21                                | <b>2.14*</b>  |
| Sustainability                             |                         |               | -0.26                               | -1.86         |
| Firm size ( <i>number of employees</i> )   | 0.27                    | <b>2.58*</b>  | 0.21                                | <b>2.09*</b>  |
| Firm age ( <i>years since foundation</i> ) | 0.23                    | <b>2.09*</b>  | 0.21                                | <b>2.14*</b>  |
| adj. $R^2$                                 |                         | 0.13          |                                     | 0.27          |
| F  |                         | <b>6.98**</b> |                                     | <b>6.94**</b> |

Note: \* $p < 0.05$ , \*\* $p < 0.01$

increased international performance on their own, with larger, older SMEs having achieved better performance through foreign operations. This result could be seen as expected, since the internationalization efforts of SMEs tend to be restricted by their lack of resources (Buckley 1989; Burpitt and Rondinelli 1998), for example, marketing resources (Knight and Cavusgil 2004). Consequently, larger firms may be more likely to possess the human and financial resources to more fully fulfil their international and global strategies. Similarly, older SMEs may have had more time to acquire the foreign market knowledge that successful internationalization tends to require (Johanson and Vahlne 1977; Johanson and Vahlne 2009), and the experience gained over time by the management team of an SME may have a beneficial impact on internationalization of SMEs (Reuber and Fischer 1997). In our model, these variables predicted a total of 13 % of international performance among the SMEs (adj.  $R^2 = 0.13$ ).

The second step saw the testing of the established hypotheses, positing that increased CSR to customers (H1) and to society (H2), as well as increased sustainability (H3) would predict increased international performance among SMEs. As seen in Table 15.3 (model 1), both CSR to society ( $\beta = 0.50$ ,  $p < 0.01$ ) as well as CSR to customers ( $\beta = 0.21$ ,  $p < 0.05$ ) predicted increased performance, and as the model remained statistically significant ( $F = 6.94$ ,  $p < 0.01$ ), H1 and H2 received support from the analysis. As the value for adjusted  $R^2$  increased by 0.14, from

the 0.13 in model 0 to 0.27 in model 1, the results suggest that the total explanatory power of CSR to the international performance was overall about 14 %. In addition to CSR having a positive impact on performance, the impact of CSR to society was particularly strong, with the coefficient  $\beta$  value being high and highly significant at the 1 % risk level.

Finally, higher levels of sustainability were not linked to increased international performance, as the coefficient for the former was not statistically significant ( $p > 0.05$ ), and thus H3, postulating a positive relationship between the two, did not receive support from the analysis. In fact, the coefficient for sustainability was negative ( $\beta = -0.26$ ), suggesting that less sustainable practices could be expected to lead to increased international performance instead. However, the correlation between the sustainability and performance variables was, while non-significant at the 5 % risk level, still positive (Pearson's correlation coefficient of 0.15), and therefore as a whole we consider the results on the impact of sustainability on performance inconclusive.

## Conclusions

International entrepreneurship literature has remained remarkably silent on concepts related to corporate sustainability (CS) and corporate social responsibility (CSR). There might be several reasons for this absence of research. The few existing studies on these topics suggest that international entrepreneurs may face particular trade-off decisions in how to balance their resources towards internationalization and developing CSR and sustainability-related practices. Also, CSR in the SMEs context presents a distinct phenomenon, and SMEs also face unique challenges when engaging in sustainable practices. Furthermore, small firms tend to view environmental practices as a burden rather than being beneficial to successful business. Based on these contradictions and the obvious gap in international entrepreneurship literature, the current paper sought to scrutinize these phenomena further, by exploring the implications of sustainability for the performance of internationally operating SMEs.

Much of the earlier literature on CSR overall has been conducted in the context of large companies, and is predominantly conceptual in

nature. Only a very few empirical results exist on the ways in which CSR impacts financial and growth outcomes in SMEs. Therefore, our empirical study with data from internationally operating Finnish SMEs across several industry sectors provides an important contribution to the body of literature. Our results confirm that CSR, rather than sustainability-related practices, is positively linked to increased international performance of SMEs. Moreover, CSR related to society has the largest positive impact on performance, overriding even that of CSR towards customers. These results will provide further implications on the dynamics of CSR and sustainability in international performance, in particular highlighting their impact on successful SME internationalization.

Moving beyond our data, we can speculate that the interest towards CSR and sustainability is likely to increase among international entrepreneurs. Therefore, additional work bridging various countries and industries will be required to test the relationships we theorized, and to further discover whether the concepts and measures we applied on CSR and sustainability are appropriate in studying the performance of international entrepreneurial firms.

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# Index

## A

### ability

- firm's, 71, 175, 278
- personal, 296
- unique, 22

### activities

- entrepreneurial, 226
- internationalization-related, 279
- value-creation, 67–9

### actors, xviii, 1–3, 18, 62, 65, 67, 73,

- 112, 113, 133, 136–40,
- 142, 144, 145, 151, 154,
- 155, 160–4, 259, 281, 315,
- 318, 342, 343, 350, 362

- intermediating, 157–9, 165

### ad hoc approach, 260, 261

### African countries, 234, 348

### agents, 259, 261, 322, 345–6, 348, 350, 351, 353

### aggressive internationalization

- trajectory, 249

### agriculture, 221, 320

### American Marketing Association (AMA), xviii, 338

### arbitrage opportunities, 60, 65, 69

### Asian markets, 10, 34, 205

### authorities, 117, 158

### automation, 140–1, 311–12, 314, 319, 322, 326

### average export value, 94

## B

### behaviour, 9, 13, 83, 85, 93,

- 100, 105, 110–12, 125,

- 127, 133, 134, 143,

- 144, 287, 317, 353, 354,

- 362, 363

---

Note: Page numbers followed by 'n' refer to foot notes.



- BGs (born globals), 20, 22–6, 45, 46, 49, 85, 195n1, 198, 200–6, 223–4
  - borderless marketplace, 249
  - borders, 29, 64, 65, 68, 72
    - national, 63, 144, 274, 350, 351
  - born global firms, 25, 221–4, 227, 232, 236, 237, 249
  - born-global patterns, 219–38
  - brand
    - development, 35
    - focus, 344
    - image, 19, 49, 182
    - integrator, 349
    - value creation, 352
    - vitality, 350
  - brokerage, 159
  - bundle, 3, 338, 345
  - business
    - family, 229, 234
    - global, 25, 30, 69, 81, 154, 181
  - business activities, 202, 266, 279, 285, 296, 339, 366
  - business associates, 229, 230, 295
  - business context, 72, 156, 276
  - business decision-makers, 291
  - business development, 119, 120, 327, 328
  - business exchange, 163
  - business extensions, 41
  - business intelligence, 231, 232, 236, 288
  - business intelligence process, 225
  - business interests, 36
  - business internationalization, 248
  - business knowledge, 198, 221, 277, 287, 288, 295
  - business logic, 120
  - business markets, 121, 156
  - business model conceptualization, 20
  - business model innovations, 312, 315, 333
  - business models
    - firm's, 338
    - innovative, 316
    - new, 69, 312, 315, 333
  - business model scalability, 22, 28, 48
  - business operations, 225, 272, 274, 278
  - business opportunities, 8, 62, 140, 153, 200, 225, 317, 350
  - business organization, 338
  - business partners, 153, 164, 165, 229, 350
  - business planning, 254
  - business practices, 41, 281, 320, 360
  - business processes, 132, 135, 143, 225
  - business rationales, 121
  - business relationships, 155–8, 160, 164
  - business strategy, 151
  - business transactions, 339
  - business triads, 165
- C**
- capabilities
    - core, 174, 184
    - organizational, 10, 175
    - teamwork management, 10, 185, 188
  - capacity, 11, 24, 85, 104, 121, 126, 221, 257, 280, 289, 294, 312, 313, 353, 364
  - capacity building, 257

- capital, 4, 18, 28, 38, 41, 43, 47, 64, 94, 95, 97, 98, 117, 122, 139, 140, 226, 264, 290, 323, 324, 328
  - social, 153, 281, 282, 288, 297
- capital intensity, 98
- case studies, 29, 103, 105, 189, 201, 283, 319–31, 342
- channels, 28, 44, 104, 134, 152, 155, 254n1, 262, 267, 279, 280, 290, 292, 293, 321, 331, 353
  - internet-based, 25, 33, 35, 43, 46, 48, 49
- China, 33, 34, 39, 71, 84, 196, 197, 200, 202, 204–6, 211, 234, 291, 346, 348
- Chinese firms, 10, 195–211
- choice, 28, 40–2, 71, 126, 144, 155, 163, 203, 205, 248–50, 253, 264, 353
  - internalization, 126
- clients, 32–7, 40, 117, 140, 176, 224, 231, 256, 258, 260, 262, 287, 328, 338, 345, 347
  - corporate, 39, 41, 44
- cluster externalities, 11, 258, 261–2, 265
- cluster locations, 252
- cluster membership, 252
- cluster reputation, 261, 262, 267
- clusters, knowledge-based, 246
- cluster theory, 249
- collaboration, 159, 160, 162, 181, 230, 235, 246, 251, 253, 262, 266, 267, 315, 320, 322, 323, 327
- collaboration partners, 322
- commitment
  - international, 152
  - low resource, 277
- companies
  - brand-led, 349
  - construction, 230, 330
  - domestic, 37
  - e-commerce, 304
  - independent, 349
  - interconnected, 250
  - machine-building, 319
  - niche, 343
  - technology-oriented, 249
  - trading, 327
- company internationalization, 248
- company management, 341
- company managers, 30
- company value creation, 4
- comparative marketing, 132–6
- competences, 261, 265, 322–6, 328–31, 333, 334
- competitive advantages, 3, 22, 25, 45, 163, 222–4, 237, 250, 322, 359
- competitiveness, 6, 22, 89, 258, 267, 316
  - international, 252
- competitors
  - international, 309
  - potential, 11, 289, 294
- complexity, 37, 132, 133, 136, 138, 143, 176, 221, 251, 315, 342
- component factor analysis, 365
- consumer engagement strategies, 354
- context
  - complex, 9, 133
  - country, 10
  - cross-border, 56

- context (*cont.*)  
 dynamic, 132  
 entrepreneurial, 48  
 macro-level, 139  
 multi-level, 145  
 national, 135, 145, 296  
 organizational, 4  
 unknown, 71
- context-focused paradigm, 135, 136
- contextual change, 145
- control, 9, 26, 27, 111–14, 119,  
 122–6, 155, 159, 160,  
 172n1, 185, 186, 260, 276,  
 281, 313–16, 321, 329,  
 330, 343, 348–50, 353, 367
- cooperation, 19, 182
- cooperation partners, 19, 182
- core business, 344, 345
- corporate customer, 44
- corporate sustainability (CS), 359, 369
- costs, 6, 7, 11, 12, 18, 27, 28, 32,  
 33, 35, 37, 39, 40, 42, 44,  
 83, 92, 104, 116, 119, 133,  
 139–41, 156, 157, 161,  
 163, 174, 181, 197, 200,  
 246, 248, 249, 252, 257,  
 259, 261, 272, 275,  
 279–81, 291–6, 309, 314,  
 316, 317, 338, 362
- counterparts, 73, 94, 98, 102,  
 157–9, 163, 164, 220
- creativity, 176, 182
- cross-border interactions, 66
- cross-border resource combinations,  
 innovative, 37, 38
- cross-case comparability, 253
- cross-case study method, 253
- CSR (corporate social responsibility),  
 12–13, 348, 359–70
- customer behavior, 133
- customer feedback, 43
- customer interface, 183
- customer orientation, 25, 46, 177,  
 182–3, 188
- customers, 3, 5–8, 12, 13, 17–22,  
 25, 28, 40, 42–7, 61, 63,  
 70–3, 93, 116, 117, 119,  
 121, 132, 133, 137–9, 142,  
 144, 145, 152, 154–6, 158,  
 163, 164, 172, 173, 175–7,  
 182–3, 187, 188, 198,  
 203–5, 224, 225, 230, 231,  
 238, 254, 260, 261,  
 278–80, 287–90, 292–4,  
 312, 314, 316, 317, 320,  
 321, 324–7, 329, 331–3,  
 337–9, 341, 344–50,  
 352–4, 361, 362, 365, 366,  
 368, 370
- customer value, 175, 339, 341
- D**
- Danish SMEs, 334
- decision-makers, 275, 277, 279, 284,  
 285, 287, 291–5, 334, 364
- decision-making processes, 264, 285
- de-contextualization, 286
- de-internationalization, 6
- design, 7, 9, 43, 44, 66, 178–9, 261,  
 282–3, 290, 322, 323, 326,  
 330, 334, 342–50, 352–4
- design innovation, 350
- design platform, 353
- development  
 conceptual, 55  
 global, 37  
 incremental, 24

institutional, 133  
 longitudinal, 119  
 technological, 5  
 differences, 22, 33, 34, 44, 58, 83,  
     84, 94, 98, 100, 112, 113,  
     133, 142, 145, 197, 202,  
     203, 206, 276, 291  
 diffusion, 289  
 direct customers, 44  
 direct interactions, 142, 157, 165  
 distribution channels, 155, 164, 267,  
     279, 293  
 distribution costs, 293  
 distribution networks, 153  
 distribution of goods and services,  
     134, 172  
 diversification, 9, 23, 35, 46, 83, 85,  
     91, 93, 102–5  
 diversity, 73, 103, 251, 281, 288,  
     309, 315  
 drivers, 4, 11, 51, 246, 271, 289,  
     293, 294, 312–14  
 dyad, 138, 139, 154, 155, 157, 158,  
     160–2, 164–6, 337  
 dyadic entry nodes, 154, 155, 160,  
     161, 164, 165  
 dyadic relationships, 154, 157, 165  
 dynamic capabilities, 20, 22, 23, 28,  
     45–8, 64, 113  
 dynamic interaction, 4

## E

early internationalization stages, 10,  
     197, 198, 201  
 eclectic paradigm, 126, 143, 248,  
     249  
 e-commerce, 23, 27, 292  
 e-commerce platform, 292

economic actors, 137, 151  
 economics, neoclassical, 132, 337  
 effectuation, 26, 46, 111–15, 121,  
     124–6, 201n4, 205  
     entrepreneurial, 110  
 effectuation logic, 112, 126, 201n4,  
     205  
 effectuation theory, 110, 125  
 efficiency, 4, 5, 38, 71, 112, 163,  
     293, 310–12, 326, 327  
 efforts, collaborative networked, 313  
 embedded ties, 281  
 emergence, 8, 60–2, 64, 66, 71, 73,  
     135, 249, 251, 327  
 emerging economies, 8, 49, 82, 220,  
     221  
 emerging markets, 8–10, 81, 82,  
     105, 135, 196, 219–38, 343  
 emotional value, 348–50, 352, 353  
 employment, 5, 44, 95, 97, 98, 221  
 enactment, 65, 67, 70, 73, 141, 142  
 engineer-entrepreneurs, 221, 226  
 entrepreneurial advantage, 154  
 entrepreneurial ambition, 40  
 entrepreneurial cognition, 56  
 entrepreneurial culture  
     international, 26  
 entrepreneurial opportunities, 8,  
     57–9, 62  
 entrepreneurial orientation, 25, 26,  
     65  
 entry  
     early, 154  
     international, 65  
 entry strategy, 163, 165  
 environment  
     competitive, 34  
     cross-border, 69  
     domestic, 291

environment (*cont.*)  
 external, 23, 226, 312, 313  
 hazardous, 304  
 information-intensive, 279  
 local, 61  
 operating, 176–7  
 regulatory, 120  
 social, 134, 142  
 environmental volatility, 22  
 Estonia, 7, 9, 20, 31–44, 49  
 Estonian SMEs, 20  
 Europe, 34, 39, 71, 87, 89, 179,  
 230, 260, 348  
 European countries, 34, 82, 89,  
 90, 322  
 European markets, 89, 92, 104, 230,  
 291, 330  
 exchange  
 informal, 117  
 relational, 3  
 social, 155  
 exchange effectiveness, 157  
 exchange parties, 155, 339  
 exchange process, 2, 341, 342  
 exchange relationships, 56, 62, 137,  
 153, 156  
 exchange value, 2, 3, 7, 17, 156, 341  
 monetary, 246  
 experiential knowledge, 155, 196,  
 196n3, 199  
 export activity, 65, 86–93, 103, 104  
 export barriers, 25, 294  
 export behavior, 212  
 export channels, 104  
 export contacts, 85  
 export destinations, 8, 83–5, 89  
 export diversification, 102, 103  
 export duration, 103  
 export dynamics, 86, 89, 93, 100, 104

exporters  
 successful, 101–2  
 unsuccessful, 94, 101, 102  
 export experience, 283  
 export flows, 82  
 export intermediaries, 12, 293, 294  
 export market entry, 84  
 export markets, 9, 84, 85, 90, 91,  
 102, 283  
 export market size, 84  
 export performance, 83, 85, 111  
 export product portfolio, 84  
 export promotion, 10, 199, 204,  
 205, 255  
 export scope, 92, 103, 104  
 export share, 87, 98, 196n1, 197,  
 198, 207  
 export strategies, 83, 103, 104  
 export value, 87n4, 94  
 export volume, 84, 87, 89, 103, 104  
 exposure, international, 247, 265, 281  
 extrinsic value, 339, 341

F

factors  
 external, 29, 234, 236  
 internal, 23  
 Finnish SMEs, 363, 370  
 firm performance, 83, 86, 102, 297  
 firms  
 emerging-market, 8, 9, 81  
 knowledge-based, 220  
 science-based, 252, 264, 265  
 small technology-intensive,  
 11, 253  
 firm's internationalization path, 24  
 first-time exporters, 8, 9, 82, 90,  
 92–4, 102, 105

fluid network structure, 351  
 fluid orchestration, 349, 350, 353  
 focal target markets, 37  
 foreign customers, 204, 205, 230,  
 261, 292–4  
 foreign direct investment,  
 126, 151, 248  
 foreign exchange partners, 281  
 foreign market decision, 155  
 foreign market entry methods, 201n4  
 foreign market expansion, 272, 273,  
 289, 297  
 foreign market expansion  
 process, 289  
 foreign market networks, 154  
 foreign markets  
 distinct, 362  
 existing, 288  
 targeted, 220  
 foreignness, 174, 187  
 liability of, 47, 153, 278  
 freight forwarders, 140  
 French market, 289

## G

global customers, 7, 12, 44, 349,  
 353, 354  
 global expansion, 19, 20, 29, 33, 48  
 global factory, 172  
 global fashion market, 349  
 global firms, 10, 25, 221–4, 226,  
 227, 232, 236, 237, 249  
 globalizing SMEs, 7, 17–49  
 high-tech, 47–9  
 global markets, 5, 7, 26, 41, 43, 45,  
 46, 114, 117, 124, 142,  
 180, 230, 251, 265, 279,  
 292, 350, 354

global market shares, 114, 117  
 global network orchestration  
 capabilities, 352  
 global outsourcing, 221  
 global partnership, 230  
 global production networks, 5, 337  
 global sales volumes, 44  
 global shipping industry, 119, 121  
 global software business, 173–5  
 global value chain integration, 330  
 Global Value Chains (GVCs),  
 88, 108  
 governmental agencies,  
 197, 200, 206  
 governmental support, 10, 195–211  
 government grants, 256  
 growth  
 economic, 5, 82  
 productivity, 28  
 growth opportunities, 65, 252  
 growth strategies, 8, 81

## H

high-tech design products, 44  
 horizontal integration, 316–17,  
 320, 322–3, 325, 327,  
 329–31

## I

identity, 35, 37, 121, 158, 163,  
 339–41, 348, 352, 353  
 IMP (Industrial Marketing and  
 Purchasing), 135, 136, 154,  
 161, 164  
 industrial clusters, 248–52  
 industrialization, 310, 311  
 industrial sectors, 309, 314, 324

- industry
  - automotive, 313, 314
  - construction, 321–3, 332
  - high-tech, 25, 221, 232–3, 249, 258
  - international maritime, 115
  - internet-based software, 49
  - traditional, 337–54
- industry clusters, 246, 254
  - science-based, 252
- industry knowledge, 225
- industry sectors, 254n1, 296, 364, 370
- industry structures, 122, 311
- informal knowledge, 11, 262, 266
- information technology, 12, 23, 45, 183, 254n1, 310, 311
- infrastructure, 5, 198, 255, 263, 290, 310, 313, 322, 323
- innovation
  - exploitive, 338
  - new process, 310
  - organizational, 26
  - radical, 62
  - technical, 12
- innovation advantages, 247
- innovation-based opportunities, 63
- innovation value, 349
- institutional arrangements, 136, 137, 139–42, 144
- institutional environments, 119, 134, 145
- institutions, 2, 6, 23, 39, 65, 119, 133, 134, 136, 137, 139, 141, 142, 144, 145, 198, 200, 249, 250, 252, 277, 294, 295, 318, 338, 361, 362
- intelligence, 141, 177, 182, 219–38, 288, 291, 313, 315, 317, 319, 325, 327–9, 332, 333
- interaction paradigm, 135, 136
- interactions, 2, 4–6, 11, 12, 28, 66, 70, 73, 103, 119, 121, 123, 132, 134–9, 141–5, 156, 157, 159, 162, 163, 165, 260, 264, 281, 315, 340, 342, 352
- intermediaries, 4, 12, 155–8, 165, 293, 294, 320, 321
- intermediating role, 7
- intermediation, 33, 154–8, 161
- intermediator, 159–61, 163
- internalization advantages, 248
- international activities, 6, 7, 11, 103, 173, 176, 204, 234, 265, 266, 279
- international certification, 232
- international clients, 35
- international competition, 334
- international context, 135, 143, 153, 165, 248, 249
- international contractors, 229
- international customers, 18, 279, 280
- international expansion, 18, 35, 110, 114, 152, 267, 310
- international experience, 253, 258, 265, 266
- international growth, 9, 81–3, 104, 105, 153, 154, 272, 279–81
- international investment, 255
- international involvement, 248, 272, 277
- internationalization
  - early, 10, 23–5, 46, 63, 125, 154, 195–211
  - successful, 13, 153, 154, 204, 206, 290, 360, 362, 368
- internationalization activities, 66, 202

- internationalization intelligence, 11, 23, 219, 220, 222, 224, 227, 229–31
  - internationalization knowledge, 198, 223, 277, 295
  - internationalization of small high-tech firms, 25, 222
  - internationalization opportunities, 6
  - internationalization path, incremental, 249
  - internationalization patterns, 8, 153, 284, 297, 317
  - internationalization process, internationalization strategies
    - gradual, 9, 25, 85, 105, 234
    - slow, 105, 153, 196, 198, 201, 203, 205
  - international marketing networks, 153
  - international marketplace, 68
  - international markets
    - institutionalized, 141
    - new, 65
    - potential, 224
  - international networks, 6, 12, 27, 73, 154, 164, 235, 261, 354
  - international new ventures (INVs), 25, 64, 110, 126, 222
  - international operations, 152, 165, 175, 187, 188, 220, 221, 227, 234, 283, 285, 339, 365
  - international opportunities, 8, 55–73, 175, 220, 224, 288, 289, 293, 294, 297
  - international orientation, 10, 152, 175, 180–1, 187
  - international performance, 13, 24, 362, 363, 366, 368–70
  - international success, 33, 175
  - international ventures, 25, 27, 60, 64, 66, 70, 220, 238, 296
  - Internet-enabled internationalization, 282
  - Internet platform, 354
  - Internet's effectiveness, 279
  - inter-organizational knowledge, 258, 262–3
- K**
- knowledge
    - institutional, 198, 277, 295
    - prior, 24
    - technological, 45, 46, 48, 49
  - knowledge assets, 4
  - knowledge base, 19, 153, 220–2, 224, 246, 310
  - knowledge cues, 72
  - knowledge resources, 8, 18, 20
  - knowledge sources, 199, 206, 295
  - knowledge transfer, 265
  - knowledge types, 204
- L**
- learning-by-exporting, 103
  - learning, experiential, 277
  - leverage, 8, 20, 45, 47, 124, 230, 247, 271, 273, 281, 282, 288, 290, 291
  - logistics, 71, 140, 156, 157, 310, 325, 328, 331, 332
- M**
- macromarketing, 147
  - Malaysian SMEs, 239



- management team, 37, 73, 368
- managerial cognition, 64, 297
- managerial decisions, 225
- managerial orientation, 25, 124
- managerial strengths, 230
- manufacturing, 83, 84, 86, 135, 172,
  - 221, 227, 231, 253, 254,
  - 261, 311–14, 316, 325,
  - 326, 344, 364
 industrial, 12, 71
- manufacturing processes, 254n1, 320
- market arbitrage, 64
- market choice, 205, 250
- market commitment, 271–97
- market complexity, 143
- market coverage, 35, 104
- market demand, 224, 326, 350
- market developments, 35, 41,
  - 310, 332
- market differentiation, 103
- market diversification, 23, 46
- market dynamics, 114
- market economy, 12, 343
- market entry
  - early international, 154
  - foreign, 10, 38, 156, 198, 201n4,
    - 252, 351
  - international, 64, 154
- market entry decision, 144
- market entry modes, 222, 252
- market equilibrium, 58
- market expansion, 28, 272, 273,
  - 289, 297
- market inefficiencies, 59, 60, 69
- market information, 37, 200, 287
- marketing, 2, 12, 25, 32, 36, 38, 39,
  - 41–3, 45, 48, 49, 56, 65,
  - 131–4, 136, 144, 148,
  - 151–3, 180, 183, 196, 259,
  - 261, 263, 264, 275, 279,
  - 337–9, 341, 343, 344, 350
- marketing activities, 252, 292, 294
- marketing budget, 292
- marketing capabilities, 23, 24, 28,
  - 46, 47
- marketing channel, 280, 292
- marketing effectiveness, 23
- marketing efforts, 34, 42, 44
- marketing expertise, 71
- marketing intelligence, 291
- marketing process, 134
- marketing-related capabilities, 182
- marketing resources, 23, 360,
  - 362, 368
- marketing strategy, 201n4
- market knowledge, 153, 164, 177,
  - 224, 277
  - foreign, 10, 11, 198, 201, 205,
  - 248, 294, 368
- market liberalization, 81
- market niche, 42, 124, 224, 249,
  - 321, 328
- market orientation, 10, 26, 175,
  - 177, 182–3, 187, 188
- market penetration, 28, 34–5
- market position, 7, 103–4
- market research, 116, 152, 205, 250,
  - 261, 263, 291
- markets
  - home, 83, 154, 198, 250, 343
  - host, 26, 163, 191
  - large, 10, 204, 274
  - local, 137, 164, 223
  - networked, 18
  - primary, 44, 71
- market share, 114, 117, 123, 367
- market size, 84, 204
- market uncertainty, 274, 275

mindset, global, 180–1, 351  
 multinational corporations, 9,  
 109–27, 151, 224, 230  
 multiplicity, 12, 351, 352, 354

## N

NBGs (non-born globals),  
 197, 202–6  
 negotiating power, 324, 331, 333  
 network approach, 9, 22, 26, 27, 48,  
 154, 163, 166, 222, 223  
 network attachments, 12, 281,  
 339–43, 350–4  
 network capability, 10, 175–7,  
 183–5, 188  
 network concept, 14, 168  
 network configurations, 4, 166  
 network connectivity, 312  
 network cooperation, 19  
 network externalities, 84–5, 174  
 network horizon, 158, 163  
 network informants, 9–10  
 network partners, 19, 20, 26, 27, 34,  
 165, 346, 350, 351, 354  
 network perspective, 6, 140, 152,  
 164, 250  
 network positions, 153, 154, 161,  
 164, 174  
 network relationships, 135, 152–4,  
 176, 195–211, 237, 250,  
 281  
 network strategy, 161–3, 166  
 network structures, 161, 162, 164,  
 312, 351  
 network technologies, 311, 313  
 network theory, 153, 250  
 network ties, 281, 288, 351  
 network types, 132, 206

new technologies, 5, 31, 70, 112,  
 254, 312, 314, 327, 330  
 Northern Jutland, 309–34

## O

ocean freight market, 141  
 online marketing, 292, 294  
 opportunity creation, 25, 62, 69  
 opportunity discovery, 61, 201, 205  
 orchestration, 349–54  
   capabilities, 12, 352, 354  
 organizations, 2–5, 7, 10, 13, 19, 22,  
 23, 26–8, 32, 41, 45, 47,  
 63, 69, 110, 114, 116, 117,  
 119, 120, 122–4, 134, 135,  
 137, 138, 140, 151, 155,  
 157, 172, 175, 176, 180,  
 181, 183–6, 189, 199, 225,  
 246, 249, 253, 272, 275,  
 280, 310, 311, 315, 317,  
 323, 338, 343, 344, 361  
 outsidership, liability of, 153, 154,  
 174, 281  
 outsourcing, international, 7  
 outsourcing production, 44

## P

partnerships, 8, 19, 27, 28, 31–7, 41,  
 44, 45, 47, 48, 176, 177,  
 181, 184, 228, 230, 251  
 patents, 39, 41, 115  
 perceptions  
   actor's, 67  
   manager's, 179  
 performance  
   environmental, 363  
   financial, 23, 362

performance (*cont.*)  
 innovative, 264  
 long-term, 23  
 performance benefits, 85  
 Porter's Value Chain, 4, 338  
 portfolio, 23, 33, 34, 37, 38, 46, 83,  
 84, 101, 103, 104, 184,  
 185, 318  
 potential customers, 44, 117,  
 119, 121, 163, 254,  
 288–90, 325  
 process  
 export development, 265  
 learning, 25, 103  
 process knowledge, 330  
 process perspective, 6  
 product development, 42, 43, 117,  
 119, 220, 225, 232, 237,  
 254, 317, 333  
 product development strategy, 230  
 product differentiation, 102, 103  
 product extensions, 350  
 production, 2, 3, 5, 43, 44, 59, 73,  
 98, 102, 131, 172, 179,  
 201, 204, 248, 250, 254,  
 263–5, 275, 310, 312, 316,  
 317, 321, 325, 326,  
 329–31, 337, 343–6, 350,  
 353, 366  
 production processes, 182, 311, 312,  
 314, 315, 319, 320, 333  
 production technologies, 264  
 productivity, 28, 39, 40, 84, 98, 103,  
 104, 251, 255, 309  
 product portfolio, 46, 83, 84, 101,  
 103, 104, 318  
 products  
 customer-centered, 326  
 knowledge-based, 224

profit, 2, 32, 34, 35, 40, 43, 60,  
 69, 71, 85, 138, 157, 164,  
 165, 317, 323, 325–7,  
 359, 367  
 prospective customers value, 175  
 providers  
 value-added service, 35  
 web-service, 32  
 proximity  
 geographical, 251  
 physical, 257, 258

**Q**

quality, 5, 34, 43, 156, 157, 162,  
 203, 296, 314, 340, 342,  
 346, 348, 352, 366  
 quality management, 330

**R**

relationship building, 24, 27, 46, 48  
 relationship context, 66  
 relationship development, 279  
 relationship partners, 152  
 relationships  
 buyer-seller, 155, 156  
 buyer-supplier, 4, 5  
 direct, 158–60, 354  
 existing, 84, 164  
 organizational, 5  
 relationships influence, 160, 250  
 relationship ties, 5  
 reputation, 162, 229, 261, 262, 267  
 resource-based view, 3, 6, 22, 23, 45,  
 48, 63, 175  
 resource efficiency, 326, 327  
 resource integrators, 137  
 resources

critical, 281, 282  
 firm-specific, 137, 139  
 intangible, 4, 6  
 resource scarcity, 153, 278, 295  
 resources commitment, 278  
 risk  
   country, 274  
   cultural, 274  
 Russia, 30, 39, 44, 93, 195, 208,  
   346, 348  
 Russian market, 93

## S

sales activities, 279, 280  
 sales experience, 44  
 sales force, 260  
 sales offices, 351  
 sales platform, 345, 351  
 scalability, 22, 27–8, 45, 47, 48  
 scenarios, 314, 325, 328, 329  
 scope, 37, 48, 92, 103–5, 114, 118  
 service business models, 18  
 service-dominant world, 136, 143,  
   171, 173, 341  
 service ecosystem perspective, 9,  
   131–45, 338  
 service ecosystems, 9, 142, 144  
 service exchange, 136, 144, 338  
 service firms, 23, 250  
 service innovations, 7, 23, 311  
 service sectors, 172  
 service solutions, 137  
 services, value-added, 32, 35  
 shareholders, 4, 17, 361  
 shipping companies, 117, 119,  
   140, 141  
 shipping industry, 118, 119,  
   121, 139

skills, 6, 8, 18, 19, 22, 23, 25, 28,  
   36, 47, 48, 67, 70, 71,  
   89, 153, 180, 181, 185,  
   186, 254, 255, 264, 265,  
   276, 350  
 Slovenia, 82, 83, 86, 87n4, 88–92,  
   104, 105  
 Slovenian economy, 86  
 Slovenian exporters, 89, 90, 102  
 Slovenian exports, 82n1, 86–9,  
   92, 104  
 Slovenian firms, 89  
 small high-tech firms, 25, 220,  
   222–4, 226, 237–8  
 smart factories, 314–16  
 social networks, 36, 153, 161,  
   262, 349  
 society, 13, 132, 134, 135, 246, 310,  
   338, 359, 361, 362, 365–70  
 software industry, 49, 173, 174, 176,  
   178, 188, 189  
 sourcing, 156, 322, 324, 326  
 stability, 116, 201, 324, 334  
 stakeholder interactions, 114, 123  
 stakeholders, 4, 67, 70, 71, 117,  
   119, 121, 137, 253,  
   338, 361  
 STC (Small Technologies Cluster),  
   253–7, 259  
 strategic alliances, 24, 351  
 strategies, resource-conserving,  
   293, 295  
 structural embeddedness, 162  
 structures, 58, 65, 86, 122, 133,  
   134, 137, 139, 141, 160–6,  
   172, 278, 309, 311–13,  
   315, 317, 321, 323, 340,  
   344, 350  
 organizational, 23, 172, 344

subsidiaries, 32, 34, 39, 118, 119,  
121, 154, 155, 268, 283,  
318, 324

substitutes, 163, 165, 261

sub-suppliers, 323, 329

suppliers, 5–7, 12, 40, 138, 152,  
158, 175–8, 187, 203, 204,  
229–32, 235, 238, 264,  
275, 287, 293, 294,  
319–24, 330, 332, 333,  
338, 349, 350, 352, 354

supply chain, 141, 144, 320, 326,  
329–32, 349, 350

supply chain management (SCM), 349

supply chain partners, 16

sustainability, 13, 326, 359–70

sustainability-related practices, 13,  
360, 361, 363, 369, 370

synergies, 5, 9, 28, 72, 246, 251

**T**

tacit knowledge, 251, 277, 281

tangible products, 2, 325

target markets, 19, 33, 35, 37, 39,  
44, 164, 198, 273, 362

technological capability, 10, 23, 41,  
175, 176, 181–2, 188, 264

technological competences, 322, 333

technological intensity, 309, 331

technological platforms, 8, 18, 37

technologies, 3–5, 7, 11, 12, 21,  
23–5, 29, 39, 41, 42, 44, 45,  
60, 62, 70, 71, 98, 112, 115,  
116, 118–24, 141, 151,  
172, 176, 181–4, 188, 221,  
224–6, 229–34, 237, 249,  
253–6, 262–4, 310–15,  
317–23, 325–32, 352

technology transfer, 151, 263

theory, transaction-cost, 248, 249

trade costs, 92, 104

transactions, 4, 32, 138, 279, 293,  
317, 337, 341

transaction value, 339, 343, 345,  
350, 352–4

triadic entry nodes, 9, 155,  
157–61, 165

triads  
closed, 160, 165  
open, 158–60, 165

## U

uncertainty  
competitive, 11, 289, 294  
contingent, 276  
firm-specific, 276  
perceived, 290, 295

unsolicited orders, 156, 279, 289

unsuccessful new exporters, 83,  
93–101, 103

Uppsala Internationalization Process  
Model, 271, 272, 274, 276

US market, 10, 33, 34, 41, 44, 46, 117

utilitarian value, 12, 344, 354

utility, 2, 188, 339, 340, 349

## V

value capture, 64–5, 71

value chain  
dispersed, 173  
internal, 333

value chain management, 10,  
171–89

value co-creation, 18, 136–9, 142,  
144, 145, 338, 354

- value creation
  - global, 29, 48
  - international, 18, 124, 180
  - marketing-based, 44
  - networked, 18
- value creation dynamics, 19–21
- value creation elements, 36
- value creation framework, 20–8
- value creation opportunities, 45
- value creation paradigm, 18
- value creation processes, 19, 28, 36, 44–8, 317, 333, 339, 351
- value creation strategy, 104
- value exchange activities, 64
- value-in-context, 4, 7, 136, 139, 144, 338, 354
- value-in-cultural-context, 144
- value-in-exchange, 138
- value-in-use, 2, 3, 7, 138, 156, 314, 344, 351, 352, 354
- value networks, 12, 172, 312
- value propositions, 18–21, 32–7, 39–45, 140, 173, 341
- vision, 70, 120, 235