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Human Resource Development in Vietnam

Research and Practice

Edited by

Hien Thi Tran · Tam To Phuong ·

Huyen Thi Minh Van · Gary N. McLean ·

Mark A. Ashwill

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This ancient **Ngọc Lũ Bronze Drum** (Đông Sơn culture 2500–2000 before present), discovered in Hà Nam province, Việt Nam (Vietnam) in 1893, provides evidence that the creative ability and vitality of the ancient Viet people continue to highlight the character of today's Vietnamese.

Foreword

We live in a world where change has become a constant and unprecedented challenges occur at the pace where nations, organizations, communities, and individuals are struggling to cope. Think about intensified competition, rapid technological revolution, changing customer expectations, a diversified workforce, and unexpected crises like COVID-19; these are just a few of many disruptors that challenge our conventional ways of thinking and our practices. The new reality is: What has proven to work yesterday or today may no longer work tomorrow; and what will distinguish one country from another in turbulent times is its capacity to learn proactively, adapt swiftly, innovate constantly, and cope resiliently. As never before, people are the focus of a nation's sustainability.

As a national human resource development (NHRD) researcher, I am excited to see a book dedicated to a systematic examination of critical NHRD issues facing a heretofore under-explored country, Vietnam. Over the past three decades, Vietnam has witnessed remarkable national growth. With its economic and political reforms, Vietnam has successfully transformed itself from one of the poorest nations in the world

into one of the most dynamic emerging countries, ranking 48 out of 157 countries on the human capital index (HCI) and second in ASEAN behind Singapore. Despite its success, Vietnam is also facing daunting human resource challenges such as the lack of a high-skill workforce, gender discrimination, and a rapidly aging population.

This book will equip you with a comprehensive understanding of Vietnam in the area of human resource development—its successes, challenges, and opportunities at the national, business and industry, and higher education levels. As the first Vietnam NHRD book published in the English language, this collection of 13 chapters offers valuable, much-needed knowledge that will expand and enrich the current NHRD literature. It also showcases sound, indigenous research conducted mostly by Vietnamese scholars. In addition, this book is an excellent reference guide for multiple constituents in Vietnam. Providing a number of evidence-based recommendations, it will inform national HRD policymaking, business and industry practices, and higher education programming.

So, whether you are a scholar or someone who is interested in gaining more knowledge about a country that is deeply integrated into the global economy, this book offers enormous benefits. It will open your eyes and inspire innovative thinking, as it did for me.

Jia Wang, Ph.D.
Professor, Human Resource Development
Texas A&M University
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The original version of the book was revised: Corrections have been updated in Front matter, Chapters 4, 9, and Index. The correction to the book is available at https://doi.org/10.1007/978-3-030-51533-1_14

Praise for *Human Resource Development in Vietnam*

“There is a pronounced need for an understanding of the contributions of HRD to innovative business practices in the setting of Viet Nam. The book presents how HRD and National and Regional HRD links strongly and productively to the educative systems in Viet Nam, including K-12 STEM education, college and university education, corporate training and development, and career development of management professionals, among others. This is a much-needed book that will be very useful for researchers, scholar-practitioners, business leaders and other workplace professionals, and policy-makers.”

—Thomas G. Reio, Jr., *Professor, Florida International University, USA.*
Editor of Human Resource Development Quarterly

“The book *Human Resource Development in Vietnam: Research and Practice* provides readers with an overview of and insights into HRD in Vietnam, completed by a team of dedicated Vietnamese and international scholars. Hopefully, this book will be a valuable reference for those who are interested in exploring HRD-related issues in Vietnam—a nation on its way to dynamically integrate into the world’s arena.”

—Thuy Thu Nguyen, Ph.D., *Director General, Higher Education Department, Vietnam Ministry of Education and Training*

“This book, *Human Resource Development in Vietnam: Research and Practice*, is a must-read resource for human resource development (HRD) scholars and practitioners who are concerned about national HRD and more particularly about HRD issues in Vietnam. Not only does this text describe the history, culture, and development of HRD in Vietnam, it covers current issues, such as career development, women leaders, management innovation, and sustainable enterprises. Thus, it represents an important scholarly and practical contribution to the field.”

—Darlene F. Russ-Eft, *Professor Emerita, Oregon State University, USA,
Clinical Faculty, Purdue University, USA*

“I welcome this timely and scholarly book on HRD in Vietnam. The team of local authors is commendably guided by a world leading HRD scholar. The book situates HRD in Vietnam in its historical, cultural and economic contexts, thus contributing to the emerging literature on contextualisation. This is an important contribution to the literature on international HRD.”

—Thomas Garavan, *Professor, University College Cork, Ireland, UPM
Malaysia and National College of Ireland*

“A long-awaited welcome to the literature on Asian women in leadership. This book is information-rich about HRD in Vietnam, a fast-growing Asian country, full of human potential, resources as well as a winning history. International HRD scholars and practitioners and policy makers will be fascinated by this book’s uniquely Vietnamese HRD topics: National and regional HRD, entrepreneurship, women on boards, and SMEs, to name a few.”

—Yonjoo Cho, *Associate Professor of HRD at the University of Texas at Tyler, USA, Editor of Human Resource Development Review, Co-Editor of a Series on Asian Women in Leadership with Palgrave Macmillan*

“A timely collection of research in diverse areas of HRD in Vietnam. As the country has emerged as one of the most innovative in global business, too much attention has been paid to economic factors at the neglect of

human and social capital. This book addresses that gap with a refreshing set of new ideas and developments.”

—Tojo Thatchenkery, *Professor and Director of Organization Development and Knowledge Management, George Mason University, USA, Co-author of Appreciative Intelligence: Seeing the Mighty Oak in the Acorn, and Making the Invisible Visible: Understanding Leadership Contributions of Asian Minorities in the Workplace*

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Part I

An Overview



1

Historical and Cultural Contexts of Vietnam Affecting Human Resource Development

Huong Thi Mai Truong, Thuy Thi Hong Pham,
and Thuy Thi Thanh Doan

1 Introduction

This chapter explores human resource development (HRD) practices in Vietnam by examining the country's historical and cultural contexts. This chapter considers history and culture as critical factors in shaping HRD strategies and practices.

The first part of this chapter provides a brief overview of Vietnam's history, followed by a discussion of the country's cultural context. The

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focus of the next section is to review and analyze the influence of historical and cultural factors on HRD practices. The final part of the chapter presents several challenges and opportunities, along with some lessons for Vietnamese organizations in adopting new practices in international HRD.

Vietnamese culture has been strongly influenced by Confucianism and is characterized by low individualism and high power distance. These traits tend to shape the managerial style to be more collectively oriented, hierarchical, and particularistic. The impacts of these elements are evaluated based on six functions of HRD (McLagan, 1989), including Training and Development, Organizational Development, Performance Management, Recruiting and Selection, Career Development and HR Planning. Thus, based on the underlying historical and cultural contexts, this chapter attempts to provide a review of HRD practices in Vietnam.

2 Brief of Vietnam's Historical Context

In ancient times, Vietnam was a dense jungle area with many caves, rivers and streams, and a long coastal area; the climate was distinctively hot and cold, suitable for the lives of plants, animals, and people. In the years 1960–1965, archaeologists discovered a series of relics of the Ancients. Vietnam is considered the cradle of human society; archaeologists have found teeth of homo erectus in Lang Son province, Northern Vietnam, possibly dating from tens of thousands of years ago (Phan, Truong, Dinh, & Nguyen, 2011). Vietnam's economic history is marked by periods such as the Stone Age to 208 BC, the Chinese domination (179 BC–938), the ethnic feudalism period (938–1858), and the period of interaction with Western culture. In each historical period, Vietnam took economic development steps suitable to the social context.

2.1 Stone Age Period to Hung King Period (208 BC–179 BC)

In the Stone Age, agriculture played an important role in primitive society. In this period, humans exercised control over their manufacturing process and owned their products. The primitive period ended when metallurgic engineering appeared. Vietnam entered the metal age 4000–5000 years ago. Ancient inhabitants of Vietnam were the Lac Viet people, who migrated from the coast of Fujian (China). After many years, the Lac Viet people inhabited northern Vietnam, overlapping with and assimilating the indigenous people, spreading out along significant rivers, and occupying most of the midland. This formed the first civilization over the next historical period, called the Van Lang-Au Lac or Hong river civilization.

In the Hung King period, the Lac people were rice growers on the Red River plains. When King An Duong arrived with the Au, he established the kingdom of Au Lac by combining the current class of rulers with his entourage. King An Duong dethroned the ruler whom the Lac lords had served previously. In later centuries, historians used the name Hung for those who ruled before King An Duong at the place where the Red River emerges from the mountains. It would have been easy for people here to be in contact with other Bronze Age cultures up the Red River to the northwest. The Co Loa fortress was on the upper plain north of the Red River where King An Duong can easily command the plain and safeguard it from interlopers of the northeast.

In addition, the metallurgy, bronze casting, and ironwork, changed the nature of the economy and stimulated economic development. This transformation was also due to the relationship between manufacturing and society that led to the division of labor. In this period, society began distinguishing between rich and poor (Fig. 1).



Fig. 1 Ngoc Lu bronze drum, the national treasure displayed at Vietnam National History Museum (Source Vietnam National Museum of History (2020))

2.2 The Chinese Domination (Northern Domination) (179 BC–938)

The Chinese feudal dictatorship lasted from 179 BC to 938. During the nearly 1000 years of Chinese colonization and domination, Vietnam's natural resources were exploited. Furthermore, Han Chinese officials seized fertile land from members of Vietnam's nobility for their immigrants. The indigenous Vietnamese were affected by Han Chinese immigrants' government administration and rules. Vietnam was operated as a Chinese province which was considered a frontier outpost of the Han Empire.

Vietnam was initially governed at the local level; however, that later changed to replace indigenous Vietnamese local authorities with newly

immigrated Han Chinese people. By the first century AD, to intensify its assimilation with the new territories, the Han dynasty raised taxes and executed marriage and land legacy changes. It aimed to transform Vietnam into a patriarchal culture increasingly agreeable to political power.

The Han mandarins required large imperial taxes in order to maintain the military and the local administration. Furthermore, to ensure a cohesive and unified empire, the Han dynasty sought to assimilate the Vietnamese via a “civilizing mission.” With Chinese rule, Han dynasty officials tried to embed Chinese culture on Vietnam, for example Chinese Buddhism, Confucianism and Taoism, the mandarin hierarchy, and royal assessment framework. The Vietnamese must adopt the worship of the Chinese head and Chinese foreign writing system at the cost of the detriment of their native language, ethnic, national identity, and cultural characteristics.

2.3 The Period of Ethnic Feudalism (938–1858)

In 938, the victory of Ngo Quyen on Bach Dang River began the period of ethnic feudalism in Vietnam. This period lasted until 1858 when France invaded Vietnam. During this period, industry and commerce developed only a little under difficult circumstances, which was not enough to open new directions for the economy.

There were fourteen feudal dynasties under the period of ethnic feudalism (Table 1).

Table 1 The Vietnam feudal dynasties under the period of ethnic feudalism

1. Ngo (938–968)	8. Later Le (1428–1527)
2. Dinh (968–980)	9. Mac (1527–1592)
3. Pre-Le (980–1009)	10. Le (1592–1788)
4. Ly (1010–1225)	11. Trinh Lord (1547–1788)
5. Tran (1226–1400)	12. Nguyen Lord (1533–1777)
6. Ho (1400–1407)	13. Tay Son (1778–1802)
7. Post-Tran (1407–1414)	14. Nguyen—independence period (1802–1883)

Source Compiled by the authors of the chapter

Each feudal dynasty had its own characteristics of autonomy. This chapter highlights the economic and cultural features of this period, which focuses on Confucianism and the economy.

2.3.1 Confucianism

Under the Ngo, Dinh, and pre-Le dynasties (939–1009), the structure of state power was organized according to the principles of Confucian political ideology with promotion by the king's authority. Even so, Confucianism was disappearing and being replaced by Buddhism. Therefore, there were not many Confucian scholars. The kings of this period adopted the Confucian political ideology with the assistance of monks to establish dynasties and build the country.

During the period of the Ly, Tran and Ho dynasties (1009–1407), Ly Thai To's Edict on the Transfer of the Capital was a cultural product of Confucianism. The ideology of destiny based on God and the scriptures in the Confucian classics were used for the nation's management. It explained and emphasized the nation's right to independence and self-reliance. Confucianism created the necessary political environment to address the need for institutional development and it gradually became a stable ideology for contributing to Vietnam's development. Specifically, Ly Thai Tong built the Temple of Literature and conducted the first exams in 1075. In 1076, the king created the national examination system and began offering instruction related to Confucianism. This dynasty established the National Academy in 1253, which was used by noble children, mandarins, and Confucian scholars for studying and teaching. The Ho dynasty oversaw a significant Confucian transformation in society. Ho Quy Ly had an awareness regarding Confucianism in social life and made use of talented Confucian scholars.

During the post-Le dynasty (1428–1788), Confucianism was the dominant ideology and tool for governance. Le Thanh Tong (1442–1479) had completed the feudalistic transformation of Vietnam through Confucianism.

By the time of the Nguyen dynasty and up to the independence period (1802–1883), Confucianism was more developed and became

the national religion. Specifically, from the Gia Long dynasty to the Tu Duc dynasty, Confucianism played a unique role in society, including in politics and education.

2.3.2 Economy

Agriculture played an important role through feudal dynasties that included public and private farms. During this time, the relationship between landowners and tenants developed. In addition, professional artisanship transformed handicraft and economic activity was self-sufficient. The waterway system enabled Vietnam to create relationships with foreign countries. In addition, feudal dynasties published currency and unit unification.

However, in the first half of the nineteenth century under the Nguyen dynasty, the Vietnamese economy was in crisis and became stagnant. Feudal production became outdated and inhibited development. It was influenced by the clash of the feudal dynasty with Western culture.

2.4 The Period of Interaction with Western Culture

2.4.1 Nguyen Dynasty-French Dominance (1883–1945)

Agricultural products became Vietnam's main exports during this period. France had invested in infrastructure in Vietnam, building irrigation canals and developing roads to enhance the trade of agricultural products. However, French domination did not change the backwardness of Vietnamese agriculture. There were fewer developed industries in this period but mining was a primary industry. Most feudal landowners and peasants lived in rural areas, while bourgeois, middle class and working class people lived in urban areas.

In this period, Confucianist ideology failed because of Western ideology in the context of French domination. The economy in the south was capitalized significantly.

2.4.2 Vietnam During the War against France (1945–1954) and the USA (1955–1975)

Vietnam spent 30 years engaged in war against France and the USA. During this period, there were differences between the North and South of Vietnam regarding the economy and society. While the North focused on agriculture, in the South, electricity, mechanics, assembly, beer and soft drinks industries were exploited to support militaries during wartime. Generally, Vietnam's economy and society were characterized by the economic exploitation and Western administration management of France and the USA.

2.4.3 Vietnam After Independence (1976–Present)

After reunification in 1975, Vietnam entered a period of peace, established the government, and centralized the economy. As a result of the centralized economy, market-based price mechanisms were nonexistent because the government did not officially recognize open trade and private entrepreneurs. All industrial trade and production activities were governed by the ministries and authorities through state-owned enterprises, which resulted in highly bureaucratic practices, inefficiency, and low productivity (Anh, Duc, & Chieu, 2014).

In 1986, *Đổi Mới* (Reforms) was implemented with the purpose of transforming the centralized economy into a market economy. Free market regulations were established to encourage private businesses and foreign-owned enterprises, thus a new form of ownership—private ownership—was legally recognized (Anh et al., 2014). Regarding global integration, Vietnam has been proactive in the integration of regional and global economies (Vo, 2017). The evidence is that international relations and international trade have expanded strongly in Vietnam through participation in the ASEAN economic community (AEC) and the Trans-Pacific Partnership Agreement (TTP) (Le, 2017). The market economy and the interaction with the global economy after *Đổi Mới*

has significantly altered the economy and society of Vietnam. Specifically, it has created both challenges and opportunities to human resource development practices in Vietnam, which will be discussed in Sect. 4.

3 Vietnam's Cultural Context

This section examines the cultural background that influences the practices of HRD in Vietnam. Specifically, it discusses Vietnam's indigenous cultural values and its sense of cultural identity. In addition, it explores the influences of Confucianism on the country's culture within the context of Hofstede's cultural dimensions.

3.1 Vietnamese Indigenous Cultural Values

It can be argued that Vietnam had its own distinctive indigenous culture long before cultural transmission occurred from other countries (Tran, 1999, 2000). The country's cultural features are partly shaped by its wet rice cultivation. Historically, this type of production was onerous, labor-intensive, and demanding. Also, families often shared their water resources and irrigation facilities.

Apart from these, people lived in places clustered together and relied heavily on each other because rice plantation had to be accomplished within a short time after watering. This necessitated an emphasis on group interests and avoidance of conflict between neighbors and work-mates.

Furthermore, as this type of subsistence economy depends heavily on nature, the culture was also shaped by continuing endeavors in coping with natural disasters. Thus, wet rice cultivation played an essential part in the development of the Vietnamese indigenous culture complex, characterized by collective orientation, harmony with others, perseverance, and hard work (Tran, 2000, 2006). These tend to dominate Vietnamese culture, even in spite of the interruption and impact of war, scarcity of resources, and economic crises (Huu Ngoc, 2008; Lee, 2005).

3.2 Strong Sense of Cultural Identity

In addition to this backdrop, Vietnamese culture was shaped by the country's long history of fighting against foreign invaders, notably Chinese, French, and American. It was conquered by China for over 1,000 years and divided by French colonization over 83 years. Vietnam was then invaded by the Americans for about one decade. These struggles and ordeals have affected Vietnam significantly and have led to the formation of some unique features of the Vietnamese cultural identity (Huu Ngoc, 2008). These include strong communal attachment, national independence, and most importantly, a strong sense of cultural identity and conservation. These characteristics were formed partly due to the fact that Vietnamese people always feared that they would be culturally assimilated by the Chinese or influenced by Western cultures. Pham (1994) commented:

The long domination by and later continued contacts with China, as well as recent involvements with the West, have left many imprints on the Vietnamese culture, helped sharpen a strong sense of identity and independence among the Vietnamese.

3.3 Influence of Confucianism

Confucianism is considered to have been introduced into Vietnam as early as the first century AD. For many years, Confucianism pervaded Vietnamese society, affecting its people's psyche and behavioral norms (Mchale, 2004). These include an emphasis on education and family values, a collective orientation, maintaining face, and respect of hierarchy.

First, Confucius emphasized the importance of education. He believed that everyone has the capacity to become a virtuous individual through learning and education (Morris, 1996; Xin, 2007). In addition, Confucius viewed family life as a training ground in that parents are responsible for the education of their children.

It is common in contemporary Vietnamese society for parents to make enormous sacrifices for their children's education. Wealthy people often

spend money and time hiring private tutors for them and/or taking them to extra classes. Children are then expected to succeed academically to bring honor to the family and their ancestors.

Apart from emphasizing education, Confucius stressed the importance of family values. Of the five cardinal relationships defined by Confucius, three (parents and children, the younger and the older, husband and wife) focus on family relationships. The term “filial” in “filial piety,” meaning “of a child,” denotes the respect that a child is expected to show to his parents (Yeh & Bedford, 2003). The child is expected to be obedient, devoted and respectful to his/her father (Ho, 1994; Sung, 1995). Therefore, filial piety is not just an attitude. To some extent, it is an underlying basis or principle on which relationships and social structure are built.

To the Vietnamese then as now, filial piety has prompted the child to love and respect his/her parents and always contribute to their comfort. Therefore, Vietnamese children are socialized into a mindset that they are indebted to their parents for their upbringing and they must repay that debt by having love and filial piety.

Moreover, Confucius stressed the ways in which people can maintain harmony in a collective (Nguyen, 1991, 2003). He did not believe in an individual agency. For him, the goal of living was to achieve harmony through appropriate actions. In a society, a person is expected to view himself as a member of a collective, i.e., at least, of a family and a society. Thus, behaving appropriately and following certain social norms to maintain relationships and harmony become important (Hofstede & Bond, 1988).

Under this influence, collective responsibility is more significant than individual responsibility in Vietnamese society. It is believed that individuals need to be treated as part of a group and to strive to maintain group harmony if they are to achieve the best results. (Rarick, 2007). Therefore, it is extremely inappropriate to single out oneself in a group. This practice characterizes the tradition of being modest about one’s success and often ascribing it to collective efforts.

In addition, maintaining face was also a priority. The implication behind Confucius’s modest attribution was empathy and saving other’s “face.” Therefore, saving face rather than losing it becomes a major

concern in Vietnamese society. Strategies such as avoiding criticizing others in public, especially superiors, and challenging superiors are very common ways for Vietnamese people to save face.

Finally, Confucian society is highly hierarchical with each person holding a defined position. The five relationships: ruler and the ruled, parents and children, the older and the younger, husband and wife, and friend and friend were set out in priority order and were between the superior and the inferior with the exception of the last pair. Within these ties, people were assigned specific roles. They were also expected to perform the duties specified by Confucian principles of conduct.

Nowadays, Vietnamese society is highly hierarchical with a strong emphasis on one's seniority, social status, and profession. This system is characterized by being obedient and respectful to parents as well as elders, seeing teachers as "masters," respecting white-collar jobs, arranging organizations hierarchically, and expecting pay and promotions to be awarded based on seniority.

3.4 Hofstede's Study—Cultural Dimensions for Vietnam

Hofstede's studies are among the first quantitatively-based projects that attempted to define specific cultural dimensions. Initially, these were developed via a survey of more than 100,000 IBM employees, an international company with multiple subsidiaries all over the world (Lustig & Koester, 2010). Hofstede first started with four independent dimensions: Power Distance, Individualism versus Collectivism, Masculinity as opposed to Femininity and Uncertainty Avoidance. The score for these aspects was calculated based on a scale out of 100 points. Up to present, 76 countries have been analyzed. Hofstede added the fifth dimension in 1991 and the sixth in 2010. They are Long-Term versus Short-Term Orientation and Indulgence as opposed to Restraint (Hofstede, Hofstede, & Minkov, 2010).

First, power distance relates to the extent of hierarchy in a society or organization. It reflects the degree that inferior members in an organization accept inequality in power distribution. In terms of this, Vietnam

has a high score of 70, which means hierarchy is accepted in society (Hofstede Insights, 2018). In an organization, authority is never challenged; centralization is popular; and a soft manner when presenting feedback in the workplace is preferred.

Second, “individualism as opposed to collectivism” identifies the extent to which people would like to be treated as an individual or as part of a group. It demonstrates the level of interdependence maintained among members of society. Vietnam scores 20 and is thus considered as a collective society where people maintain strong relationships, demonstrate high loyalty to their group, preserve harmony and save face. (Hofstede Insights, 2018).

Third, “masculinity versus femininity” focuses on the motivation of members in a culture and how the notion of being successful is defined. In “masculine” culture success is defined as being the winner or being the best. Therefore, the society is driven by rivalry, accomplishments, and success. In a “feminine” culture, care for others as well as well-being are the signs of success. Vietnam has a score of 40 and is therefore deemed to have a feminine culture where the emphasis is on consensus, equality, unity, and quality of life (Hofstede Insights, 2018).

Fourth, uncertainty avoidance refers to the degree of stress when people face the unknown. Cultures that score high are less comfortable with uncertainty and ambiguity. They tend to establish implicit and explicit rules, laws, and behavioral norms to manage uncertainty. In contrast, people in cultures with low scores are more comfortable and less stressed when facing uncertain circumstances. They are less dependent on rules to manage ambiguity. They are more receptive to risks and more open-minded to change.

Vietnam scores 30 and thus its people are fairly comfortable when facing uncertain situations (Hofstede Insights, 2018). Their attitude is more relaxed and they consider experience as more important than rules. In the workplace, they tend to be flexible with schedules and are not likely to resist change and innovation.

Fifth, long-term as opposed to short-term orientation describes whether people emphasize more on the future, present, or past. Cultures that score low tend to maintain established customs, practices, and

norms. On the contrary, those with long-term orientation are more pragmatic in the sense that they emphasize thrift and efforts in order to prepare for days ahead.

Vietnam has a score of 57, and thus is a pragmatic society where truth is believed to vary according to situation, context, and time (Hofstede Insights, 2018). People are inclined to adapt customs and practices to fit new conditions. They prefer saving and investing their resources and encourage thriftiness and persistence to achieve results.

Finally, “indulgence versus restraint” demonstrates gratification versus control of human desires and impulses when it comes to enjoying life. Low level of control means “Indulgence” whereas high level of control is called “Restraint.”

Vietnam’s score is low (35), thus its culture is featured as Restrained (Hofstede Insights, 2018). People focus less on leisure activities and tend to control their gratification and desires. Their needs are compromised and controlled by rigid social customs, traditions and norms. They tend to think that indulging themselves is somehow wrong.

4 The Impacts of Historical and Cultural Contexts on Human Resource Development Practices in Vietnam

Since the second half of the 1960s, many scholars have attempted to define and conceptualize HRD. However, HRD remains an ambiguous concept with diverse interpretations due to the relative boundaries between HRD and other domains. In this chapter, we adopt the definition of McLagan and Suhadolnik (1989), which describes HRD as “the integrated use of training and development, career development and organizational development to improve individual and organizational effectiveness” (cited in Stewart, Gold, & Hamlin, 2011). This notion not only includes the intended purpose of HRD to enhance individual growth but also brings about the concept of organizational development. This definition is supported by researchers and practitioners who focus on the leading role of HRD in the development and

design of future businesses. It is considered a strategic approach to HRD that might facilitate Vietnamese organizations to integrate into the international environment. Utilizing this definition, Sect. 4 examines the impact of history and culture across six functions including Training and Development, Organizational Development, Performance Management, Recruiting and Selection, Career Development, and Human Resource Planning.

4.1 Training and Development

A significant value that the Vietnamese inherited from Confucianism is studious attitude that results in a strong willingness to learn and train employees. In fact, Vietnamese society values and respects people with a high level of education; thus, learning is considered a fundamental step toward job opportunities and climbing social ladders (Nguyen, 2016). The importance of training and development has been recognized by most Vietnamese employees and companies yet the sources of funding for these activities remain an unresolved. Employers often spend their budgets on other priorities, for example, technology rather than training and developing staff. Employees, therefore, must seek self-development through universities, colleges, and vocational schools (Cox & Warner, 2013; Kamoche, 2001).

The purpose of learning and the development of Vietnamese managers is mainly associated with acquiring a moral standard and maintaining leadership identity. The success of maintaining a formal leadership position brings honor and prestige to their family and clan, the collective groups they belong to. In Vietnamese culture, leadership position equates to a high status, which reflects a successful personal life. Thus, managers adopt learning and development to gain respect from their fellow workers and maintain the identity of a leader (Ren, Ngan, & Ying, 2014).

In additional, training is mainly planned for staff in managerial or high-level technical roles rather than staff in less-skilled jobs (Goodwin, O'Connor, & Quinn, 2014). There are many multinational companies (MNCs) that send their staff abroad for short-term training. Nonetheless, these opportunities are often offered solely to senior and middle

managers. This unequal distribution of opportunities might adversely affect morale, which hampers the effectiveness of the training efforts and reduces the long-term outcomes of knowledge development (Kamoche, 2001).

Another critical point is that there exists a paradox of training and development in Vietnamese organizations. Many staff have a reluctance to demonstrate creativity or take risks due to a fear of failure even after they have acquired new knowledge. The explanation is related to the culture and history of extreme caution when the Vietnamese had to deal with unfamiliar people and circumstances in the past. This practice has now been absorbed in organizational settings (Kamoche, 2001).

In addition, the power hierarchy in Vietnamese companies prevents staff from being innovative and creative because employees have to confront strict discipline and regulations when implementing new ideas. The fear of mistakes and criticism not only creates a barrier to learning and knowledge creation but also casts a shadow over performance evaluation and rewards (Bartram, Stanton, & Thomas, 2009).

Regarding the historical factor, the economic reform of 1986 has created a new type of ownership—the private sector. This sector includes local private firms and Foreign-Owned Enterprises (FOEs). The sector has not only contributed to economic growth but also led to a hybrid of local and modern managerial practices. With well-established HRD policies and procedures, FOEs pay attention to training and development, which is deemed to be an investment in human assets. Local firms have adopted these Western HR practices to improve individual performance and productivity. Therefore, the role of training has been embedded with the Western individualistic approach, which focuses on skills improvement and job-related knowledge (Thang & Quang, 2011).

4.2 Organizational Development

Organizational development in traditional organizations in Vietnam is distinct in nature due to the bureaucratic structure, “concept of face,” and collectivistic culture. Given a longstanding feudal period and a post-war centralized economy, the high power distance characteristic was

emphasized. This has resulted in a hierarchical structure and centralized decision-making in organizations. Vietnamese managers tolerate positions of authority and bureaucratic management styles. Consequently, they accept the unequal distribution of managerial power and often feel comfortable working in a hierarchical structure.

Vietnamese managers also exhibit patriarchal attitudes in the execution of their duties. Their behaviors tend to be rigid and motivated by a strong respect for employees with a position of authority (Berrell, Wright, & Thi Van Hoa, 1999). The decision-making mechanism in organizations is typically top-down. Although ideas and discussions are sometimes allowed in the implementation phase, participation in decision-making is often not encouraged in strategic planning. Mostly, decisions are made at the top management level and communication flows down through a hierarchical structure (Truong, 2013).

The concept of face defines the way individuals interact with each other in organizations with an emphasis on saving others' face. It results in indirect communication and avoidance of giving negative feedback (Le, Rowley, Quang, & Warner, 2007). The most remarkable characteristic of management in Vietnam is that the concept of face was extended to the organizational level. The fear of losing competitive advantage and damaging the reputation of the company leads to the managers' practices of not firing or cutting wages. The rationale is that the managers have a responsibility to take care of staff who show loyalty and commitment to the company. If the managers fail to fulfil this obligation, the "corporate face" will be threatened. Thus, Vietnamese managers seem to accept a reduction in profits than lay people off (Kamoche, 2001; Thomas, Stanton, & Bartram, 2005).

Collectivistic culture affects employee commitment positively with the emphasis on loyalty and attachment to the organization (Powell & Le, 2015). Employees are expected to obey norms and have a strong sense of belonging to the group (Felfe, Yan, & Six, 2008). These include the development of a close relationship and a long-term commitment to their organization. Vietnamese employees commonly have positive work values and their commitment tends to increase if they hold complex jobs or receive praise based on their work. This could be explained by their feelings of being valued and trusted within the company, especially for

those who see work as a central life value. In line with the collectivistic characteristic, the feminine culture aims to create a harmonious organizational climate and to avoid conflicts in the workplace. When it comes to argument or disputes, Vietnamese people often choose a win-win solution for the sake of fitting in harmoniously and saving the others' face (Quang & Vuong, 2002).

4.3 Performance Management

Performance management in Vietnamese organizations is affected by a variety of cultural values, including high collectivism, high power distance, fear of losing face, and a tradition of egalitarianism. The impact of culture results in ill-defined performance goals, a lack of fairness, and poor links between performance management and rewards (Kamoche, 2001; Stanton & Pham, 2014). These challenges vary based on the types of business.

The state-owned enterprises (SOEs): According to Kamoche (2001), political dynamics and relationships influence the process of performance management at the SOEs. Performance assessment usually relies on the consensus of the manager-subordinate relationship. This ad hoc system and the ill-defined appraisal goals raise a concern about the assessment outcomes. However, the assertion of Kamoche that performance management in SOEs, which is considered a management device to maintain harmony, is not supported in recent research. It is mainly because of the influences of recent history. *Đổi Mới* has resulted in a significant transformation, enabling the country to become one of the fastest growing economies in the world.

The rapid change in the current economic and political environment has created profound changes in management practices. Stanton and Pham (2014) argued that the change in the business environment has led to the understanding of Vietnamese managers in the transition of performance management. This process has been transformed from traditional non-evaluated work practices to performance-based rewards. Nonetheless, organizations still face the resistance of some senior employees due

to their perceptions of cooperative production, collective ownership, and egalitarianism.

The joint ventures (JVs): In Vietnam, doing business based on personal relationships is a common practice that JVs and Foreign Owned Enterprises (FOEs) also follow in their management activities. Similar to SOEs, appraisers such as supervisors/line supervisors in JVs are affected by their personal relationships in the evaluation process. Thus, there are complaints from employees about the reliability and validity of the process due to the lack of fairness. In addition, many managers are reluctant to give overly negative or positive evaluations because they are afraid the results might cause dissatisfaction and envy among staff.

Performance management in JVs is still influenced by maintaining harmony with others, respect for tradition, saving face, and avoiding negative feedback. Despite the fact that JVs have adopted Western practices of performance management, the system has been modified to adapt to the local context and organizational culture. There has been increased awareness of the challenges related to the reliability and fairness of the performance process and some JVs have been making efforts to develop solutions (Stanton & Pham, 2014).

Furthermore, the influences of Western orientation have been deepened since Vietnam integrated into the global economy. One of the impacts of Western values is the development of emerging individualism among the younger generation. This individualistic orientation is demonstrated by young employees pursuing their own career goals and personal achievements (Le et al., 2007). To value personal achievements, many local and foreign organizations have adopted a merit-based evaluation system and individual performance pay in their performance management practices.

4.4 Recruiting and Selection

The recruiting and selection process in Vietnam demonstrates a strong influence of the relationship-based characteristics. The main feature of selection includes interpersonal trust and long-term relationships. It is acceptable for organizations to take advantage of existing employees'

relationships or trusted contacts (Kamoche, 2001). With the impact of Confucianism, Vietnamese culture emphasizes personal relationships as the key to success in business. It is not only applicable to local firms but also especially useful for international companies to integrate into the Vietnamese business environment. Multinational companies tend to use recruitment as a tool for accessing local networks and knowledge at an early stage. Organizations might embrace the recruitment of personnel who already have large networks to cultivate their relationships and expand the business (Trinh & Blomdal, 2016). The recommendations of existing employees are directly linked to face and reputation. Employees would only introduce people whom they trust to protect their face. Therefore, this method of recruitment is deemed to be reliable (Kamoche, 2001).

In some cases, recruitment might begin by word-of-mouth, followed by a careful consideration of family backgrounds and merits of the candidates. Collectivism is reflected in the creation of a “corporate family”; thus, the recruitment goal is to find candidates with the right attitude and “long-term commitment” to fit in the business, especially in SOEs (Kamoche, 2001). Moreover, the patriarchal orientation focuses on family values and is visible in the way employers operate their business. Managers are concerned about their employees both professionally and personally. In order to help employees to overcome their financial problems, managers sometimes involve themselves in these personal issues by giving priority to recruiting employees’ family members.

An interesting point is that the methods of informal recruitment through word-of-mouth or personal relationships do not seem to be an important factor in small and medium-sized enterprises (SMEs). Vo’s study (2010) does not support the idea that close personal relationships can improve the level of trust, motivation, and commitment of employees to employers. In fact, the employees with personal relationships do not show a high level of commitment due to their lack of trust in the success and development of firms in the long term. By contrast, people who have no personal connections express more motivation because they believe they were hired for their qualifications and ability. Therefore, employers of SMEs should conduct the selection process based on employee’s skills, knowledge, and attributes.

Since Đổi Mới, to keep up with economic rapid changes and enhance competitiveness, most organizations have adopted Western HR practices. While private companies, JVs and FOEs, use “CV analysis” and “interviews” as techniques or tools in the recruitment process, SOEs are likely to prefer “tryouts.” In terms of the quality of recruited candidates, FOEs and JVs reach the highest level. It is notable that despite the fact that a variety of recruitment and selection techniques have been adopted in most organizations, the relationship-based characteristic still somehow influences current recruitment practices (Zhu & Verstraeten, 2013).

4.5 Career Development and Human Resource Planning

In high power distance cultures, participative and systematic HR planning might be rare or nonexistent. The centralized decision-making process makes the plan short-term oriented and highly flexible, which facilitates the requests of high-level executives (Aycan, 2005; Meshksar, 2012). Although human resource planning plays an important role in enabling organizations to address the overriding human resource-related issues, the literature review on human resource planning in Vietnam has been very limited. According to Pham (2011), some studies revealed that the absence of human resources planning contributed to the failure of SOEs. However, equitized state-owned enterprises (ESOE) were expected to adopt the practice of human resource planning to improve competent human capital for better performance of the organization.

Because of insufficient performance management, career planning and development is considered the employees’ responsibility in SOEs. Individuals have to evaluate their own strengths and weaknesses, find motivation, and seek opportunities in career planning activities (Quang & Dung, 1998). Since no formal career development is planned for employees, they must pay for external courses and training programs by themselves to advance their careers. Regarding promotion opportunities, seniority preference is a significant factor in internal promotions because of the ‘respect for senior’ value. Managers in SOEs emphasize “seniority,” which indicates a high percentage of senior employees

with a long “length of service” in organizations. This practice sometimes impedes the career development of young talents.

Although Vietnam has a low uncertainty avoidance score, patriarchal attitudes and masculine traits of Vietnamese managers have made them place more value on male achievement and personal benefits. They score high on uncertainty avoidance, and are satisfied with a “stable” job and a secure career path. In general, Vietnamese employees are motivated to work hard to earn money and save for the future; interestingly, they will not reduce their work even though they get higher income or better jobs. This is a reflection of the long-term orientation of “doing-oriented” rather than “being oriented.” As a common trend, urban young people hold the attitude that their careers should come first, followed by a period of accumulating savings to ensure positive prospects for their future married life. Therefore, they tend to make more income by getting involved in continuous extra work (Le et al., 2007), which is associated with the restraint toward enjoying life.

However, the individualism of Western traits has had a significant impact on young people. This change has disrupted the traditional value of a lifetime job (or a “stable” job). When employees become “too individualistic,” they tend to engage in “job hopping” because they strive for higher wages or better positions. One trend is a high staff turnover rate among Vietnamese companies, especially after the Lunar New Year (Tet) holiday. It has become a job-hopping culture with 67.8% of young Vietnamese employees intending to leave their jobs after “Tet” (Jones & Masters, 2016).

5 Conclusion and Implications

Reviewing the impact of history and culture on human resource development practices in Vietnam reveals that these factors have left a remarkable imprint on the operation of Vietnamese organizations. This is a result of the country’s diverse historical and cultural exposure from the Chinese influences to Western colonization and invasion.

The influence includes the challenges to HRD such as the purpose of learning to maintain managers’ status, the unequal distribution of

training and development opportunities that focus on high-level staff, and the resistance of employees to demonstrate their acquired knowledge. The hierarchical organizational structure and centralized decision-making are typical consequences of a culture that emphasizes high power distance. Additionally, the concept of face is extended to the organizational level, which carries the risk of profit loss in saving the corporate face, and the lack of fairness in performance management. Moreover, personal relationships and seniority preference still play a vital role in Vietnamese businesses, which makes the performance assessment unreliable and prevents some young talents from accessing employment opportunities.

On the other hand, the impact of long exposure to Western values and changes in contemporary history has also created prominent opportunities for Vietnamese organizations to adopt Western HRD standards. Since the economic reform in 1986, the business environment in Vietnam has been changing rapidly to integrate international practices. Fortunately, some cultural values are still relevant and can contribute to the development of Vietnamese employees such as the desire for learning and development, positive work attitudes, and a long-term orientation.

In addition, the development of the private sector also created opportunities for local firms to embrace modern HRD practices of FIEs. Besides, increased individualism among the youth might become a driving force to enable organizations to redesign their practices in performance management, training, and career development, which can align individual competencies to organization productivity.

Apart from taking advantage of the opportunities created by the historical and cultural background, the implications of this chapter are also for organizations to mitigate its adverse influences and imprint if they are to develop strategic HRD. Managers should be aware of the fact that the concept of “face” still plays a vital role at the organizational level; thus, more attention should be paid to communication and the enhancement of subordinate relationships.

Employers should strive for a harmonious working environment, provide autonomy for their staff, and develop training programs and career development to improve employees’ loyalty and commitment.

For managers, offering job security and stability also helps retain high-level staff and reduce turnover. Employee empowerment should be used by managers to decrease high power distance and build a strong team spirit among staff. Lastly, to be successful in Vietnam, international managers should make efforts to improve their cultural awareness and try to understand and appreciate the differences in cultural values of the host country.

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2

National Human Resource Development in Vietnam: A Review Study

Huyen Thi Minh Van and Tam To Phuong

1 Introduction

Vietnam firmly aspires to be a modern and industrial nation by 2035 with “...the goal of a prosperous people and a strong, democratic, equitable, and civilized country ...” (Constitution of the Socialist Republic of Vietnam, Article 3, 2013). These aspirations and the supporting policy and institutional agenda stand on several key transformations, one of which involves reforms of human resource training and development (World Bank/WB & Ministry of Planning and Investment/MPI of Vietnam, 2016). Regarding the 2035 aspirations, Vietnam is already

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positioned far along the way. Despite the broad acceptance of a modern and industrial country (Tran, 2015), WB and MPI (2016) have set forth five quantitative criteria. They include a gross domestic product (GDP) per capita, urbanization rate, share of industry and service and employment in GDP, a private-sector share in GDP, and Human Development Index (HDI). Except for the HDI, there has been a wide gap between the current statistics and the 2035 expected targets on the other four criteria.

A major issue inhibiting Vietnam's economy from reaching the 2035 targets is low labor productivity. Vietnam's labor productivity ranked among the lowest countries in Asia despite recent relatively high and stable economic growth (Công Thương, 2019; Dtinews, 2019; Nguyen & Kenichi, 2018). The quality of human resources is also low, ranking 11th of 12 Asian countries investigated, with an overall rating of 3.76 on the WB's 10-point measure (HR Asia, 2019). Therefore, to navigate the challenging labor background and achieve the ambitious 2035 goals, Vietnam must adopt appropriate national strategies and align implementation of workforce and human resource development (WB & MPI, 2016). The introduction of the Human Resource Development Strategy (HRDS 2011–2020) (Government of Vietnam/GoV, 2011a) at the same time as the national Socio-Economic Development Strategy (SEDS 2011–2020) has placed great emphasis on developing the country's human resources, especially high-quality human resources.

Despite the growing importance and attention attached to HRD and NHRD in bridging the gap between Vietnam's current status and aspirational destination, a lack of thorough understanding of both persists, with a predominant focus on training and development. There have been limited published studies and documents that shed light on the evolution of Vietnam's HRD and NHRD concepts or their features as national policy on socio-economic development and human resource development. Thus, this review provides an overview of NHRD in Vietnam, focusing on its evolution and conceptualization in the context of the country's unique socio-economic development. Accordingly, the knowledge provided in this review will lay a common ground for those who engage in policy-making, practice, and research, locally and internationally, for a joint effort to craft effective NHRD in Vietnam now and in

the future. Furthermore, this knowledge will contribute to the literature of HRD in an emerging economy like Vietnam where this topic is under-investigated despite its scholarly growth potential.

2 Research Purpose and Objectives

The purpose of this chapter is to provide an integrated, synthesized overview of the conceptualization, and state of national human resource development (NHRD) of Vietnam from policy, associated documents, and related literature.

To achieve the above purpose, four objectives are set forth:

- Objective 1: Explore the concepts of NHRD globally and in Vietnam
- Objective 2: Trace the evolution of NHRD in Vietnam over 30 years (1991–2020)
- Objective 3: Describe policy and implementation framework of NHRD in Vietnam
- Objective 4: Identify major features of NHRD in Vietnam.

3 Methodology

The review process primarily followed Torraco's (2005) protocol in doing integrative literature reviews and embraced Krippendorff's (2004) method of qualitative content analysis. This study's type of integrative literature review focuses on "new or emerging topics that would benefit from a holistic conceptualization and synthesis of the literature to date" (Torraco, 2005, p. 357). Analyzing the meanings of conceptual content determines the existence and frequency of concepts within texts to explore them further (Krippendorff, 2004). Since NHRD in Vietnam as national policy is an under-studied topic, integrating relevant literature by means of content analysis will generate new knowledge about developing human resources at the national level grounded in the context of Vietnam.

A search was adopted on two dimensions: content and language. Regarding the content and being guided by Objective 1, HRD and NHRD and underlying concepts were searched from major HRD-related journals and proprietary databases; with corresponding concepts in Vietnamese explored from other sources. Objectives 2 and 3 were mainly achieved through studying policy documents, notably the three socio-economic strategies over 30 years, the HRDS 2011–2020 and its respective master plan. All objectives guided the search in proprietary databases including Academic Search Ultimate, Business Source Ultimate, Education Source, ERIC (EBSCO), Proquest Dissertation and Theses-Full Text, and PsycINFO as well as popular search engines of Google Scholar and Google, varied based on the contextual background of Vietnam and international reports. Both English and Vietnamese bodies of literature were explored to ensure a substantive and extensive search.

The keywords utilized include phrases (or the abbreviations) or their combinations such as *workforce development*, *labor force development*, *human resource development* or *human capital development* or *human development policy and planning* or *training systems* or *human development* and *Vietnam* (or *Viet Nam*) within text. The timeframe for the search spanned from 1986 (the landmark year of renovation with Đổi mới policy) to the present.

4 Concept Exploration

The following sections are the description of three essential terms and concepts and their related denominations: human resources (HR), human resource development (HRD), and national human resource development (NHRD). As NHRD is the focus of the chapter, HRD and HR are explored to varying degrees depending on how they provide a relevant conceptual background for NHRD. These terms are also investigated from the linguistic and contextual perspectives in literature in both English and Vietnamese.

4.1 HR and Underlying Concepts

This section is not intended to define strictly what the term human resources means, but to explore how the term and related concepts are perceived and used in English and Vietnamese. Human resources, in its simplest understanding, refers to the people in an organization or a country. However, from the perspective of business and management, human resources are one type of resource that is used with other resources, as inputs or factors of production or elements of development. Yet, the term itself has evolved to embrace profound connotations when society becomes more complex.

As the searched key term was human resources (HR), we found a series of HR and related concepts. They are listed in English (*italics*) with their closest Vietnamese equivalents in brackets. They included *human resource* (nguồn nhân lực), *human resources* (nguồn nhân lực), *workforce* (lực lượng lao động), *labor force* (lực lượng lao động), *personnel/staff* (nhân sự), *manpower* (nhân lực), and *human capital* (vốn con người). Despite having slightly different shades of meaning, these terms, in the context of Vietnam, all refer to the people working for an organization or those being counted in the workforce of a country. Therefore, we used an umbrella term, human resources, to refer to all of the terms listed above, in the context of Vietnam. Whenever human resources refer to a function of an organization, it is named the HR function.

4.2 HRD and Underlying Concepts

As HRD has not been formally recognized in Vietnam as a field of study, we will portray HRD in Vietnam in a more exploratory manner in the context of how HRD has been conceptualized worldwide.

Swanson and Holton (2001, 2009) chronicled nearly 20 definitions of HRD in the literature. While Harbison and Myers (1964) defined HRD as “the process of increasing the knowledge, the skills, and the capabilities of all the people in the society” (p. 2), Swanson and Holton (2009) claimed HRD to be “a process of developing and unleashing expertise for the purpose of improving individual, team, work process,

and organizational system performance” (p. 4). Other HRD scholars (in chronological order, Chalofsky & Lincoln, 1983; Jones, 1981; McLagan, 1989; McLean & McLean, 2001; Nadler, 1970; Watkins, 1989, plus others) have cast HRD from different perspectives, as a process, a series of integrated/organized learning activities and experiences, a discipline, a field of study and practice, or a combination of organizational realms. Evidently, the HRD concept has evolved over time to reflect underlying social, economic, and academic development.

Across these definitions, the commonality lies in the purpose of HRD to capitalize on the resources that humans bring to the successes of individuals and organizational systems (Swanson & Holton, 2009). The HRD intent is improvement; the two widely accepted HRD pillars are learning and performance. Specifically, HRD operationalizes in organizational settings, represented by (1) individual and organizational learning and (2) individual and organizational performance (Ruona, 2000; Swanson, 1996; Yang, Watkins, & Marsick, 2004). Commonly accepted major components of HRD include training and development, organization development, and career development (McLagan, 1989; Swanson, 1995). Nevertheless, some renowned HRD scholars have expanded the boundary of HRD over the organization to embrace its activities within “community, nation, or, ultimately, the whole of humanity” (McLean & McLean, 2001, p. 322). In the same line of inquiry, human development is considered central to HRD (Kuchinke, 2010). On the other hand, Lee (2001) refused to define HRD on philosophical, theoretical, and practical grounds, claiming that HRD is “a process of becoming rather than ‘a thing of being’” (p. 327). Similarly, Kuchinke (2001) perceived HRD to be more practice-oriented. Building HRD on human capital theory, Nafukho, Hairston, & Brooks (2004) highlighted the importance of education and training for workplace learning and performance improvement.

We intend not to define HRD formally, especially in the context of Vietnam. Instead, we expected to facilitate the readers’ understanding of how the HRD concept has been envisioned.

Specifically, the literature review has revealed the following conceptual expressions of HRD. They included *human resource development* (phát triển nguồn nhân lực), *human resources development* (phát triển

nguồn nhân lực), *workforce development* (phát triển lực lượng lao động), *labor force development* (phát triển lực lượng lao động), *personnel development* (phát triển nhân lực), *staff development* (phát triển nhân viên; in some cases staff development refers to developing the administrative staff in the public sector), *human capital development* (phát triển vốn con người), and *human development* (phát triển con người). In the context of Vietnam, we use HRD as an umbrella term to refer to a field of study and practice or activities with the purpose of developing human resources at the organizational or national levels. HRD is operationalized in Vietnam to embrace training and development, strategic planning, community development, while career development, organization development, plus others, are at the fledgling stages.

By collectively reflecting on varying conceptualizations of HRD and the underlying concepts, we will provide an overview of HRD, necessary for the introduction of NHRD and NHRD in Vietnam in the sections that follow.

4.3 NHRD and Underlying Concepts

Interest in NHRD—a focus on HRD as national policy—has been well established. NHRD has been defined from different perspectives. Recorded since the Middle Age as regional planned development of human resources (Russ-Eft, Watkins, Marsick, Jacobs, & McLean, 2014), HRD on a societal scale was believed to have been used first in Harbison and Myers (1964). Specifically, NHRD is

... the process of increasing the knowledge, the skills, and the capacities of all the people in the society. In economic terms, ... the accumulation of human capital and its effective investment in the development of an economy. [...] From the social and cultural points of view, the development of human resources helps people to lead fuller and richer lives, less bound by tradition. In short, the processes of human resource development unlock the door to modernization. (Harbison & Myers, 1964, p. 2)

Interest in NHRD grew at the turn of the century. *Advances in Developing Human Resources* (ADHR) published a special issue on “Human Resource Development as National Policy” (McLean, Osman-Gani, & Cho, 2004). The conceptualization and operationalization of NHRD in the countries studied were shaped by their circumstances and characteristics. The move toward elevating HRD to the policy level for national development has since captured growing attention of academics and professionals worldwide. Another collection focusing on NHRD in transitioning economies was published by Lynham, Paprock, and Cunningham (2006), further advancing the knowledge about this topic.

Lynham and Cunningham (2004) stated that NHRD is “a process or processes of organized capability and competence-based learning experiences ... to bring about individual and organizational growth and performance improvement, and to enhance national, economic, cultural, and social development” (p. 319). While Metcalfe and Rees (2005) defined NHRD as “the development of a ‘national’ policy of skills development and is normally devised by governmental administration departments” (p. 457), Oh, Ryu, and Choi (2013) defined it as “a system that a country possesses in order to acquire, develop, and utilize its human resources” (p. 156). Despite being “impossible to provide an overarching definition of NHRD” (McLean, 2004, p. 271), NHRD can be simply perceived as developing human resources at the national level.

Cho and McLean (2004) predicated the variability of the NHRD concepts, yet they saw five emerging models for NHRD: centralized model, transition model, government-initiated model, decentralized/free-market model, and small-nation model. Cho and McLean (2004) and Lynham and Cunningham (2006) highlighted that an individual country may not strictly conform to a certain model; some components of a model that are observed in one country may primarily fit in another country’s model.

More broadly, Alagaraja and Wang (2012) discussed nine NHRD model categories inside and outside HRD literature. The HRD literature revealed three types. First, political, economic, and sociocultural systems prevalent in several countries made up one type (Cho & McLean, 2004; Lynham & Cunningham, 2006). Second, the individual case study approach was adopted to inspect another type (e.g., Ke, Chermack, Lee,

& Lin, 2006; Rao, 2004; Rao & Varghese, 2009). Third, Cho and McLean's (2004) study on five NHRD models was the last type, in which the role of government in national economic development was centered. The non-HRD literature unveiled six other models more descriptive of the developed countries; thus, the literature generates a broader understanding of the current status of NHRD (Alagaraja & Wang, 2012). Of the six models, two were more applicable to diverse Asian national contexts. One involved describing the role and extent of state involvement in vocational and career education, in addition to workplace training at regional and local levels. The other compared national systems of skills formation and was characterized by Alagaraja and Wang (2012) to be more conducive to diverse Asian national contexts as similarities and differences of diverse national contexts were considered.

There have been over 150 studies on NHRD since 2006, and NHRD publications have soared over nearly 50 years. Garavan et al. (2018) suggested multilevel investigations of NHRD incorporating macro, meso, and micro levels of analysis. Macro analysis involves studying global forces regarding the business environment, labor market, mass migration, and cultural differences, plus others. Meso level analysis is based on the above factors corresponding to the national level. Micro-level analysis focuses on NHRD-related elements such as institutions, actors' perception and behaviors, social capital, and interventions and strategies. Garavan et al. (2018) provided five guidelines in future research on NHRD, including (1) formulate research questions that requires cross-level analysis, (2) combine quantitative and qualitative methodologies, (3) investigate NHRD comparatively based on theoretical justifications, (4) focus on the impact of multilevel conceptualizations of NHRD over time, and (5) clearly define the construct under investigation and select appropriate theory.

The description of NHRD definitions and models above has given an important background and a useful frame of reference for studying NHRD in Vietnam. Particularly, NHRD is broadly defined as developing human resources at the national level. NHRD as national policy of Vietnam will be delineated further in the succeeding sections. As a result, a proposed definition of the current NHRD in Vietnam is put

forward based on a detailed analysis of the evolution of HRD at the national level over 30 years, from 1991 to the present.

5 NHRD in Vietnam—Context and Evolution

The conceptualization of NHRD in Vietnam has gone through an important evolution to form its establishment. We analyzed NHRD in Vietnam as national policy for developing human resources from a socio-economic HRD perspective. The development timeline charted the socio-economic history, from the reunification year of 1975 to around 1990/1991, then the NHRD evolution took shape over the next three decades, 1991–2020.

5.1 Development Timeline of NHRD in Vietnam

Development of HRD in Vietnam at the national level has passed through distinct stages along with the national history and socio-economic development. Figure 1 is the description of the important landmarks. Five stages are shown, including the 1976–1985 period, with 1986 marking a turning point until around 1990/1991. The following three stages, 1991–2000, 2001–2010, and 2011–2020, reflected three important decades connecting to the 10-year socio-economic development strategies (abbreviated as SEDSs, i.e. SEDS 1991–2000; SEDS 2001–2010; SEDS 2011–2020). Noticeably, the SEDS 2011–2020 signaled a transition into a time for NHRD in Vietnam, with the introduction of the strategy for developing human resources of Vietnam, namely, Human Resource Development Strategy 2011–2020 (HRDS 2011–2020) (GoV, 2011b). Each stage in this development timeline is analyzed in terms of historical and economic conditions and the link to developing human resources.

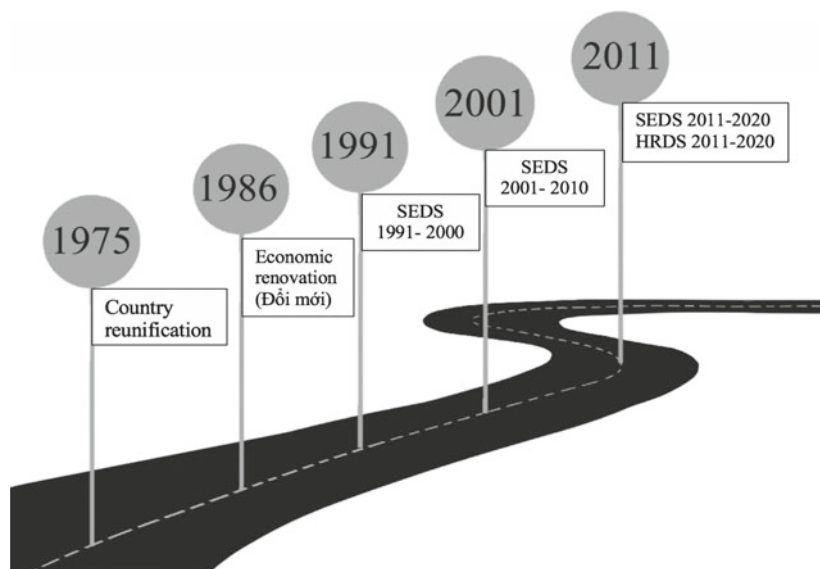


Fig. 1 Development timeline of Vietnam's NHRD (Source The authors of the chapter)

5.1.1 HRD in the 1976–1985 Period

After three decades of war, Vietnam reunified and became a socialist republic in 1975. During the 1976–1985 period, the government of Vietnam considered central planning to be a key feature of the socialist economy. Specifically, state and collective enterprises were fundamental, and private ownership and sectors were to be eliminated. The economy remained dominated by small-scale production, low labor productivity, material and technological shortfalls, and insufficient food and consumer goods in the second five-year plan¹ (1976–1980) period (Cima, 1989). The third five-year plan (1981–1985) emphasized the development of industry and agriculture, decentralized planning, and a focus on improving management skills of government officials; yet the overriding economic goals were not attained (Cima, 1989).

¹First five-year plan (1961–1965) applied to North Vietnam only, revealed in 1960 at the third National Congress of Vietnam's Workers' Party for the period 1961–1965.

In terms of human resource development, a search in the Vietnamese-language literature revealed a predominant use of the term *lao động*, which is literally translated into English as *labor*. A variety of related terms included *laborer*, *labor force*, *heavy labor*, *type of laborers*, *the laboring population/people*, *pay per labor hour*, *labor workers*, *social labor*, and *manual labor*, etc. Given the poor economic condition of a country hit hard by wars, different uses of terms centering around *labor* emphasized the national demand for physical labor during the 1976–1985 period. The more physical labor was available in quantity, the better it was for the economy. Labor skills, therefore, were barely a priority. Instead, manual [unskilled] labor was in great need. The economy tended to focus primarily on the use of physical strength necessary as one important factor of production, equal to others. Efficiency or innovation capacity, as implied in the concept of HRs, was virtually non-existent during 1976–1985, not to mention investment in human resources, as in the notion of human resource development.

5.1.2 HRD from 1986 Until Around 1990/1991

The 1986–1991 period is labeled the *Đổi Mới* (renovation) period as it witnessed significant changes in economic, political, and social spheres. The year 1986 signaled the beginning of a new path of economic renovation for an impoverished Vietnam. *Đổi Mới* was launched in the Sixth Party National Assembly, marking a move from bureaucratic centralized management based on state subsidies to a multi-sector, market-oriented economy, open to world markets (MPI & WB, 2016). A series of major market-oriented reforms were pushed through, such as abolishing goods rationing, raising certain administered prices to the market-clearing level, liberalizing domestic and foreign trade, and devaluating the national currency, the Vietnam Dong. Important laws were approved, including The Foreign Investment Law (1988), The Just 1988 Land Law, The Law on Export and Import Duties (1989), and The Enterprise Law and The Law on Sole Proprietorship (1990). In 1991, the first export processing zone was established near Ho Chi Minh City.

As the fourth five-year plan (1986–1990) and per regulation of the Communist Party of Vietnam’s (CPV) Document (1986–1991) marked the important second wave of economic reform after the first wave in 1975–1985, the perspective on labor and workforce was vividly economics-oriented. The common terms and phrases often found in literature about this period include *labor*, *productivity*, *employment*, *human*, or *liberation*, embedded in *economic sectors*, *economic structure* or *production forces*, among others. For instance, laborers were initially freed from unreasonably restrictive mechanisms to be on their own and seek ways to find jobs, increase income, and take part in community activities (CPV, 2015; Do & Nguyen, 2013). People were placed at the center of the national policy for development (Nguyen, 2016; Pham, n.d.). Transformation at the enterprise management level and developing entrepreneurship have been initiated since 1986 (Do Benoit, 2016). Amid the dilemma of the over-abundant labor and cheap-labor mentality on the part of employers prevailing in that 1986–1991 period, Hainsworth (1993) assessed the potential for a new human strategy for development in Vietnam. In short, the view of HRD in this period embraced the characteristics of the Đổi Mới economic policy.

5.2 Evolution Toward NHRD in Vietnam Over 1991–2020

Over a period of 30 years, NHRD in Vietnam has evolved due to the growth and requirements of the country’s socio-economic development, starting from the SEDS 1991–2000 (Communist Party of Vietnam/CPV, 1991), then the SEDS 2001–2010 (CPV, 2001), and finally the SEDS 2011–2020 (GoV, 2011a). This section first presents the overall contextual background in Vietnam since 1990 to present, followed by the evolving concepts of Vietnam’s HR, HRD, and NHRD. It concludes with the important characteristics of the evolution toward NHRD in Vietnam between 1991–2020.

5.2.1 Contextual Background

Since 1990, among the significant efforts made, every ten years the government of Vietnam has promulgated the SEDS to guide the country's socio-economic development. The SEDSs provide an overarching orientation for the country's development for the next decade, including development of its human resources. SEDS 1991–2000 was proposed when Vietnam, a less developed country, had not yet come out of the economic crisis despite certain positive changes from the previous period. The economic structure revealed imbalance with heavy dependence on agriculture. Starting in 2001, the country made significant achievements in many areas of socio-economy and people's lives but was still stuck with the status of a poor and underdeveloped country. SEDS 2001–2010 aimed for accelerated industrialization and modernization along the socialist orientation, laying the foundations for the nation to become basically an industrialized country by 2020. SEDS 2011–2020 targeted to build the country to be an industrial one with socialist orientation when Vietnam entered the medium income level group of developing countries with many important achievements in economic, cultural, and social fields. In short, for over 30 years of development since the *Đổi mới* of 1986, Vietnam's socio-economic development has gained significant achievements, in which the contribution of HRD has been elevated to an increasingly important role at the strategic level within the national system.

5.2.2 Evolving Conceptualization of Human Resources

In the three SEDSs, three terms *human* or *people* (*con người*), *labor* (*lao động*), and *human resource(s)* (*nguồn nhân lực*) have been commonly used without clear definitions for each of these terms. For the purpose of conceptualization, HRD is vital to understand how these terms are used in terms of its scope, foci and approaches over the 30 years. Generally speaking, while human or people captures the largest meaning, referring to all the Vietnamese people, labor force or workforce includes those of working age from 15 and able to work (National Assembly, 2019).

The most ambiguous term is human resource(s) as its definition has not been found in HRD-related government's documents, such as SEDSs, Human Resource Development Strategy (HRDS 2011–2020) (GoV, 2011a), and Human Resource Development Master Plan (HRDMP 2011–2020) (GoV, 2011b). However, human resource(s) has emerged in the SEDSs with increasing frequency, occurring 3 times in 1991, 6 in 2001, and 15 in 2011, indicating that HRs has become familiar and gradually conceptualized in the context of Vietnam's socio-economic lives. Although HRDS and HRDMP do not provide a specific definition of HRs, their specific targets set for HR groups can help to define the concept of HRs in Vietnam. Human resources at the national level in Vietnam refer to the workforce or labor force in general and some specific groups, especially talented or highly qualified HRs in focused fields.

5.2.3 Evolving Conceptualization of HRD and NHRD

HRD at the national level in Vietnam was analyzed for conceptualization from the following aspects: its position in the SEDSs, the government's direction related to HRD, and its developmental approaches. First, HRD has gained its importance in the SEDSs. Specifically, HRD was perceived in the 1990s to be one of many solutions (as in SEDS 1991–2000) and served as one of several key measures in the 2010s (as in SEDS 2001–2010); recently, it has become one of the three strategic breakthroughs and a foundation to a most important advantage in reaching the SEDS goals (as in SEDS 2011–2020). HRD at the national level has received increasing importance in SEDSs; hence it has significantly contributed toward the achievement of Vietnam's socio-economic development goals. Thus, HRD at the national level in Vietnam can be perceived as a means for the country to achieve the status of a modern industrial nation in the years to come.

Second, the long-term vision to become a modern industrial nation has been broken down into more specific goals every ten years and elaborated in SEDSs. Similarly, NHRD objectives have adjusted to align with the SEDSs, particularly the economic structure in each decade.

When the country restructured its economy from an agricultural to an industrial focus in the early 2000s, HRD shifted its objectives from job creation and utilization of laborers' production power in labor-intensive industries, especially agriculture, to job creation and improvement of workforce employability to meet the demands of HRs for industrial sectors and localities. In SEDS 2011–2020, to meet the country's sustainable development, an overarching requirement for the nation's socio-economic development, the general objective of HRDS 2011–2020 was to make Vietnam HRs a foundation and the most important advantage. With that aim, HRDS focused on building comprehensive and balanced HRs with reasonable structure at all levels of individuals, sectors, localities, and the nation, while heavily investing on a highly qualified and talented workforce.

Finally, the changes in the NHRD objectives have impacted developmental approaches that NHRD has applied in the process of policy-making and implementation, including education and training and the interplay of centralization and decentralization. Most importantly, improvement of education and training and a vocational education system is the national approach. In particular, training in the 1990s was primarily in the form of informal in-house training and knowledge transfer at the workplace, while various training opportunities were provided by education and vocational training institutions in the 2000s. Further enhancing the quality and quantity of the trained and highly qualified and talented workforce requires government agencies to formulate and deploy education and vocational training development strategies in the 2010s. Second, the interplay of centralization and decentralization in HRD practices has been increasingly improved through the strategic and monitoring role of the central government and the implementation of the local governments. In Vietnam, socialization takes the form of privatization in HRD practices, especially in higher education and vocational training, in terms of management, financial mobilization, and the market. It is this tendency that illustrates vividly the interplay of centralization and decentralization.

In short, the analysis of SEDSs in the three periods from 1990 to 2020 has identified some important characteristics describing the evolving conceptualization of NHRD in Vietnam over the last 30 years.

Specifically, HRD at the national level in Vietnam (1) has served as an increasingly significant means to the success of SEDSs, (2) is a means unto itself through investing more intensively in the development of trained workforce and high-quality and talented HR groups, (3) has utilized higher education and vocational training as two strategic domains to achieve its goals, and (4) is operated based on a framework of more dynamic interplay between centralization and decentralization.

The changing socio-economic context of Vietnam since the country's reunification, especially 1991–2010, has paved the way for the introduction of an official national strategy to develop HRs in 2011. For the sake of clarity in conceptualization, we labeled “HRD at the national level” to refer to the phenomenon before 2011 and “NHRD in Vietnam” since 2011 to refer to that official national strategy, HRDS 2011–2020. NHRD in Vietnam, will be studied in-depth in the following section.

6 NHRD in Vietnam 2011–2020

The following sections will include an in-depth analysis of NHRD in Vietnam 2011–2020. We begin with a description of the policy and implementation framework, followed by a proposed definition of NHRD in Vietnam in the current period. The concluding section sketches out major features of current NHRD in Vietnam.

6.1 Policy and Implementation Framework

In light of the national Socio-Economic Development Strategy (SEDS, particularly Goal 9) for the same time period 2011–2020, Vietnam has mapped out the Human Resource Development Strategy (HRDS 2011–2020) and Human Resource Development Master Plan (HRDMP 2011–2020). This is the first time Vietnam has formally and officially developed a strategy on developing human resources in parallel with the national socio-economic development strategy. Moreover, HRDS 2011–2020 was devised along with its master plan spanning an identical time horizon. This fact serves as strong evidence that Vietnam has

paid close attention to developing its HRs, not only at the strategic level but down to the execution level. The national HRDS 2011–2020 and HRDMP 2011–2020 fall into what is called the policy-level NHRD of Vietnam that focuses on two clusters: (1) raising the intellectual power and working skills and (2) the physical strength of HRs (HRDS 2011–2020).

HRDS 2011–2020 has set specific HRD targets for the two five-year socio-economic development plans, SEDP 2011–2015 and SEDP 2016–2020, in the two clusters mentioned above. As for the intellectual power and working skills cluster, the following targets are covered: rate of trained laborers, rate of vocationally trained laborers, the ratio of university and college students per 10,000 people, number of international-standard vocational schools, number of international-standard excellent universities, and the number of quality human resources in six breakthrough fields. The other cluster on the physical strength of HRs consists of average life expectancy, young people's average height, and malnutrition rate among under-5 children. As can be seen from the SEDS and SEDPs, for Vietnam to realize its modernization and industrialization goals by 2020, higher education and vocational training have become the key domains for developing high-quality HRs.

The following figure (Fig. 2) describes the policy and implementation framework at two levels: policy and implementation. The upper part of the framework locates HRDS within SEDS in the same time frame, 2011–2020, and within the two plans, SEDP 2011–2015 and 2016–2020. The Ministry of Planning and Development (MPI) is an administrative government agency, and the Ministry of Finance is in charge of funding and financial matters. The lower part of the framework depicts the implementation at the local level, with the Ministry of Education and Training (MOET) and the Ministry of Labor, Invalids, and Social Affairs (MOLISA) being the specialist ministries. International cooperation is an important component in the framework. Details on the flow and interaction of different levels in the framework are described below.

HRDS 2011–2020 lays a foundation upon which relevant ministers, heads of ministerial-level agencies, heads of government agencies, chairpersons of provincial-level People's Committees, and leaders at related

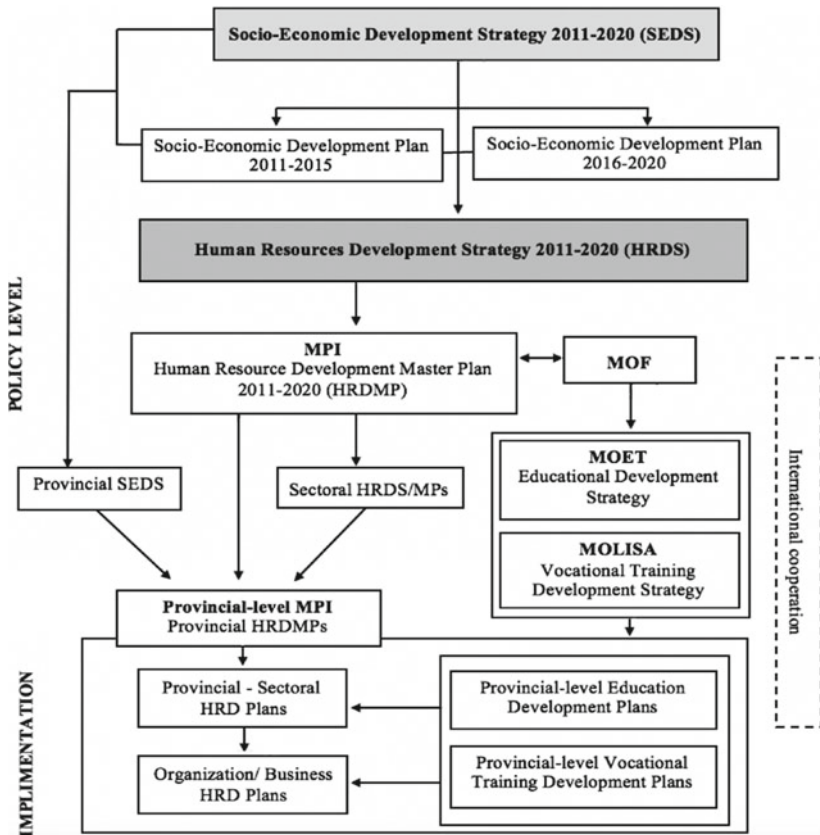


Fig. 2 Policy and implementation framework (Source The authors of the chapter)

agencies serve as key agents implementing the HRDS. HRD planning and implementation are important tasks of ministries, industrial sectors, provinces, and cities, ensuring that the demands of HRs are met, and the development of sectors and localities balanced.

In order to deploy the SEDS, SEDPs, and HRDS/HRDMP 2011–2020 goals, a mechanism of implementing government entities and agencies has been set up. The government of Vietnam in SEDS and SEDPs nominates the MPI to evaluate periodically and annually review the HRDS to ensure its achievement. The HRDS specifies

30 action programs (16 under “Building, Supplementing and Developing the General Legal Framework and Policies on HRD and 14 under “Human Resource Forecast, Formulation and Implementation of Human Resource Master Plans, Programs, and Projects”). The MPI also takes charge to complete the HRDMP. Reflecting both the HRDS and HRDMP along with the Law on Education, the MOET sets up the Education Strategic Plan 2011–2020. Similarly, the MOLISA is guided by the HRDS/HRDMP and the Law on Vocational Training to formulate Vocational Training Development Strategies 2011–2020 (GoV, 2012b). In addition, the MOF is in charge of mobilizing and balancing resources, especially HRD funding. These strategies at the line ministry level are meant to mirror the national requirements for accelerated development in high-quality HRs.

At the provincial level, People’s Committees and heads of related agencies are key to implementing local HRDS. People’s Committees are in charge of approving SEDS for their respective provinces and cities. Similar to the national level, provincial-level Planning and Investment Departments are standing bodies in charge of formulating, supervising, and evaluating the implementation of local HRDMP plans and reporting to the People’s Committees. Provincial sectors and ministries share responsibilities and functions with those at the national level with regard to implementing HRD plans. At the provincial level, each ministry establishes their HRD plans based on the SEDS, HRDS, HRDMP, provincial SEDS, and their own development strategies.

In the overall picture of NHRD in Vietnam from the policy and implementation perspectives, the role of international cooperation has been emphasized. The government of Vietnam has collaborated closely with international organizations in implementing its HRD policy. The cooperation takes the form of recommended inputs for SEDS and SEDP per period, reform recommendations, monitoring and evaluation, among others. Such cooperation will be examined later in detail.

6.2 Conceptualization of NHRD in Vietnam 2011–2020

The analysis of HRD evolution between 1990 and 2020 with a focus on the formalization of NHRD in the 2011–2020 period has proven that before 2011, Vietnam apparently had policies designed to develop its workforce. Approval of HRDS 2011–2020 in April 2011 marked the moment Vietnam officially adopted NHRD as a national policy. This underscores the importance of conceptualizing NHRD in Vietnam at the present time by demonstrating what NHRD as a national policy means and how it is associated with Vietnam's socio-economic development. First, NHRD is a means or strategic intervention that facilitates the target of the country's SEDSs of becoming a modern industrial country. Thus, the goals and objectives of NHRD are in alignment with the SEDSs' missions and visions at each stage of the country's development. Second, NHRD as a means unto itself focuses on developing employability-related competencies of the workforce in general, especially trained workforce and high-quality and talented HR groups. In addition, NHRD in Vietnam must meet and rationalize the HR requirements of various sectors and localities and contribute to their development. Higher education and vocational training have also been identified as the key HRD strategy. Finally, the interplay of centralization and decentralization serves as a framework for NHRD operation at multiple levels.

Thus, an analysis of the evolution of NHRD in Vietnam based on the government's policy documents has provided the basis for proposing the following initial and current definition of NHRD. This definition pertains to the 2011–2020 period, being reflected on respective SEDS, HRDS, and the related HRDMP as the current NHRD in Vietnam:

Vietnam's human resource development for the 2011-2020 period is a strategy at the national level (Vietnam's NHRD 2011-2020) to develop human resources (HRs), on the basis of meeting the HR needs of different sectors and localities in an appropriate manner.

Vietnam's NHRD focuses on improving employment-oriented competencies and developing and managing the workforce, especially high-quality and talented people, through higher education and vocational training. Vietnam's NHRD 2011-2020 contributes strategically to realizing Vietnam's overall goal of a modern industrial country.

6.3 Key Features of the Current NHRD in Vietnam

The key features of NHRD in Vietnam include NHRD as national policy, immediate emphasis on workforce training, and international cooperation in implementing NHRD in Vietnam. Each feature is analyzed in detail below.

6.3.1 NHRD as National Policy

NHRD in Vietnam as national policy can be analyzed according to the following characteristics: (1) serving as a means of achieving the national socio-economic development goals, (2) a means unto itself, (3) higher education and vocational training serving as a strategic solution-driven approach, and (4) the interplay of centralization and decentralization.

NHRD as a national policy is shaped by Vietnam's circumstances and characteristics. NHRD is presented in official documents (i.e., HRDS and HRDMP) and approved by the Prime Minister. Since 2000, NHRD has served as a means of meeting the goal of Vietnam becoming a modernized and industrialized country by 2020 and aspiring to modernity, industrialization, and a higher quality of life by 2035. NHRD as national policy directs HR-related strategies and plans and is implementation under the responsibilities of the provincial and ministerial government agencies. Notably, conceptualization and operation of NHRD in Vietnam is strongly influenced by the country's unique circumstances, which reflects a common trend among developing countries in their transitional society, such as China, the Philippines, South Africa, Morocco, and Brazil (Lynham et al., 2006).

Regarding the objectives of NHRD, it is focused on the macro and micro levels, government, and individuals, respectively. Vietnam shares

similar objectives with the greater international perspective, focusing on employment competencies, such as skills improvement (Lynham & Cunningham, 2004), and capacity and competence-based learning experiences (Metcalf & Rees, 2005). Nevertheless, one unique aspect of NHRD in Vietnam is creating HRs with reasonable structure that rationalize HR requirements at the sector and local levels, contributing to their socio-economic development. NHRD in Vietnam centers on workforce development sharing a similar exclusive approach to NHRD in other countries (e.g., Nair et al., 2007). However, this definition seems to be of a narrower scope compared to definitions that expands NHRD to cover human development of a nation (McLean, 2004).

Higher education and vocational training are perceived as the foundational strategic interventions to meeting NHRD goals and objectives, as codified in formal documents such as the SEDSs, HRDS, SEDMP, Education Development Strategy, and Vocational Development Strategy. Generally speaking, several solutions have been proposed to improve the quality and increase the accessibility of the workforce to vocational training and higher education opportunities, focusing on developing education and vocational training standards, strengthening education management, and improving cooperation among businesses and education and training institutions. Especially in terms of higher education for developing high-quality and talented HRs, HRDS proposes a comprehensive renovation of the education administration mechanisms as a breakthrough solution. Examples include applying standardized systems and technology, improving education quality management and teacher and educational administration, building tertiary institutions that meet international standards, and promoting overseas training and international exchange and cooperation.

Due to the socialist-oriented market economy that the Vietnamese government has pursued, an interplay of centralization and decentralization serves as a framework for NHRD operation at all levels of management, finance, and market orientation. Regarding management, central control and the rise of a free-market-influenced mechanism allows the central government to determine the overall objectives and direction of NHRD while transferring authority and responsibilities to lower

governmental agencies and the private sector to implement and evaluate HRD-related plans. Financially, while state budget funds maintain key financial resources, fiscal decentralization is implemented through capital mobilized from various resources, including funds from individuals, organizations and businesses, and overseas. Finally, from a market perspective, the government of Vietnam and the public sector are in charge of implementing and providing essential services and making sure that different types of HRD initiatives and programs are properly implemented. Conversely, the effect of a market economy on HRD promotes socialization or privatization, especially education and training programs based on the HRD requirements of provinces, sectors, organizations and businesses, and market mechanisms. HRDS 2011–2020 and other HRD and education-related government documents promote the socialization (xã hội hoá) in the form of privatization of HRD at the national level, implying “individualization of responsibilities,” “privatization of public goods,” and “mobilization of resources” (Nguyen, 2018, pp. 1–2). The socialization approach in HRD is primarily applied in education and training, through the involvement of different education and training providers (government—, community—, and privately owned training institutions), various social potentials (schools, families, individuals and the society) and financial resource mobilization (the government, economic sectors, organizations, individuals, and foreigners).

In short, as a developing country, national HRD in Vietnam shares core principles underlying their conception of HRD in many other developing countries that Nair and colleagues concluded in their study (Nair et al., 2007): (1) national HRD has been viewed from the political and socio-economic perspectives, (2) the government takes the leading role in planning and implementing HRD policies, (3) education and vocational training plays the most critical solutions of NHRD, and (4) improving the quality of education and vocational training aims to train more high-quality HRs.

6.3.2 Immediate Emphasis on Workforce Training

Although education and training are the two major areas of development for NHRD in Vietnam, training is a frequently employed buzzword in development agendas of Vietnam. The term *training* (*đào tạo*) appeared with high frequency in the HRDS 2011–2020. Training is considered the largest component of HRD; training and development (T&D) is a major realm of focus within HRD (Swanson & Holton, 2001). According to them, training is “the process through which skills are developed, ... in order to help individuals ... to become more effective and efficient in their work” (p. 204); development is “the planned growth and expansion of the knowledge and expertise beyond the present job requirements” (p. 208). It could be suggested from these definitions that training is oriented toward one’s current job, while development is longer-term beyond the current job.

In the context of Vietnam, to realize the goal of becoming a modern industrial country by 2035, the labor skills needed for industrialization require significant job-oriented training. On a national scale, vocational training is directed toward creating a workforce immediately demanded by industry. The nation’s current industrial HR remains well below the required level.

Benchmarking against the World Economic Forum’s (2017) Global Human Capital measure of work-related knowledge and skills within particular age groups/generations in 130 countries, Vietnam was positioned very low on specialized skills used at work (Know-how, 120th) and low on the level of formal education of younger and older generations as a result of past education investment (Capacity, 85th). Vietnam ranked high on skill application and accumulation through work (Deployment, 6th) and average on formal education of the next-generation workforce and continued upskilling and reskilling of the current workforce (Development, 67th). These scores combined reflect the population’s potential knowledge and ordinary skill application as well as upskilling efforts. However, the biggest concern is about insufficient breadth and depth of work-related specialized skills, as well as large formal education gaps among generations. An economy working toward industrialization requires increases in high and medium-skilled

employment shares, economic complexity, and the availability of skilled employees (World Economic Forum/WEF, 2017).

Another justification for the popular role of training in NHRD concerns the country's low labor productivity and quality. Productivity is the economic aspect of HRD, as it pertains to HRD's performance goal at the national level. Per purchasing power parity using 2011 as base year, Vietnam's labor productivity in 2017 was 7.2% of Singapore, 18.4% of Malaysia, 36.2% of Thailand, 43% of Indonesia, and 55% of the Philippines (Công Thương, 2019). Vietnam's HR quality scored 3.39 out of 10 while Malaysia was 5.59 and Thailand 4.94 (Lao Động, 2017). The unskilled or technical workers without degrees/certificates in Vietnam's youth aged 15-24 accounted for 79.75% of the youth labor force, with the unemployment rate in 2015 accounting for 45.7% of total unemployed (GSO, 2011–2015; as cited in Trinh, 2019). A total of 42.4 million workers have not been trained to satisfy the necessary level of technical expertise demanded, and an aging population could exert a negative impact on Vietnam's productivity in the future (General Statistics Office of Vietnam/GSO, 2019). Therefore, there remains substantial room to increase quality in vocational training to meet the labor market's requirements.

In case of the suggested ratio of 1:10:100 researchers to engineers to employees with good skills in organizational functions being applied to drive productivity and add production value (MPI & WB, 2016), the current emphasis on vocational training to develop HRs on a national scale reflects Vietnam's immediate need if it is to realize its master goal of becoming a modern industrial country by 2035.

6.3.3 The Role of International Cooperation in NHRD Implementation

In implementing NHRD and other strategies concerning HRD, Vietnam has cooperated with and received substantial assistance from international agencies and donors. Major international organizations included the WB, United Nations (UNDP, UNESCO, plus others), Asia-Pacific Economic Cooperation (APEC), Organization for Economic

Cooperation and Development (OECD), and International Labor Organization (ILO). Bi-country development cooperation projects are in operation with Japan (e.g., Japan International Cooperation Agency, or JICA), Australia, Ireland, and Korea, among others. All of these organizations have set out support plans that align with the national SEDS 2011–2020, SEDPs 2011–2015, and 2016–2020, and HRDS 2011–2020 along with the associated HRDMP. Their support ranges across a variety of development areas including education, higher education, vocational training, human development, and the like.

Due to the chapter's scope, we focused on the cooperation directly linked to the HRDS 2011–2020 and its master plan, via evaluation reports and related documents. First, JICA's Basic Study in HRD in Vietnam (JICA, 2012) assisted with maintaining a sustainable economic growth through developing the industry and the industrial HRs for Vietnam. The focus areas of cooperation relate to the Higher Education Reform Agenda (2006–2020) to increase the number of higher education institutions and enhance the quality of education, research capacity, and management in universities. Second, the report on Global Human Capital (World Economic Forum, 2017) stated that Vietnam's labor force has adequate current skills but has not yet achieved the ability to diversify skill sets or develop the advanced know-how. The report assumes the intrinsic value of productivity and creativity and a human-centric vision of the future of work that recognizes people's knowledge, talents, and skills as key drivers of a prosperous and inclusive society. In the long-term, capitalizing on human capital must remain a top priority for business and policy leaders. Third, the United Nations' One Strategic Plan 2017–2021 is a partnership framework between the government of Vietnam and the United Nations. The plan aligns with SEDS 2011–2020, SEDP 2016–2020, 2030 Agenda for Sustainable Development, and Vietnam's international human rights commitments, featuring the motto "Leaving No One Behind." One focus of the plan is labeled Investing in people, and quality education is one of the investments. Another important cooperation partnership is with the World Bank, highlighted through Vietnam 2035 Report (WB & MPI, 2016). Importantly, this report looks into the HR aspects of the transformation and the reform agenda that should be implemented to realize Vietnam's status

of a modern industrial country by 2035. The report's relevant recommendations are also incorporated in Vietnam's SEDP 2016–2020 and SEDS 2021–2030.

International organizations and donors' assistance have experience in working with developing countries through development projects. They have helped advance NHRD in Vietnam toward efficient implementation processes and monitoring and evaluating projects' expected outcomes, contributing to overall goal achievement.

7 Implications for Research and Practice and Conclusions

The implications for research and practice were determined based on the nature of the current chapter, with research limitations offering clues to implications for future research. The socio-economic developmental reality of Vietnam provides an essential foundation for this chapter's research and practical implications.

7.1 Implications for Future Research

In this study, as NHRD in Vietnam is positioned as a sub-system in Vietnam's socio-economic development, the initial definition and the key features of NHRD as national policy have been based primarily on an in-depth analysis of related government documents. This has resulted in two major limitations that could be addressed in future research. One limitation is that subjectivity produced by personal biases and limited perspectives may have influenced the scope of the NHRD definition and analysis of its key features. Another consequence is that while the proposed NHRD definition from an HRD perspective is necessary to initiate an HRD field of study in Vietnam, that definition might stem the dynamic nature of a potential interdisciplinary course of study.

The above limitations offer opportunities for future research implications. First, inclusion of different types of documents, such as directives, guidelines, and instructions issued by government agencies, reports made

by domestic and international organizations, and research studies would provide a more comprehensive picture of NHRD on different levels and from different perspectives. Second, future research could explore how NHRD in Vietnam is similar to and different from that of other countries that have commonalities of location, culture, economic level, and political system. Additionally, viewing HRD and NHRD in Vietnam from an interdisciplinary perspective with a diverse, interactive, and a broad range of theories and practices would be highly recommended. Finally, in developing countries like Vietnam, HRD is perceived as a cross-cutting field. Related concepts and definitions change to reflect the growth of the economy (Nair et al., 2007). Thus, it is suggested that future research examine the evolution of these concepts in updated documents and practice in Vietnam.

In reference to different NHRD models obtained from the HRD and non-HRD literature (Alagaraja & Wang, 2012), the model for NHRD in Vietnam is more inclined toward Cho and McLean's (2004) transitional model, yet it does not strictly comply with those boundaries. The transitional NHRD model applies to "countries under transition from the centralized model to a government-initiated or decentralized model" (Cho & McLean, 2004, p. 384). The Vietnamese economy has transitioned from a centralized system to a socialist government-regulated market-driven mechanism, neither government-initiated nor decentralized. Studying NHRD in Vietnam reveals modeling toward individual case studies with socio-economic, cultural, and political uniqueness (Lynham & Cunningham, 2006). The NHRD Vietnam model fits better with models described in non-HRD literature when considering the role and extent of state involvement in vocational and career education, as well as workplace training on the regional and local levels (Alagaraja & Wang, 2012). Therefore, the global literature on NHRD models should be referred to as a source for future research. Vietnam's NHRD model should reflect the vivid and unique reality and current socio-economic development prevailing in the country.

7.2 Implications for Practice

NHRD must prepare to respond to the macro, meso, and micro needs of the Vietnamese people in the coming years. We strongly recommend beginning with opening of HRD academic programs based in higher education institutions, laying a sound foundation for the establishment and development of HRD as a field of study in Vietnam. HRD programs are where knowledge of HRD and related disciplines are imparted from HRD scholars and practitioners, preparing highly qualified HRD professionals to best meet the needs of businesses in Vietnam. Such academic programs would serve as the driving force for an HRD community of scholars and professionals where HRD research and practice would be promoted. Research findings and local and international best practices could inform decision-making and implementation on all levels, from the government to businesses and individuals.

Another practical implication concerning the current emphasis on workforce training comes with proper evaluation of training. As training directly benefits HR productivity and quality, it is essential that it be conducted in an effective and efficient manner. On the whole, training is needed for a national industrial workforce. However, training bears the nature of being conducted in an organizational setting and specifically task-oriented. Thus, evaluating training programs is essential for organizations to manage performance. A popular model for the evaluation purpose is Kirkpatrick's (1998) four levels of training evaluation: reaction, learning, behavior, and results. The last two levels are often untouched or ignored, yet they are useful in training assessment, especially in the context of Vietnam where training is for the industrial HRs. Structure on-the-job training is also recommended for practice (Jacobs, 2014). International cooperation can also support training assessment.

8 Conclusions

Following its purpose of exploring NHRD in Vietnam from substantive and conceptual perspectives via the integration of relevant literature and official policy documents, the chapter has succeeded in contributing to

the literature on NHRD in Vietnam on the basis of essential conceptual grounds of HRD and NHRD in global research. The chapter proposed an initial definition of current NHRD in Vietnam for 2011–2020; yet an aspirational definition is expected and sought for in future research to reflect a vision for NHRD in Vietnam.

The chapter has approached NHRD in Vietnam with an appreciation for the uniqueness of a country emerging from poverty and war. Vietnam's macro-level orientation and deployment recognizes the critical importance of HRD for national development. From conceptualization to its major features, HRDS 2011–2020 has served as a highly important milestone in national development in terms of developing HRs. HRDS 2011–2020 has been implemented, along with SEDS 2011–2020, to achieve Vietnam's goal of becoming an industrial country by 2020 and a modern industrial country by 2035.

HRDS 2011–2020 has contributed to opening bottlenecks slowing economic development in Vietnam, some relating to HRs. As a specialized strategy for developing HRs in Vietnam, HRDS 2011–2020 has addressed issues of labor productivity and quality, moving for Vietnam toward sustainable development. We conclude with a proposal that HRD should be “considered multidisciplinary, multiperspectival, and multi-level” (Garavan, McGuire, & O'Donnell, 2004, p. 435) and call for a joint effort of policy makers, HRD scholars, and practitioners to envision NHRD in Vietnam and realize its potential contribution to national development.

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3

Vietnam's National Human Resource Development Strategy in Response to Industry 4.0: An Analysis from a Labor Market Perspective

Anh Thuy Tu and Truong Xuan Pham

1 Introduction

Humans are an important determinant of development in any country. Building and improving human resources are therefore a crucial activity of most enterprises at both the micro- and macro levels. At the microlevel, to obtain qualified personnel, enterprises must focus on recruitment and short-term training activities because of uncertainties in long-term employment. However, on a macro level, the government

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must implement long-term policies for human resources working in a variety of fields. It is reasonable for long-term policies to be executed step-by-step with comprehensive plans because the product of the policies requires that a lasting process be formed. As a result, national human resource development needs a unified direction in which common goals and joint action plans are established, i.e., an NHRD strategy. There are several models of NHRD strategy that have been built and applied in many countries: centralized, transitional, government-initiated, free market, and small nations (Cho & McLean, 2004). Currently, there is one influential factor that would change NHRD strategy: a new industrial revolution. The revolution is taking place with a lot of breakthrough technologies such as artificial intelligence, automation, 3D printing, and Internet of things (IoT). Known as Industry 4.0, it is changing the economy's mode of production, distribution, and consumption. As Industry 4.0 is creating a significant impact on labor markets, countries' labor markets are in strong need of modification in order to create a high-quality labor force that can understand and utilize the new technologies. To develop the economy in general and labor market in particular, one of the macro solutions is building an appropriate NHRD strategy to adapt to Industry 4.0 requirements.

In this chapter, based upon a literature review, we focus on four points. First, we review the NHRD strategy-related concepts and then propose a conceptual framework for the strategy. Secondly, we apply the framework to analyze Vietnam's NHRD strategy. Thirdly, we examine how Industry 4.0 impacts on NHRD strategy, thereby finding the gaps in the current Vietnam's NHRD in alignment with requirements from Industry 4.0. Lastly, we rely on the gaps to suggest some adjustments for the ongoing NHRD strategy in Vietnam in the near future.

2 Conceptual Framework of National Human Resource Development Strategy

In this section, we describe the conceptual aspect of an NHRD strategy which includes its concept, components, and classification.

2.1 Concept of NHRD Strategy

Development strategy can be seen from organizational and national perspectives. From an organizational perspective, strategy development is the process used to examine and select a strategic option that is the most promising one for the organization and then plan the allocation of the organization's resources to achieve its objectives (Chartered Management Institute (CMI), 2014). Most businesses desire to identify, nurture, and acquire new clients and business opportunities to drive growth and profitability. A development strategy at the business level describes the strategy used to accomplish that goal (Hinge, 2018). From a national perspective, Organization for Economic Cooperation and Development (OECD) (2001) defined development strategy in the context of sustainable development as an overall plan or set of plans involving instruments and working methods to solve national development challenges in order to acquire and sustain national development objectives.

In this chapter, we define development strategy as an overall plan relevant to the development of objectives in which their status is in the future and the methods for achieving the objectives are clearly stated. Normally, the future state must be better than the current situation. The process for achieving the objective is included in the plan with a timeline for step-by-step action.

Human resources (HR) is a broad concept with many definitions. Labor economics theory states that human resources are the sources of the labor supply for social production and development (Rayton, 2010). Therefore, human resources, under this theory, consist of the entire population that is capable of providing labor (Lazear & Shaw, 2007). The World Bank (WB) also agreed with the idea and defined HR as those who are at a skilled level requiring knowledge and having the capacity to

influence all existing or potential human lives for socio-economic development in a community (WB, 2000). In Vietnam, many researchers have studied the topic. According to Pham (2001), human resources are understood as the quantity and quality of the working population. The quality aspect includes mental, physical, and intellectual features of the working population in producing goods and services for society.

Combining these two concepts, NHRD strategy could be defined as a national policy to advance a set of goals including both the quantity (e.g., the number of students over 10,000 people, the ratio of trained labor over the total one, the ratio of employment of newly graduated students) and quality aspects in support of national human resources. This strategy will achieve these goals in a given period of time with the stated methods. Regarding policy, the government is responsible for building NHRD strategy usually with overall goals, including specific objectives and tasks to fulfill the objectives, appropriate solutions to achieve the tasks, and finally the responsible ministries to execute the content of the strategy through the allocation of sufficient funds. This approach to NHRD is consistent with Kim (2012), as NHRD refers to the development of a national policy to improve the well-being of its citizenry and is normally developed and implemented by government departments. NHRD strategy therefore embraces a wide range of sectors such as education, health, safety, training, economic development, culture, science, technology, and any factors influencing human resource as noted by McLean (2012).

2.2 Components of NHRD Strategy

NHRD could be comprehended variously in individual countries as each country with its own economy, political system, culture, and stage of development. However, in the final analysis, NHRD strategy is essentially a strategy built by a nation to achieve a set of human resource goals in the future. Thus, it has the following core components in NHRD strategy, i.e., overall goals, and specific objectives and tasks. Additionally, in a national strategy for human resources national features such as the political, economic, cultural, and social environment cannot be neglected

(Swanson & Holton, 2001). The initial consideration leads to the rationale of the whole plan or strategy. Finally, the capacity of executing the strategy or resource allocated to implementation should be considered.

From practices in several countries, strategies that require extreme resources which are over capacity of organization or a nation usually cause ineffective resources allocation leading to uncompleted goals at the end (Kim, Lee, & Jung, 2009). Therefore, carefully defining the resources specialized for the strategy would help enhance its scope of the strategy and its feasibility. Figure 1 visualizes the conceptual framework, focusing on core components (in the dotted line rectangle) and the extended ones (the remaining outside), of an NHRD strategy.

2.2.1 The Core Components

Overall Goals and Specific Objectives. These components are critical as the government envisions the level of development of its national human resources in the future. *Overall goals* essentially set up the ultimate aims of the strategy in the long run, whereas specific objectives are the concretization of the overall goals that are usually obtained in the short run. They could be listed by theme and timeline. Obviously, they must represent a significant improvement over the current status, reflecting progressive changes through a monitored system of indicators. *Specific objectives* should be embedded in an indicator system, which determine whether the strategy's implementation will be successful. If the indicators are too ambitious, the strategy will probably fail. If they are not ambitious enough, the strategy will not create competitive human resources. In addition, the indicator system guides all activities in the strategy to operate in a consistent and coherent manner. Tasks are the work that needs to be finished from the government's view to achieve the objectives and further the overall goals of the strategy. They should be clear, feasible, and measurable so that the outcomes can be compared to the indicators system in objectives in order to conclude the objectives were accomplished or not.

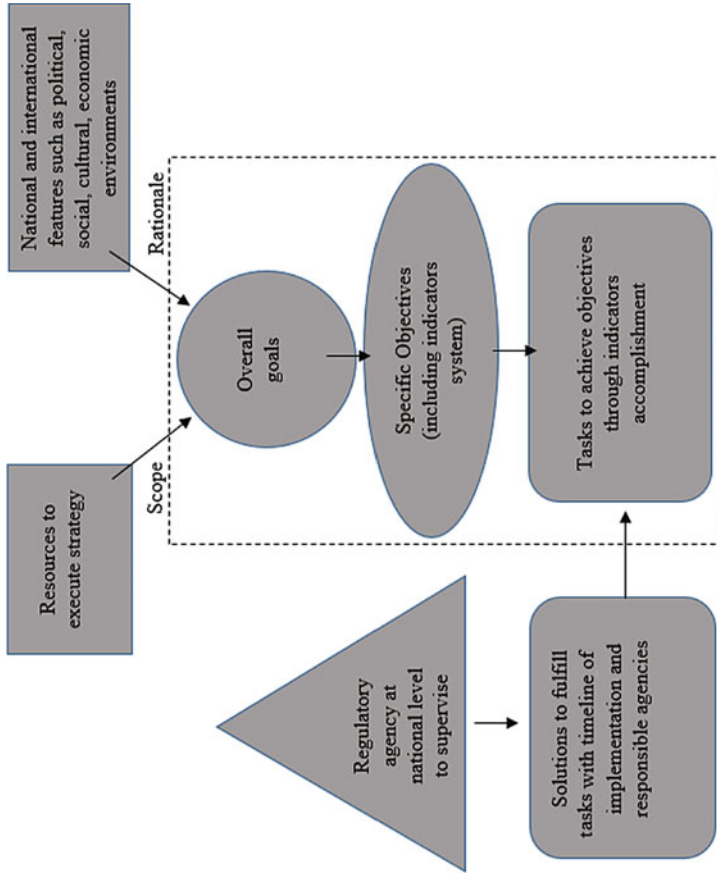


Fig. 1 Conceptual framework of NHRD strategy (Source The authors of the chapter)

2.2.2 The Extended Components

Rationale. The rationale describes the current state of the national human resources and the vision of the country and its human resources in the future. It includes a description of international and domestic environments affecting the development of national human resources. It leads to several requirements for human resources to be developed through specified methods that fit under NHRD goals and objectives. The overall goals are mostly qualitative and specific objectives are mostly quantitative.

Scope. Scope of the strategy includes the contents, the level of authority, and timeframe. The contents of the NHRD strategy are embodied in the overall goals, objectives, and tasks. In terms of levels of authority, the national level agencies are in charge of setting overall goals and objectives embedded in an indicator system while responsible agencies are responsible for implementing specific tasks through indicator accomplishment. For an NHRD strategy, the timeframe for implementation cannot be shorter than one year.

Solutions with timeline of implementation and responsible agencies. Each task and a corresponding solution must be systematically designed to achieve each objective. For each objective, the government needs to develop a step-by-step schedule compatible with the overall goals. In accordance with the identified solutions, the government also needs to assign a ministry or government agency to implement the solutions with available funds to help them fulfill the task.

Regulatory agency. The regulatory agency which is in charge of supervising the implementation of the strategy of the assigned agencies could be newly established or already exists. Then the regulatory agency periodically assesses the efficiency of the strategy in order to make timely adjustments.

While the core components clarify the country's goals for its HRs and what things it has to do, the extended components add supporting details to strengthen the reasonability and feasibility of the strategy by answering questions relating the rationale of why the country has to develop its HRs and how the country implements specific tasks to accomplish objectives and overall goals within a specific timeframe.

2.3 Models of NHRD Strategy

Cho and McLean (2004) classified five main models of NHRD strategy. Indeed, we consider the four models, except the model for small nations. The reason is that the small nation model of NHRD strategy developed by Cho and McLean (2004) has usually been applied by a group of small nations (normally island nations) in order to gather their insufficient resources in common usage.

The next part will review each model of NHRD strategy from the labor market perspective. Labor market is selected since it strongly reflects the balance of roles between the government and the private sector (Müller, 2003). Between the two extremes, as the combination of the government and the private sector becomes more harmonized, both labor supply and demand gradually change to adopt more characteristics of the dominant side (see Table 1 for a comparison of the four models).

Different models of NHRD strategy define different styles of their components. In general, the centralized and transitional model with the controlling role of government usually have rigid objectives; entities to implement the strategy are government agencies. Compulsory solutions in the model include rules and regulations. Others solutions in the model could be encouragement and cost–benefit incentives.

3 Impacts of Industry 4.0 on NHRD Strategy

Even Industry 4.0 is recognized widely but so far its presence is still limited to confined sectors. The proliferation of Industry 4.0 at the microlevel is ambiguous, especially in the developing countries, which lack the necessary technological background for the Industry (Asgar et al., 2020). However, the governments in these countries are highly aware of its presence and potential impacts focusing on the labor market. Therefore, this section will analyze the impacts of Industry 4.0 on NHRD strategy through the labor market, which is in line with the classification of NHRD strategy models in the previous section.

Table 1 Features of labor market in countries applying the NHRD model

Model	Nature	Features of labor market in country applying the model	Typical countries applying the model
Centralized	Planning and implementation of NHRD strategy are executed by central government	<p>Labor supply: Abundant but low-skilled</p> <p>Labor demand: Heavily dependent on state sector, low demand from private sector</p> <p>Supporting system: Education system struggling at general level; vocational training and tertiary education are weak</p> <p>Labor market stays at a primary stage; labor law is still ineffective</p>	China, Middle Eastern countries, South Korea in the past
Transitional	Planning and implementation of NHRD strategy are executed by three parties (central government, labor union and enterprises). This model reflects the process of moving away from centralized model	<p>Labor supply: Abundant but medium-skilled</p> <p>Labor demand: Balanced between state sector and private sector</p> <p>Supporting system: having an adequate general education system; vocational training and tertiary education are still weak</p> <p>Labor market starts to develop; labor law is in completion</p>	South Africa, Thailand, Malaysia, South American countries

(continued)

Table 1 (continued)

Model	Nature	Features of labor market in country applying the model	Typical countries applying the model
Government-initiated	Indicators especially job standards are built by enterprise's associations following on initiation of central government	<p>Labor supply: abundant and high-skilled</p> <p>Labor demand: in high demand, mostly from private sector</p> <p>Supporting system: general and tertiary education are well-developed; vocational training is effective</p> <p>Labor market is completed with a full component; labor law is comprehensive</p>	Singapore, European countries (except Western region)
Free market	No intervention from central government in the labor market, private sector is accorded absolute freedom in setting up HRD planning	<p>Labor supply: Not abundant (labor shortage exists in some sectors), a part of the labor force is highly skilled</p> <p>Labor demand: in high demand, mostly from private sector</p> <p>Supporting system: Education system not only completes structure of primary and secondary, vocational, tertiary level but also postgraduate level; labor have high self-study ability</p> <p>Labor market is sophisticated; labor law is coherent and strict</p>	US, Western Europe, Japan

Source Compiled by the authors of the chapter based on Cho and McLean (2004), Lynham and Cunningham (2006) and Müller (2003)

Industry 4.0 is a comprehensive revolution affecting the labor market. It consists of enormous applications of technology with one unified digital platform. Industry 4.0 differs from previous industrial revolutions through the speed of evolution and the wide range of impacts. In manufacturing, Industry 4.0 helps create new products and services; increase productivity, flexibility, and efficiency; reduce costs significantly; and shorten the time to take goods to market, thereby reducing the prices of goods and services and enhancing product competitiveness (Schwab, 2016).

As for consumption, consumers benefit from higher quality products with more competitive prices. The consumption pattern changes as consumers prefer using client support services through a system of Internet of things (IoT) (the technology creating a common interconnection Internet environment for electronic devices). In addition, consumers have access to more transparent product information due to the pressure on producers to maintain competitive advantage. Traditional management will gradually recede to be replaced by modern approaches using big data (the technology using extremely large data to analyze patterns or trends), automated systems, and virtual reality.

The labor force is most critical in being negatively impacted by Industry 4.0. Recent studies indicate that there are three main channels through which this revolution impacts workers: the nature of employment, supply and demand of labor, and labor structure (Cerika & Maksumic, 2017; Philippines' Technical Education and Skills Development Authority, 2016).

According to a World Economic Forum's (WEF) forecast, about 75% of the world's workers may lose their jobs in the next few decades (WEF, 2018). In another study conducted by the International Labor Organization (ILO, 2016), about 56% of workers in five Southeast Asian countries are at risk of losing their jobs because of robot technology. Vietnam is one of the countries that is most affected by Industry 4.0. In addition, according to the Ministry of Science and Technology (MoST)'s (2018) estimation, in the future, some industries in Vietnam will be severely damaged due to the impact of Industry 4.0. However, Industry 4.0 will simultaneously create new jobs that robots cannot perform, requiring workers to have new skills and qualifications. It is forecasted

that by 2025 up to 80% of jobs in the world will be new jobs that are not available currently (Goldman, 2016). In the short-term, the number of jobs lost because of Industry 4.0 is likely to be greater than the number of the jobs created, which requires knowledge and skills that are not easily acquired (?) by the current workforce (WEF, 2016). In other words, Industry 4.0 will take a net number of jobs away from the labor market. Labor will need to accumulate interdisciplinary understanding through STEM (science, technology, engineer, mathematics) learning activities and blended learning methods with an emphasis on application. Also, complex skills need to be learned. The WEF (2016) listed the 10 must-have skills in Industry 4.0: complex problem-solving, critical thinking, creativity, human management, teamwork, emotional intelligence, decision-making and evaluation, negotiation, flexibility in awareness, and service orientation.

The second channel affecting HR from Industry 4.0 is labor supply and demand. The demand for labor is expected to move into technology-intensive jobs requiring high skills. In manual labor and industries associated with automated processes, the demand for labor will fall sharply, especially in textiles, footwear, electronics, and in areas using labor intensively. For example, in the textile industry, operations such as cutting and sewing can be replaced by robots that can work continuously, doing assembly in electronics, and doing consultancy and customer care in services. There will be agricultural robots; instead of working in fields, farmers will become managers of their fields. In contrast, the number of computer technicians, network administrators, and e-commerce operators will increase greatly. Changes in labor demand will inevitably lead to changes in labor supply. Technical training schools and technology institutions engaging with the revolution will gradually have more students enrolling. The other higher education institutions that are less relevant to the technologies of Industry 4.0 must find new ways to implement training to attract students (University of the Future, 2018).

The last channel affecting HR is labor structure. Industry 4.0 produces constant pressure on workers to improve themselves and thus increase the number of highly skilled laborers. Emerging industries will include e-commerce, smart manufacturing and processing, new materials, clean energy, high-tech agriculture, and distribution. This move will lead

to a widening wage gap between highly skilled and low-skilled labor (Acemoglu, 2002; Kuzmenko & Roienko, 2017). However, this pressure may be reduced because, in the long run, the supply of skilled labor will become redundant. Shierholz (2014) and other labor economists argued that it was not the case that skilled labor is in shortage, since it turns out that economies could not provide enough jobs for them, leading to high unemployment rates. It then suggests that in the long run, if policymakers could fix the demand side of the labor market and promote more investment in the education system, the number of skilled workers and their utilization will not be a problem. Despite this, it is unlikely in developing countries in the near future as they prepare for and adapt to Industry 4.0 due to inadequate performance of their education systems that will require a lot of time to improve.

The impacts of Industry 4.0 are now transferred to the necessary changes in NHRD strategy. Since the variation of the common models of NHRD strategy stems from the nature of the labor market, once the labor market is affected, NHRD strategy will be modified, too.

The prominent change should come from overall goals and objectives. They must be analyzed by collecting and summarizing feedback from the business community. Within the objectives the indicator system, which includes knowledge and skills compatible with Industry 4.0, will be emphasized more, especially for labor who graduate from higher education. Knowledge should be more interdisciplinary, while skills needed for labor in Industry 4.0 such as critical thinking, creative ability and lifelong learning aim at solving complex problems and acquiring a continuous flow of new knowledge. All indicators must be clear and flexible to adapt quickly in response to Industry 4.0.

In developing countries, instead of focusing on higher education as the final stage of creating a competent workforce that responds to changes in the labor market, NHRD must concentrate immediately on revising early education (pre-school and primary school) through vocational education and higher education to incorporate education with a focus on appropriate skills suitable for the requirements of Industry 4.0. According to WEF (2016), skills needed include data processing and illustration, artificial intelligence, and computer science. Such sophisticated skills need time to build as opposed to several years currently spent

in tertiary education. Learning subjects such as STEM or programming from primary school on is a focus in many countries.

Secondly, tasks accompanied with solutions, timelines, and responsible agencies must be flexible to respond quickly to rapid changes brought about by Industry 4.0. Among possible solutions, effective career orientation is indispensable. It needs to shift to the jobs working in a cyber environment. Furthermore, in terms of technological application, implementing or monitoring implementation also requires smarter and more technology-integrated solutions such as big data and artificial intelligence. Better coordination among government agencies is also essential due to the interdisciplinary nature of Industry 4.0 (Salim, Jager, Hold, Ott, & Sihm, 2016). The demand for financial resources and personnel to execute NHRD is much larger than before. These resources are first placed in research to adjust NHRD strategy to align with the requirements of Industry 4.0. Finally, additional funding will be needed to strengthen cooperation among government agencies in fulfilling their new tasks.

In a nutshell, under Industry 4.0, the mixed-model approach which engages both participation of government and private actors appears to be most suitable as the strategy of NHRD. The government has sufficient resources and overall vision, whereas businesses work directly with particular technologies of Industry 4.0 every day. The main users of technologies can help the government set up appropriate targets for NHRD. Thus, Industry 4.0 not only changes the content of the strategy but also the way in which to execute the strategy.

4 Building NHRD Strategy in Vietnam

4.1 Brief Description

As a developing country that has been transitioning from a centrally planned economy to a market economy, Vietnam has so far built one valid NHRD strategy for the period 2011–2020. This NHRD strategy in Vietnam contains almost all of the components of an NHRD strategy.

In this part we will briefly describe this strategy with a focus on its core and extended components.

4.1.1 Core Component

Overall Goals

The overall goal of Vietnam's NHRD strategy was to make Vietnam's human resources the most important foundation for the country's sustainable development, international integration, and social stability. The qualifications of Vietnam's human resources were to become equal to their counterparts in advanced countries in the region with some aspects approaching the level of developed countries.

Specific Objectives

Specific objectives to be accomplished included:

- i. Vietnamese human resources have good physical strength and stature; develop comprehensive intellect, will, ability and morality; use self-study and self-training; develop dynamic, proactive, and self-reliant capabilities; have a high level of professional knowledge and skills; and be creative, adaptable, and show initiative in living and working environments.
- ii. Vietnamese human resources meet the necessary requirements regarding professional attitudes and behaviors (be ethical and responsible, with a professional conscience, appropriate working style, labor discipline, a cooperative spirit, civic consciousness) and dynamism and high self-reliance, meeting the requirements imposed on workers in an industrial society.
- iii. Focus on building human resources in science and technology, entrepreneurs and business administration specialists, and professional state administrative personnel.

Table 2 Indicator system in Vietnam's NHRD in the period 2011–2020

	2010	2015	2020
<i>I. Intellectual abilities and skills</i>			
1. Labor with training ratio (%)	40.0	55.0	70.0
2. Labor with vocational training ratio (%)	25.0	40.0	55.0
3. The number of student at university and college over 10,000 people	200	300	400
4. The number of world class vocational school	–	5	>10
5. The number of world class university	–	–	>4
6. The number of high-quality labor in core field			
– State administration, policymaking, international law	15,000	18,000	20,000
– Lecturers at university and college	77,500	100,000	160,000
– Science and technology	40,000	60,000	100,000
– Public health and medicine	60,000	70,000	80,000
– Banking and finance	70,000	100,000	120,000
– Information and communication technology	180,000	350,000	550,000
<i>II. Physical features</i>			
1. Longevity (age)	73	74	75
2. Average height of adults (meter)	>1.61	>1.63	>1.65
3. Malnutrition rate (%)	17.5	<10.0	<5.0

Source The Vietnam's NHRD Strategy for the period 2011–2020

Indicator System in Specific Objectives

The indicator system clarifying the above-mentioned specific objectives consists of nine quantity indicators in two categories: the intellectual abilities and skills and the physical features, as detailed in Table 2.

4.1.2 Extended Components

Solutions

To achieve these indicators, the latest strategy of HRD of Vietnam set out the following tasks and their corresponding solutions:

- i. Changing awareness of HRD and its usage
- ii. Renovating the state management on HRD and its usage
- iii. Focus on building tertiary and vocational training institutions approaching international standards; innovating policies on training and personnel employment of civil servants; developing and implementing programs of training and using talented persons, especially in ICT, biology and computer science; improving the quality of programs teaching foreign languages, especially English; deploying the project, *Bringing Vietnam* soon to become a strong country in information and communication technology; rapidly reducing child malnutrition; and strengthening physical education and training through sports activities in schools
- iv. Other solutions: mobilizing resources for sufficient investment in HRD up to 2020; develop policies on appreciation and promotion of talents; develop and promote national cultural values of Vietnamese; enhance the attraction of foreign capital inflow; and enhance and expand international cooperation.

Timelines and Responsible Agencies

According to the latest strategy approved by the Prime Minister of Vietnam, the strategy implementation emphasizes the main role of three ministries: Ministry of Planning and Investment (MPI), Ministry of Education and Training (MOET), and the Ministry of Labor, Invalids and Social Affairs (MOLISA)

MPI coordinates with the ministries and local government in carrying out specific research; integrating objectives, viewpoints, and solutions in NHRD into ministerial and provincial HRD plans for 2011–2020 and 5-year plans within this same period.

MOET and MOLISA are responsible for leading and coordinating with other ministries and local governments to integrate the objectives and related solutions into the Education Development Strategy; Vocational Training Development Strategy; network planning of universities, colleges, and vocational schools; developing and implementing key HRD programs and projects, focusing on solutions to improve the quality of

education and training based on social needs; and coordinating with the MPI annually in evaluation of the strategy implementation (Government of Vietnam, 2011).

4.2 Analysis of Vietnam's NHRD Strategy

Vietnam's NHRD strategy is following the centralized model since the government has a dominant role in the strategy. The model is also reasonable for the current status of Vietnam's labor market as indicated in Table 1.

Vietnam's NHRD Strategy 2011–2020 has almost the core components of an HRD strategy, except tasks. Also, the strategy lacks general context statement from which its necessity is usually derived, thereby creating basis for following overall goals and specific objectives (Ngo, 2019)

In developing countries with significant limitations of resources in planning and implementing NHRD strategy whose nature is already extremely complex, an NHRD strategy usually concentrates on higher education (or tertiary education) whose product will be directly used to create new values for the economy (Sequeira, 2012). Vietnam is not an exception as four or nine indicators (nearly 50%) are incorporated in higher education outcomes (we only use “university” to refer to higher education).

The system of indicators is relatively complete but compared with the skills required in Industry 4.0 some that are necessary are lacking. This is understandable because the strategy was formulated in 2011, a year in which Industry 4.0 was not clearly indicated. In the next NHRD strategy, new skills in the system must be updated in the context of Industry 4.0. In addition, this new strategy must be consistent with the current state of Vietnamese human resources in order to be feasible.

The strategy also lacks a schedule, or timeline, for implementation. In addition, the roles of the implementing and monitoring agencies are slightly confusing and not completely separated. The problems probably occur because the content of the strategy was built by theme in which the contents in one topic were grouped in one part, leading to the confusion.

The strategy also contains some minor inadequate points. First, it was formulated vertically, meaning that overall goals and specific objectives were first created, followed by solutions, and implementing agencies without specifying tasks. However, this approach could create confusion as it cannot clarify which solutions are derived from which objective. Secondly, resources to fund the strategy implementation are ambiguous. Vietnam's government generally stated that it would arrange sufficient capital to execute the strategies. Thirdly, there are few indicators in the indicators system relevant to higher education, which is usually emphasized in HRD strategy of a developing country.

While the current NHRD strategy of Vietnam has a total of four quantitative indicators for higher education as mentioned above, Malaysia, another country in the same region, has 10 quantitative indicators (Malaysian Ministry of Education, 2013) and Romania, a developing country in Europe, has 20 quantitative indicators (Romanian Agency for Quality Assurance in Higher Education, 2014). It is imperative to build a unified system of qualified indicators in line with international practices. The indicators are also the factors that connect Vietnam's NHRD strategy and higher education development strategy in which the indicators in the former strategy guides the similar ones in the latter strategy.

4.3 Suggestions for Adjustments

4.3.1 Selecting Model

Based on a review of Vietnam's NHRD strategy 2011–2020, the country is undoubtedly following a centralized model in which the government plays the dominant role in building the strategy, designing plans, and implementing solutions. We believe that Vietnam should move from a centralized model to the transitional model of NHRD strategy. This suggestion agrees with the study of Alagaraja and Wang (2012) regarding NHRD strategy of China and India, which share a lot of similarities with Vietnam in terms of social and economic conditions. In the new model, the government still plays its core role but adding coordination

with the business community and labor unions as Vietnam's labor market develops. The model of strategy is supposed to be suitable to Vietnam due to the nature of the economy, growing private sector, and economic integration

Nature of the economy. The characteristics of Vietnam's economy have been socialist-oriented markets as a mixed-model economy in which the market economy is operated under the direction of the government heading toward socialism. However, under the current condition of a limited and inadequate supply and demand of labor and its supporting systems, Vietnam has not been able to fully implement the government-initiated model that requires a complete and well-functioning labor market.

Growing private sector. According to MPI (2019), until the end of 2017 most Vietnamese companies were small and medium enterprises accounting for 98.1% of the total number of enterprises, plus household businesses. Due to the overwhelming number of SMEs and their diversification, they are not likely to have shared goals in the field of human resource development. Large enterprises have recently prospered, even though they represent an insignificant proportion of the total number of enterprises in the country. Until about ten years ago, it was difficult to mention a large private enterprise in the Vietnamese economy, especially in the manufacturing sector, but now we can list several that are successful, including Vingroup, Thaco, HAGL, Viettel, along with strong FDI enterprises such as Samsung Vietnam, Toyota Vietnam, Intel, etc. They have high standards for high-quality labor because they are utilizing updated technologies in production and business. In addition, they have conducted self-training after recruitment. These organizations can be consulted when the government develops an NHRD strategy and subsequent plans of action. Furthermore, these enterprises really understand how much they need human resources to be qualified and are flexible enough in Industry 4.0. Therefore, it is necessary to consider the opinions of enterprises in developing an updated NHRD strategy.

Economic integration. Vietnam is currently in the process of international integration at a high level. The country has just concluded two new generations of free trade agreements, i.e., CPTPP (Comprehensive and Progressive Trans-Pacific Agreement) and EVFTA (EU-Vietnam Free

Trade Agreement), including new standards of labor. Under the CPTPP and EVFTA, workers are guaranteed basic rights, benefits, and conditions of employment, including new rights appearing for the first time in Vietnam, such as the right to be free in establishing labor unions and the right to have training and professional development at work. Workers in the near future will have greater input into their own development.

4.3.2 Modifying Components

Rationale. Because of the lack of rationale in the current NHRD strategy of Vietnam, the next one should state the rationale of the strategy clearly so that its formulation is in alignment with social and economic development strategy during the same period. Similarly, the new one should be a beacon for other strategies related to human resource in specific field such as higher education development strategy. The consistency should cover the broader range from goals, objectives, and tasks, including indicators system and timeline.

Overall goals and objectives. In order to develop Industry 4.0 goals and objectives, it is necessary to conduct a comprehensive study to determine the knowledge and skills of Vietnamese workers in accordance with Industry 4.0 by organizing a national conference or national survey in which Vietnam's business community will identify the knowledge, skills, and other qualifications of labor that it requires. From this, a handbook of skills needed for labor in Industry 4.0 in Vietnam could be published and become the vital evidence for a new NHRD strategy of the country.

Within objectives, the strategy needs a timely update of the objectives especially the indicators system, emphasizing the Industry 4.0 adapted skills such as the skill of long-life study, self-study, and complex problem-solving ability. However, at first the indicators system must be built with resilience. Since developing countries have emphasized higher education in their NHRD, the indicators system in Vietnam's NHRD strategy could refer to the outcome-based system proposed by Martin and Sauvageot (2011). The outcome-based system focuses on students' level of knowledge, preparation for the labor market (skills), preparation for civic and social life, equality, and democratization of education. Once

established, the indicator system could be transferred into the strategy through the objectives and corresponding tasks that are directly related to high quality and high skill human resources. Moreover, the indicator system might be specified further to specific fields of economy that are mostly affected by Industry 4.0 such as the number of engineers per 10,000 people, and average time spent to obtain an engineering degree. Last but not least, it should be noted that the more specific the indicators are, the more effective the strategy implementation will be (Martin & Sauvageot, 2011).

Tasks. It is obvious that the next NHRD strategy should add tasks under each specific objective, since the current one is missing this component. Subsequently, as a flow, main solutions are defined under each task.

Resources to execute strategy. The strategy needs a clearly stated fund to create strong commitment and incentives for each beneficiary. The monitoring process is also costly, as indicated by the below point. As a result, the government should specify the financial resources for the strategy to ensure its feasibility.

Regulatory agency to supervise. The strategy needs monitoring mechanism improvement. Since Industry 4.0 changes quickly, NHRD strategy should be monitored and adjusted periodically. A steering committee is used in many countries to allow relevant government bodies periodically to review and evaluate the strategy implementation. In Vietnam, there is only one committee that represents all competent ministries relevant to NHRD strategy implementation: the National Council for Education and Human Resource Development, chaired by the Prime Minister (PM). Unfortunately, the committee is only able to consult the PM on issues related to NHRD such as education policy and law modification, NHRD strategy implementation assessment. The responsibility of leading and coordinating ministries to execute the NHRD strategy now belongs to MPI. Therefore, upgrading the council to be a comprehensive, competent office should be considered. The way to implement and monitor the strategy must apply recent technologies in Industry 4.0 because there will be big data to process during the implementation.

4.3.3 Changing Format

To avoid the confusion that arises when reviewing Vietnam's current NHRD strategy, the present format should be organized under the suggestion in Table 3 in which solutions are attached directly to specific tasks and in turn, the specific task is attached directly to specific objectives. In one objective, we could have many tasks and in one task we could have many solutions. Solutions in different tasks might be similar,

Table 3 Suggested format of presentation for NHRD strategy

Overall goals	Specific objective 1 (including indicators 1)	Task 1.1	Solution 1.1.1	Responsible agencies with tentative timeline	
			Solution 1.1.2		
		Task 1.2		Solution 1.2.1
		Solution 1.2.2			
			Responsible agencies with tentative timeline
		Specific objective 2 (including indicators 2)	Task 2.1		
	Solution 2.1.2				
	Task 2.2	Solution 2.2.1		
	Solution 2.2.2				
	Responsible agencies with tentative timeline		
	Specific objective 3 (including indicators 3)	Task 3.1		Solution 3.1.1	
				Solution 3.1.2	
.....	Task 3.2	Solution 3.2.1			
Solution 3.2.2					
.....			
.....			

Source Developed by the authors of the chapter

however, tasks in different objectives must be different. Since this is the strategy other than master plan, solutions and timeline should be envisaged with the main points in the tentative period.

5 Conclusion

The NHRD strategy for 2011–2020 is close to the final years of implementation and a new one is being developed. Industry 4.0 seems to be the critical factor affecting the process and the content of the new NHRD strategy of Vietnam. As a matter of fact, Industry 4.0 has had an obvious impact on Vietnam's economy mainly through the labor market, whereas the availability of qualified Vietnamese human resources for Industry 4.0 is still at a low level (Central Institute for Economic Management, 2018). Therefore, the new NHRD strategy as a guide for all NHRD activities in Vietnam from which a qualified labor force has been built to meet social-economic requirements must take into account this limitation.

Vietnam's goal is to be an industrial country by 2045 with a high per capita income (Politburo of the Communist Party of Vietnam, 2018). This aspiration cannot ignore the development of Industry 4.0. By focusing on the three suggestions in the previous section, Vietnam's government could produce a new and legitimate NHRD strategy that improves upon the weaknesses of the previous versions and adapts to the new economic and social environment created by Industry 4.0.

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4

Vietnam and Regional Human Resource Development in ASEAN

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1 Introduction

The Association of Southeast Asian Nations (ASEAN) emerged in 1967 amidst a tumultuous political climate in Southeast Asia, when ensuring the security and sovereignty of the individual nations became an

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interdependent endeavor. The initial five countries of ASEAN included Indonesia, Singapore, Malaysia, the Philippines, and Thailand. As ASEAN began addressing its political and security needs, it welcomed Brunei Darussalam in 1984, Vietnam in 1995, Laos and Myanmar in 1997, and Cambodia in 1999.

Human resource development (HRD) has long been a component of ASEAN and seen as key to successful integration and interdependent development. One of the guiding goals in the original ASEAN Declaration signed in 1967 set out to “provide assistance to each other in the form of training and research facilities in the educational, professional, technical and administrative spheres” (ASEAN, 1967, p. 2).

In 2015, ASEAN ushered in a new era of integration, including the tripartite ASEAN Community made up of the ASEAN Political-Security Community, the ASEAN Economic Community, and the ASEAN Socio-Cultural Community (ASEAN, 2015a). This integration elevated the role of HRD as exemplified in the ASEAN Charter—the guiding document for ASEAN integration—which includes the HRD-related goal, “To develop human resources through closer cooperation in education and lifelong learning, and in science and technology, for the empowerment of the peoples of ASEAN and for the strengthening of the ASEAN Community” (ASEAN, 2007, pp. 4–5).

HRD plays an important role in ASEAN integration. For example, part of the vision of the ASEAN Economic Community is increased economic integration via the creation of a single market and production base, including the free flow of goods, services, investment, and skilled labor with increasingly free flow of capital throughout the region. This vision puts HRD initiatives central to ensuring the labor force has met mutually agreed-upon qualification frameworks. In the ASEAN Socio-Cultural Community, which includes sectoral ministerial bodies such as the ASEAN Labor Ministers Meeting and the ASEAN University Network, HRD initiatives serve the development of the citizens within Southeast Asia to guide regional integration and development and make ASEAN “a centre for human resource development and training” (ASEAN, 2016a, p. 20). The last four countries to join ASEAN (Cambodia, Laos, Myanmar, and Vietnam)—also referred to as CLMV nations—represent “development gaps” within the ASEAN nations and

have been a focal point of ASEAN's goal for equitable development in the region (ASEAN, 2016b, p. 49). To address these gaps, ASEAN initiated the first work plan of the Initiative for ASEAN Integration (IAI) in 2002, comprised of over 200 projects across four areas, one of which is HRD (ASEAN, 2002).

In 1986, the Communist Party of Vietnam began reforming the Vietnamese economy from a central government-controlled economic system to a more market-oriented economic system. After Vietnam officially joined ASEAN in 1995, it increasingly integrated into the regional market, which created the need to focus on developing its human resources (Curry, 1996). Considering Vietnam's increasing role in ASEAN and its efforts to develop its workforce to meet the needs of regional economic integration, the purpose of this chapter is to shed light on the relationship between Vietnam and ASEAN in the context of HRD. What follows is a brief description of the theoretical background and methodology informing this work. We then discuss the influence of Regional HRD in ASEAN on Vietnam and the role that Vietnam has played in Regional HRD in Southeast Asia, including implications for research, policy, and practice.

2 Theoretical Background and Methodology

The theoretical base informing this chapter stems from the established literature on HRD and National HRD and the emerging literature on Regional HRD. HRD is broadly defined as,

any process or activity that, either initially or over the long term, has the potential to develop adults' work-based knowledge, expertise, productivity and satisfaction, whether for personal or group/team gain, or for the benefit of an organization, community, nation, or ultimately, the whole of humanity. (McLean & McLean, 2001, p. 322)

As McLean and McLean (2001) assert, HRD processes and activities occur at many levels, including national and global levels. HRD at the national level has seen increasing popularity in HRD scholarly discourse

(McLean, 2014). McLean (2006) offered the following preliminary definition of National HRD:

National Human Resource Development (NHRD) is an undertaking at the top level of government and throughout the country's society that coordinates all activities related to human development (HD) to create greater efficiency, effectiveness, competitiveness, satisfaction, productivity, knowledge, spirituality, and well-being of its residents. It includes education, health, safety, training, economic development, culture, science and technology, and any factors influencing HD. (as cited by Russ-Eft, Watkins, Marsick, Jacobs, & McLean, 2014, p. 20)

Considering the diversity of nations' governing structures and cultures, no singular prescriptive understanding of National HRD applies to all countries.

Lynham and Cunningham (2006) further elucidate the levels at which HRD processes and activities can occur and posit that, in between national and global levels, there is also a regional level of HRD. While Regional HRD is still an emerging concept, it can be broadly understood as follows, based on and McLean's (2006) preliminary definition of National HRD and Crocco and Tkachenko (2018):

Regional HRD is an undertaking by governments and other actors throughout societies in the region that enables and coordinates all activities related to human development for the benefit of individuals, organizations, communities, and nations in the region.

Regional HRD differs from National HRD in several important ways. While National HRD is seen as a top-down government-initiated process in a country's society (McLean, 2006), Regional HRD is an undertaking by governments and *other actors* throughout the region. An intergovernmental, *regional* organization, such as ASEAN in Southeast Asia, plays a key role in the coordination of human development activities. For example, to support the development of people in the region, ASEAN has set up an initial vision and regional architecture. There are multiple intergovernmental entities and organizations under ASEAN (e.g., ASEAN Socio-Cultural Community and the ASEAN University

Network) that develop and implement various HRD-related initiatives (e.g., Initiative for ASEAN Integration). While national governments continue playing an important role (as in the case with National HRD), ASEAN has also welcomed external actors to contribute to the regional development, including international organizations, such as Asian Development Bank, and governments outside of the region, such as Japan, Korea, and China as in the ASEAN + 3 Cooperation.

The question guiding this chapter asks, what is the nature of the relationship between Regional HRD in ASEAN and National HRD in Vietnam? To explore this relationship, this chapter integrates methodological practices from integrative literature review (Torraco, 2005, 2016) and qualitative content analysis (Hsieh & Shannon, 2005). Integrative literature review is the systematic collection, review, and synthesis of scholarly sources on a given topic (Torraco, 2016). Two primary data sources were utilized. First, the official Vietnamese government publications, reports, and white papers were searched via official government websites. These included documents collected from Vietnam's Ministry of Labors, Invalids and Social Affairs (MoLISA) and Ministry of Foreign Affairs. Second, ASEAN documents were searched and collected for review. Official ASEAN documents published online at www.asean.org between 2007 (since the publication of the ASEAN Charter) and July 1, 2019 were searched and analyzed using a summative approach to qualitative content analysis (Hsieh & Shannon, 2005).

3 Regional HRD in ASEAN: The Case of Vietnam

This section provides an overview of ASEAN documents, governing bodies, and HRD initiatives with other partner nations that provide a framework for HRD in Vietnam. The relationship between ASEAN and Vietnam in the context of HRD is shaped by multiple statements, policies, and other documents: those that directly emphasize the role of HRD as well as those where HRD initiatives are mentioned peripherally as a means of achieving other objectives. Among the statements that fall directly under the purview of HRD, the "ASEAN Leaders' Statement

on Human Resources and Skill Development for Economic Recovery and Sustainable Growth” adopted in Vietnam in 2010 is a major document (ASEAN, 2012, p. 21). This statement outlines three major HRD goals: to “[f]oster technical cooperation and capacity-building activities in ASEAN,” to “[p]romote tripartite and public-private sector cooperation,” which included the initiative to cultivate “national and regional social dialogue among government, employers and workers in addressing human resource development, policies and programs” and to “[e]nhance the quality and skills of workers in all ASEAN Member States” (ASEAN, 2012, p. 22).

As HRD has been a focus of ASEAN since its inception, HRD is also mentioned peripherally in a host of other statements, policies, and publications as a means to bring about a stated goal that is not directly related to HRD. For example, this peripheral focus on Regional HRD in ASEAN can be found in ASEAN’s strategic objective to promote information and communication technology (ICT) and respond to climate change in the region (ASEAN, 2009). Also, the ASEAN Labor Ministers’ Work Program (2016–2020) stresses the importance of supporting migrant workers, to “establish and implement human resource development programs and reintegration programs for migrant workers in their countries of origin” (ASEAN, 2017a, p. 73). While not exclusively focusing on HRD, the aforementioned HRD-related activities are vital to achieving the goals of the particular initiatives.

The ASEAN Socio-Cultural Community (ASCC) and ASEAN Economic Community play important roles in initiating and implementing HRD-related activities. The ASCC—which oversees the ASEAN Labor Ministers Meeting and the ASEAN University Network—provides the clearest outline of the role of HRD at the regional level in ASEAN. Beginning with developing ASEAN institutions, the ASCC has put forth many HRD-related strategic objectives, such as to “[s]trengthen civil service through effective capacity building, human resource development and collaboration programs among ASEAN Member States” (ASEAN, 2016a, p. 5). Specifically, the ASCC Blueprint seeks to “[e]nhance the competitiveness of ASEAN human resources through the promotion of life-long learning, pathways, equivalencies and skills development as well as the use of information

and communication technologies across age groups” (ASEAN, 2016a, p. 19).

The way ASEAN is structured dictates that the ASEAN Sectoral Ministerial Bodies are ultimately responsible for carrying out this statement “in accordance with the national laws, regulations and policies of Member States” (ASEAN, 2012, p. 23). Under the ASCC, the Senior Labor Officials Meeting (SLOM) and the SLOM Working Group on Progressive Labor Practices to Enhance the Competitiveness of ASEAN (SLOM-WG) are responsible for carrying out many of the aforementioned HRD-related objectives outlined by the ASCC. For example, SLOM and SLOM-WG are tasked with putting together programs for skills recognition and supporting the ASEAN Qualifications Reference Framework. The framework is aimed at supporting the mutual recognition agreements (MRAs) that ASEAN has for eight professions as part of its realization of the free flow of skilled labor (ASEAN, 2017a). These eight professions include accountants, architects, dentists, engineers, medical doctors, nurses, surveyors, and tourism professionals.

Much of the discussion about HRD also occurs in the realm of the ASEAN Economic Community (AEC). For example, one aspect of the AEC Blueprint 2025 is to “foster robust productivity growth through innovation, technology and human resource development” (ASEAN, 2015b, p. 2). HRD and the need to “enhance technical cooperation in the services sector for human resource development” are also defended to bring about the ASEAN Trade in Services Agreement and for supporting Micro, Small, and Medium Enterprise (MSME) development in the region (ASEAN, 2015b, p. 6).

Regional HRD in ASEAN also occurs specifically to support the development of CLMV nations. At the CLMV Cooperation Summit in Vietnam in 2016, the nations committed to HRD-related cooperative initiatives including the CLMV Scholarship Program (funded by the Vietnamese government), a database of vocational training programs in the CLMV nations, collaborations among universities, training institutions, and certain educational professions, and continued dedication to bringing about MRAs in skilled labor according to the ASEAN Qualifications Reference Framework (ASEAN, 2017b).

In the IAI Work Plans, which oversee the development and integration of CLMV nations in ASEAN, the guidelines for IAI projects are proposed with five mandatory criteria, one of which is that the project “contributes to capacity building and human resource development” (ASEAN, 2016b, p. 49). HRD is seen as a crucial component to the integration of the CLMV nations into the ASEAN Economic Community and permeates nearly every initiative. For example, in infrastructure development outlined in the second IAI Work Plan, action items include “training in multimodal transport... training on railway operation... [and] training in fuel quality testing, fuel transport safety, power trading and negotiations on transboundary power tariffs” (ASEAN, 2009, p. 102).

There are also several Regional HRD initiatives that involve partner nations that have emerged via ASEAN’s many bilateral and multilateral agreements. These include the ASEAN + 3 Cooperation between ASEAN nations and China, Japan, and the Republic of Korea, which began in 1997; the ASEAN + 6 Cooperation, which added Australia, India, and New Zealand; and the ASEAN + 8 Cooperation with the addition of the United States and Russia. Examples of HRD collaborations with external partners include the ASEAN-Japan HRD Collaboration Program for Strengthening the Basis of Human Resource Development in CLMV Countries (ASEAN, 2017b) and the ASEAN Australia Development Cooperation Program (ASEAN, 2011), the latter of which defines HRD as:

all activities which will seek to enhance ASEAN’s human and institutional resource capacities at the regional and national levels, including training and development in the economic and non-economic areas, transfer of technology and know-how. HRD activities may include, but are not limited to, research, studies, surveys, workshops/seminars/conferences, and exchange programs. (p. 240)

Most of the cooperative agreements between ASEAN Members States and external partners like Australia seek to use HRD to “support regional mechanisms and capacity for the implementation of selected high priority AEC Blueprint activities at the national level” (p. 240).

The Australia–ASEAN cooperation is implemented through a program in which Australia and ASEAN leaders identify priorities, carry them out with resource contributions from both parties, and then evaluate improvements (ASEAN, 2011). Other collaborations, such as between ASEAN and the Republic of Korea involve the latter party inviting 7000 ASEAN citizens to participate in training and capacity-building programs in Korea. The program is aimed at promoting “sustainable economic and social development and poverty alleviation” in ASEAN (ASEAN, 2011, p. 306).

4 The Relationship Between Vietnam and ASEAN in the HRD Context

The framework for Regional HRD established in ASEAN by its member states has not evolved in isolation. Rather, Regional HRD in ASEAN has emerged concurrently and interrelatedly with National HRD in the individual ASEAN member states. Considering that we are seeking in this chapter to understand the relationship between Regional HRD and National HRD within the case of ASEAN and Vietnam, in the following section we elucidate this relationship and highlight Vietnam’s contribution to Regional HRD in ASEAN, Vietnam’s influence as Chair of ASEAN, and other HRD-related policies and programs that emerged through cooperation between Vietnam and ASEAN.

4.1 Vietnam’s Role in Regional HRD in ASEAN

Vietnam has an emerging National HRD structure with a relatively high ranking in HRD competitiveness among emerging countries (Oh, Seo, Kim, Yoo, & Seong, 2015). Vietnam’s role in Southeast Asia has been a driver not only for the development of CLMV countries, but also for ASEAN as a whole. It played an important role in the admission of Laos, Myanmar, and Cambodia into ASEAN, ending the political separation among Southeast Asian countries. In 1998, amid the regional financial crisis, Vietnam successfully organized the VI ASEAN Summit

with the approval of the Hanoi Plan of Action, setting concrete objectives to implement the ASEAN Vision 2020. Vietnam also played a leading role in implementing the aforementioned IAI and Narrowing the Development Gap (NDG) between CLMV countries and the rest of ASEAN. It contributed to the initiation and implementation of the ASEAN Community Roadmap including the comprehensive plan to build three pillars of ASEAN Community (Le, 2015) in 2010, and focused on sustainable development. The relationship between Vietnam and ASEAN has been embraced and implemented not only by the Ministry of Foreign Affairs but also by other government agencies at both national and local levels in political, security, economic, social, and cultural cooperation. Southeast Asia is now Vietnam's fourth-largest export market after the United States, the EU, and China (General Statistics Office, 2018). It accounts for about 20% of international tourists coming to Vietnam and is one of the major job markets for Vietnam's workforce.

The relationship between Vietnam and ASEAN in HRD has evolved mostly in the framework of social and cultural cooperation, which is mainly coordinated by Vietnam's Ministry of Labor, Invalids, and Social Affairs (MoLISA). The MoLISA is also Vietnam's national coordinator in the ASEAN Socio-Cultural Community. The Vietnamese government acknowledged that its cooperation with ASEAN has allowed it to make substantial progress in its HRD. For instance, through the IAI, Vietnam has transformed its workforce by participating in more than six hundred projects with a value of more than USD 110 million in the last eighteen years. Vietnam has approved a national plan to implement the "ASEAN declaration on the role of the civil service as a catalyst for achieving the ASEAN community vision 2025," which sets its target that 80 percent of civil service staff in Vietnam will be trained on public administration and meet the common standards of ASEAN public services (Decision No.1439/QĐ-TTg, 2018).

More than 1700 legal and administrative documents related to ASEAN have been issued by the Vietnamese government and its agencies, including more than 600 documents on the MRAs, to promote free movement of skilled laborers within ASEAN countries. These regulatory documents lay the foundation for HRD activities in Vietnam to operate

and take effect on the development of Vietnam's human resources. Vietnamese government officials acknowledge that Vietnam's participation in ASEAN has contributed considerably to Vietnam's development of technical and vocational training, labor productivity, and competitive advantage.

4.2 Vietnam as Chair of ASEAN

Chairmanship in ASEAN occurs on a rotating basis annually with all other member nations. Vietnam served as Chair of ASEAN in 1998 and 2010 and resumed chairmanship in 2020. Each Chair of ASEAN selects a theme to guide the year and holds two summits. In 2010, the theme of the year was "Towards the ASEAN Community: From Vision to Action." That year, Vietnam hosted the 16th and 17th ASEAN Summits, the 5th East Asia Summit, and a spectrum of other ministerial meetings such as the 21st ASEAN Labor Ministers Meeting.

As Chair of ASEAN, Vietnam has demonstrated a commitment to HRD. For example, the Chairman's Statement of the 16th ASEAN Summit called for "strengthening cooperation on education, technical and vocational training and lifelong learning" (ASEAN, 2012, p. 4). Then, perhaps the most consequential HRD-related document was the aforementioned ASEAN Leaders' Statement on Human Resources and Skills Development for Economic Recovery and Sustainable Growth, which was adopted at the 17th ASEAN Summit. While being Chair, Vietnam also hosted the 2nd ASEAN Human Resources Conference, held in Hanoi in 2010. In 2020, again as Chair of ASEAN, Vietnam put forth the theme of "Cohesive and Responsive," which emphasizes the goal of building high-quality workforce and improving social services for people in the region (ASEAN, 2020; Viet Nam News, 2020).

4.3 Mutual Recognition Agreements and Their Implications for Vietnamese HRD

One of the most noticeable impacts of ASEAN on Vietnam's HRD has been the implementation of mutual recognition agreements (MRAs).

The MRAs with ASEAN were considered an important catalyst for Vietnam to create a regulatory framework to align its educational system with regional and international qualification systems. This, in turn, would support labor mobility. Vietnam approved the Vietnamese Qualifications Framework in 2016, which outlines outcome standards for eight levels of education from primary school to doctoral training. When conducting studies and proposing the Vietnam Qualifications Framework, the advising team chose the ASEAN Qualifications Reference Framework as an important reference point. The approval decision delegated MoLISA to cooperate with others in comparing the framework with the ASEAN Qualifications Reference Framework and other national qualification frameworks (Decision No.1982/QĐ-TTg, 2016). This laid the foundation for recognizing qualifications between Vietnam and other ASEAN countries. The Vietnamese government also viewed the ASEAN Qualification Reference Framework as an important means of developing training programs and to ensure certification quality.

As mentioned above, ASEAN has implemented MRAs on eight professions to promote labor movement: engineering, nursing, architecture, surveying, medical services, dental services, accounting services, and tourism. These jobs, however, only account for a small number (roughly 1.4%) of the total jobs within ASEAN (*International Labor Organization and Asian Development Bank*, 2014). Vietnam's monitoring commission of MRAs has implemented the registration for Vietnam engineers to become ASEAN engineers. According to MoLISA data, Vietnam currently has more than 200 engineers certified as professional ASEAN engineers. That said, only around 20 Vietnamese architects have been certified as professional ASEAN architects. The number is very small compared to national totals of certified engineers and architects in Vietnam, partly due to indifference toward ASEAN certification. When surveyed, several senior engineers and architects in Vietnam attributed their indifference to ASEAN certification to its lack of foreseeable benefits and to the time-consuming nature of the certification process (Navigos Group, 2019). The tightening professional certification of engineers and architects in Vietnam, however, has paved the way for the increasing mobility of highly skilled workers in Vietnam to other nations in the region. Singapore, Malaysia, and Thailand are among the job

priority options that many young professionals in Vietnam are targeting (Navigos Group, 2019).

There has been an increase in awareness of international certifications, followed by the introduction of internationally certified programs offered in Vietnam. The gradual transformation of accounting education in Vietnam serves as an example. Compared to other countries, Vietnam has the lowest level of implementation of international accounting standards (Tran, 2018). Companies operating in Vietnam have to follow Vietnamese Accounting Standards. The harmonization and convergence with International Accounting Standards are preconditions for implementing MRAs (Baker & Barbu, 2007). After the news of Vietnam joining the MRA in accounting was shared in 2014, the Institute of Chartered Accounting in England and Wales opened a representative office in Vietnam in 2015 and has worked with nine universities in Vietnam to provide certified accounting training for Vietnamese students. The Australian Certified Professional Accounting certification has also recently been provided in many Vietnamese universities to prepare for Vietnam's integration into the AEC, as well as to meet the increasing demands for accountant training.

The unfolding of MRAs in nursing, medical services, and dental services in 2006 has also required an appropriate regulatory framework. These three MRAs did not strive for a common certification regulatory body in ASEAN, but focused on fostering communication and cooperation to mutually recognize one another's professional certificates. Since joining the MRA in nursing, the development of nurses in Vietnam has seen significant progress over the last 10 years, yet the quantity and quality of nursing professionals remain the lowest-ranked in the region. The ratio of nurses per doctor in Vietnam is 1/1.9, while the World Health Organization recommendation is 1/3.5. By comparison, that ratio is 1/5 in the Philippines, 1/8 in Indonesia, and 1/7 in Thailand (Kanchanachitra et al., 2011). Via ASEAN, technical and developmental cooperation to address the disparity in the maturity of the nursing regulatory frameworks has been carried out. In 2007, just one year after the MRA was signed, the ASEAN Joint Coordinating Committee on Nursing (AJCCN) was established. The regular monitoring by the AJCCN has promoted mutual learning among ASEAN

countries contributing to a common core competency framework in health professions in Vietnam (Fujita et al., 2019). The reference to the ASEAN Qualification Reference Framework has been utilized in colleges and universities to improve their training curricula. One notable example is from Dai Nam University, a relatively young university, in which the nursing department's curriculum has been borrowed almost exclusively from Thailand's standard nursing program. An interesting detail was that the developer of the curriculum, Duy V. Le, had learned about Thailand's nursing program in the framework of cooperation and learning activities among health professionals in ASEAN several years before. The learning gained from sharing activities in the framework of MRAs was transferred into the concrete development of a nursing program and went on to contribute to the development of the Vietnamese workforce.

4.4 Cooperation in Technical and Vocational Education and Training

Besides the development of the workforce in the aforementioned eight areas of MRA, vocational education in Vietnam generally also saw significant changes as a result of ASEAN integration through the ASEAN Community (Viet, 2017). Vietnam currently has about 53.7 million workers. This number is estimated to increase to 63 million workers by 2030 (General Statistics Office, 2016). Vietnam is planning to establish 30 job classes with ASEAN certifications (Directorate of Vocational Education and Training, MoLISA). The AEC and the ASEAN Qualifications Reference Framework are considered a revitalizing opportunity for gloomy vocational education centers in Vietnam. The framework has been used as a guideline for vocational programs in almost all vocational education institutions such as FPT Polytechnic, Hanoi College for Electro-Mechanics, and local vocational training centers across Vietnam. While in the past it was difficult to find a good construction technician or mechanic, nowadays skilled technicians can be found in many vocational centers throughout the country. MoLISA acknowledges that vocational development in Vietnam has been carried out in alignment with ASEAN qualification frameworks.

Along with revamping its technical and vocational education system, Vietnam actively participates in the ASEAN Skill Competition (ASK). To prepare for the ASK, national skill competitions are held. These competitions are held to evaluate participants based on ASEAN and international skill certification standards. The winners are awarded ASEAN skill certificates. In the last ASK, Vietnam ranked third, just after Thailand and Indonesia. ASK is a pathway to the World Skill Competition (WSC), in which Vietnam also participates. These competitions promote pride in one's vocational profession, which has been subdued amidst the rise of higher education institutions. In the past, technical and vocational education was considered among the worst options for career development. The perception has begun to change along with the positive vibe and the promotion of ASK. Many people now consider vocational education to be a good investment in one's professional career (Bodewig, Badiani-Magnusson, Macdonald, Newhouse, & Rutkowski, 2014). Vietnamese leaders also highlighted the development of technical and vocational education as a priority.

4.5 Other Areas in Human Development and Cooperation with ASEAN's Partners

Besides revitalizing vocational education and professional development in Vietnam, Vietnam's participation in ASEAN has also helped Vietnam to improve the lives and services provided for disadvantaged groups. In recent years, the concern for autistic kids, seniors, and women has been heightened with the implementation of the two major projects within the ASEAN framework, such as Autism in ASEAN: Developing Legal Regulations and Policies, and Social Securities for Seniors. The workshop on Autism in ASEAN attracted attention from media outlets and nearly one thousand people participated in Vietnam's autistic awareness day. Social securities for seniors and women have also been in focus to eradicate violence towards women and children, as well as to ensure health services for seniors. These activities help to raise awareness of various issues, improve social development in Vietnam, and change the perception of Vietnamese people toward autism, gender equality, violence toward

women, and senior care. Cooperation with ASEAN has also facilitated Vietnam's establishment of a series of networks to train women and support them in job placement. For example, there are ASEAN funds dedicated to women in need. An ASEAN women business network was also formed in 2014, which promotes the sharing and learning among Vietnamese businesswomen and with ASEAN businesswomen.

Vietnam's participation in ASEAN has contributed to the realization of the lifelong learning philosophy ingrained in Vietnamese culture. Schools in Vietnam display the motto, "learn, learn more, learn forever" (học, học nữa, học mãi), which is, in essence, no different than the concept of lifelong learning (Luong, 2017, p. 17). Lifelong learning has been advocated for by the Vietnamese government with various directives and policies and has emerged as a pivotal focus in its national HRD. Vietnam actively participated in the Southeast Asia Ministers of Education Organization (SEAMEO) with the establishment of the SEAMEO Regional Center of Lifelong Learning in Vietnam in 2013. SEAMEO, which was founded before ASEAN in 1965, now holds its annual meeting in conjunction with the annual ASEAN Education Ministers Meeting. The Vietnamese government has considered strategies to promote lifelong learning not only in middle-age working groups but also in people more than sixty years old, building a learning society in Vietnam with happy classrooms and schools (Decision No.89/QĐ-TTg, 2019). Vietnam is also pushing for the formation of an ASEAN education network and a lifelong learning system.

The cooperation activities among Vietnam, ASEAN, and SEAMEO brought considerable and visible benefits for Vietnam, such as funding for more than 2000 Vietnamese officials to participate in conferences, seminars, and workshops at regional centers from 2002 to 2009. Those officials are state workers in various areas, including many people who were awarded funding to support their higher education. Vietnam also received significant funding for education from Singapore and other ASEAN partners. Many Vietnamese students have been awarded scholarships to study in both high school and higher education institutions in Singapore. Many of these students continue to pursue higher education opportunities in other countries.

Vietnam also fosters HRD relations with ASEAN nation partners. For instance, Vietnam collaborates with Japan in labor safety, healthy employment relationships, and training and development. With South Korea, it focuses on cooperation in training HRD professionals. South Korea has invested to build Cyber University with a server hosted in Vietnam, promoting learning for all with the help of online learning technologies. With China, Vietnam emphasizes relations in social security, labor migration, and workforce development. The ASEAN + 3 collaboration has provided important funding sources for ASEAN life-long learning. In the framework of cooperation in East Asia, Vietnam has fostered relations with Australia in developing leadership for the country. Many students who received scholarships from Australia came back to Vietnam and were promoted to important positions in various government agencies.

In summary, the influence of ASEAN on Vietnamese National HRD can primarily be seen through its regulatory frameworks for HRD activities, including training, education, and social development for the Vietnamese. These activities have brought changes not only in legal frameworks but also in the improvement of Vietnamese workforce competencies and perceptions of many Vietnamese on various social issues. Through cooperation with ASEAN members and partners, Vietnam has been able to secure additional resources to implement its national strategy on developing human resources.

5 Implications for Research, Policy, and Practice

Research on Regional HRD has been scant. Research on its effects on National HRD is even more so. As illustrated in the chapter, the dynamics between Regional HRD and National HRD can be seen at a minimum as a two-way relationship, characterized by the involvement of various actors. In the case of Vietnam, multiple actors, including government agencies, nongovernmental organizations such as women social networks, private institutions, individuals, and regional organizations continue to play an important role in HRD-related activities that

stem from ASEAN initiatives. Additional research is needed to understand the dynamics among these actors at both the regional and national levels and across the two levels.

Vietnam's national strategy for HRD from 2011 to 2020 was aligned with many of its activities in ASEAN. Further studies are needed to unpack the role of external partners in shaping National HRD. In addition, more research is needed to understand different mechanisms that impact HRD in ASEAN member states. For instance, future studies could look into experiences that Vietnam and other ASEAN countries have had with MRA implementation. Such research could shed light on the challenges and good practices that could be shared among ASEAN member states to foster more effective MRA implementation.

ASEAN statements and documents by sectoral ministerial bodies portray great efforts in framing and planning HRD-related activities. What is less known is how these activities are implemented on the ground, what impact they have had, and how the impact is measured. While many ASEAN statements and documents report on specific HRD-related activities, there are very few follow-up publications that report on the systematic evaluation of these efforts. Further efforts to evaluate HRD projects should be taken to help policymakers learn from both the failures and successes of ASEAN's HRD-related projects, so the decisions about future programs, practices, and policies can be informed by evidence from the field. Given the scarcity of resources, such evaluation efforts should help policymakers be more effective in the long-term.

To realize the vision of an ASEAN Community, member countries, especially Vietnam, should push forward in seeking out the harmonization and convergence of certification standards. MRAs have been recognized as a critical and significant catalyst for bringing changes in National HRD. Given the positive effect of these initiatives and the accumulated experience with MRA implementation, more professions should be built in this system to allow for increased standards, more workforce mobility, and more comprehensive Regional HRD.

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Part II

Human Resource Development in Education



5

Higher Education's Role in Promoting Entrepreneurship and Innovation Ecosystems in Vietnam: An Evaluation of the Innovative Partnership Program

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1 Introduction

The world is experiencing a new industrial revolution that is changing the way in which people live, learn, work, interact, and relate to one another. An exponential growth in the availability of new technologies is disrupting existing value chains, while at the same time giving rise to new ways of meeting human needs. Intellectual and entrepreneurial talent have become indispensable to wealth creation. Indeed, as Schwab (2016)

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claims: “Talent, more than capital, will represent the [new] critical factor of production.”

This new environment is posing challenges for universities. Traditional approaches to teaching are being displaced by digital technologies. Private corporations are establishing their own research and development capabilities. To remain relevant, universities must rapidly evolve.

A process of evolution is already evident across many OECD countries, where universities are reported not only to be cultivating closer relationships with the world of business (Gibb, 2017; Graham, 2002; Maskell & Robinson, 2001) but also to be redefining their role as one which involves making a contribution to local and national development (European Commission, 2003). The first mission of universities may be teaching, and their second mission may be research, but now they have a third mission, i.e., engaging with processes for wealth creation by society.

In general, universities in Vietnam have yet to embrace this third mission. Indeed, many of them have yet to commit to the second mission. Traditionally, universities in Vietnam have been valued for their teaching mission. The number of research-oriented universities remains small and linkages between universities and industry have traditionally been weak (see, for example, Nguyen, Nguyen, Doan, & Dao, 2017; Pham, 2013). In recent years, however, there is a growing realization in Vietnam that its higher education system needs to make a more direct contribution to national economic development by becoming more entrepreneurial.

It is against this background that a four-year Innovative Partnership Program (IPP) was initiated in 2014 by the Finnish Government,

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in cooperation with the Government of Vietnam. The IPP sought to identify ways in which Vietnamese universities could become more entrepreneurial. Insights from the IPP initiative are reported in this chapter.

2 Reviewing the IPP

The IPP, in addition to advising on the development of start-ups in Vietnam, sought to assist Vietnam with the development of entrepreneurial universities. As originally conceived (see, for example, Etzkowitz & Leydesdorff, 2000), entrepreneurial universities were higher education institutions that actively sought to commercialize knowledge, principally by selling patentable discoveries to industry. Subsequently, they were regarded as institutions hosting scholars whose research achievements could be licensed to industry through commercial partnerships, or even crystallized through the establishment of university-owned spin-off companies (see, for example, Hsu, 2007; Asterbro, Bazzazian, & Braguinsky, 2011). These universities were seen also as providing “an important social setting for students and faculty to exchange ideas, including ideas on commercial entrepreneurial opportunities” (Hsu, 2007).

Most recently, entrepreneurial universities have come to be regarded as institutions that contribute actively to the creation of cultures, practices, and opportunities likely to be conducive to innovation and entrepreneurship (see, for example, Gibb, 2017; Salem, 2014), while also exercising a training function (Carvalho, Costa, & Dominginhos, 2010). Wright, Siegel, and Mustar (2017) refer to entrepreneurial universities in their most recent incarnation as entrepreneurship and innovation ecosystems, that is, as hubs actively engaged in coordinating a wide range of stakeholders, including students, faculty, alumni, businesses, and public authorities, for the purpose of advancing innovation and entrepreneurship at a local level. It is this most recent conceptualization that provided the inspiration for the IPP.

To implement its vision of an entrepreneurial university, the IPP established a University Collaboration Program, involving 11 higher education institutions from across Vietnam. These included: Hanoi University

of Science & Technology; Foreign Trade University; FPT University; HCMC University of Science & Technology; HCMC Open University; University of Finance and Marketing; Saigon Technology University; Danang University of Technology; Nha Trang University; Dalat University; and Hue Industrial College. These were institutions that were already, or had expressed an interest in becoming, entrepreneurial. Subsequently, two other institutions, Nong Lam University and Nguyen Tat Thanh University, joined the Program. The Management Training Institute of the Ministry of Science and Technology (MOST) participated throughout as an observer.

The participating institutions were provided with a range of opportunities to assist with their development as entrepreneurial entities. Important among these was an intensive training program provided for selected personnel from each of the participating institutions. This program initially required attendance at a two-week training “boot camp.” The participants then undertook almost six months of supervised practice while engaging in curriculum development and in the conduct of institutionally based promotional activities focused on innovation and entrepreneurship. Having completed the program, the participants were supported informally while they proceeded to give expression within their institutions to the IPP vision.

Early in 2018, a review of the IPP was commissioned. To implement the review, in-depth interviews were conducted with 20 selected personnel who had played a significant role in the IPP’s implementation across the 13 participating higher education institutions. Later, the interviewees contributed to two focus-group discussions about insights to emerge from their experiences. In addition, two institutional case studies were conducted, one at the FPT University and the other at the Foreign Trade University. These two institutions were selected as case studies because each has a national reputation for being strongly committed to entrepreneurship and innovation.

Two models of entrepreneurship and innovation ecosystems influenced the review. The first was Isenberg’s (2010, 2011) model of an entrepreneurial ecosystem, defined as a “set of individual elements ... that combine in complex ways ... [to] turbocharge venture creation and growth” (2010, p. 43). The individual elements identified by Isenberg included: policy, finance, culture, support, human capital, and markets.

Universities fitted well with this model because of the importance of their role in contributing to the development of human capital. The second was Morrison's (2013) model of an innovation ecosystem, which focused more explicitly on the importance of entrepreneurial universities. According to Morrison, entrepreneurial universities not only recruit and train the skilled talent pool required to enable the establishment of start-ups, but they also become research and development partners for these start-ups once they have become profitable companies.

The review sought to focus on five criteria for the evaluation of development assistance, as identified almost 20 years ago by the OECD's Development Assistance Committee (DAC). The DAC criteria are: *relevance*, concerning the extent to which an aid activity aligns with the priorities and policies of the target group for receiving aid; *effectiveness*, concerning the extent to which an aid activity achieves its stated objectives; *efficiency*, concerning the extent to which the outcomes achieved have been cost-efficient; *impact*, concerning the extent of the changes, whether positive or negative, which have resulted from the aid intervention; and *sustainability*, concerning the likely future continuation of a flow of benefits from the initiative.

3 Findings from the Review

The following account addresses a selected number of important themes and challenges to emerge from the review. In general, the themes and challenges link to one or another of the DAC evaluation criteria.

One of the strongest themes to emerge concerned the *relevance* of the IPP both to national policy and to institutional priorities. A recent national policy statement, *Prime Ministerial Decision 844*, issued on May 18, 2016, expressed a need in Vietnam for the development of a functional national ecosystem for innovative start-ups. Ministries have subsequently been required to develop both the necessary regulations and the appropriate financial mechanisms and education policies to enable this need to be addressed. The policy statement forms part of a cluster of recent government initiatives intended to boost Vietnam's adoption of

higher value-adding forms of economic production. The IPP was recognized by all concerned as fitting well with official priorities. Across all the participating higher education institutions in the IPP's University Collaboration Program, senior academic managers were reported to have valued highly the support provided by the IPP in enabling the development of strategies for becoming more proactive in their responses to the wishes of the Government. For many of these academic managers, the notion of an entrepreneurial university appeared to be new. One interviewee reported, for example, that:

Thanks to the IPP, the [innovation] Center has achieved the trust of the university leadership and of other faculties. From early 2018, [the University] will be opening new courses on entrepreneurship and innovation.

From another university, an interviewee reported:

IPP helped to change the understanding of leaders. Before IPP participation, the plan of establishing a course on entrepreneurship and innovation in the Doctorate in Business Administration Program was just an 'idea', but after participating in the IPP the leaders understood more clearly [the notion of] entrepreneurship and innovation and [they] approved a proposal to establish an entrepreneurship and innovation program in the DBA.

From a third university, an interviewee reported:

IPP also makes leaders of [this University] understand the importance of entrepreneurship and innovation. They are trying to adopt an innovation mindset in some activities in the University. They also start to research some industry linkages that can improve entrepreneurship and innovation at the University.

From yet another university, an interviewee commented:

IPP helps leaders of [this University] to understand and form a strategy for entrepreneurship and innovation, and so that they decided to establish

the Innovation Center. IPP also helped lecturers on entrepreneurship and innovation at [the University] to design a better entrepreneurship and innovation course curriculum.

In general, a fundamental shift at senior academic management levels was reported to have occurred within the participating institutions regarding perceptions about the potential for a university to establish and sustain an entrepreneurship and innovation ecosystem. Some universities, in fact, were said to have become so inspired by the IPP concept of an entrepreneurial university that they had begun to take bold steps in terms of establishing entrepreneurship and innovation centers. The Foreign Trade University (FTU), one of the two case-study institutions, reported, for example, that it had made a commitment to create an entrepreneurship incubator with a mission of engaging with potential investors. The importance of these developments cannot be over-stated. Vietnam's higher education sector has not traditionally accepted the view that expenditure on research, innovation, and entrepreneurial initiatives might represent investment in the future. The IPP came at a time when senior managers at higher education institutions were much more receptive to such a view.

In terms of *impact*, the IPP was reported to have been especially successful in the area of capacity building. According to nearly all interviewees, it had resulted in the creation of a vibrant network of lecturers, consultants, coaches, and even investors who were highly committed to the idea of creating institutionally-based entrepreneurship and innovation ecosystems, with a particular emphasis on nurturing start-up developments. An interviewee from one university reported, for example, that:

The most important impact of IPP is the creation a network of 500 brothers across the country that we can tap into ... it is not just at the individual level. It is even at the institutional level. This is very useful for our work.

Another interviewee shared the same sense of excitement about the development of a community of interest regarding entrepreneurship and innovation ecosystems, commenting that:

IPP has created for us a network of people who share the same passion and vision. I already knew some of the people who were working on innovation and start-ups, but by joining the IPP program, we feel we are bonded together for a common cause.

The IPP's contribution to capacity building was also reported to have been significant for the individual faculty members who had undergone the intensive training program. When interviewed, these participants reported in glowing terms about the extent to which their skills in delivering workshops and programs had been sharpened, and their self-confidence boosted. One of many comments along these lines came from an interviewee who remarked that:

IPP also helps us to know how to conduct workshop on entrepreneurship and innovation for students, [and on] how to develop the educational curriculum. As the result, the DBA now has its own curriculum on "innovation and entrepreneurship."

From another university, an interviewee commented:

There are a number of activities in the [University] being implemented thanks to our participation in IPP. We have developed an entrepreneurship and innovation educational program, and conducted activities for raising awareness, and media. We organized a number of workshops on entrepreneurship and innovation for both lecturers and students. The feedback showing these workshops highly relevant is over 80%.

This interviewee's tone was one of excitement and pride in personal achievement. The interviewee was elated that the IPP had provided the skill-base, confidence and positive attitudes required to implement successfully an institution-wide program of workshops on entrepreneurship and innovation, not only for faculty members but also for students.

This reaction was not uncommon. Across a majority of the 13 participating higher education institutions, new curriculum streams related to entrepreneurship and innovation had been introduced as new, or as an element within existing, training programs, and these developments were greeted with enormous excitement.

Another aspect of the IPP's contribution to capacity building was the perceived value of the materials provided for participants in the intensive training program. As one interviewee reported: "*[The] entrepreneurship and innovation training is now implemented by the lecturers who were trained through the IPP. We also used materials and textbooks that IPP provided.*"

Though evidence of the *sustainability* of the impact of the IPP may take longer to identify, it was reported by more than one-third of the interviewees that their institutions had embarked on long-term commitments to entrepreneurship and innovation by establishing and funding business incubators of one kind or another. An example here is the Foreign Trade University's commitment to establish an innovation hub and start-up incubation space, giving it operational and financial autonomy, which is unusual in the context of a public higher education institution in Vietnam. For most interviewees, these developments provided a basis for optimism that the impact of the IPP would be long lasting, especially because of the extent of the complementarity between Government priorities and the IPP's vision of entrepreneurial universities.

The two case-study universities selected for inclusion in the review, that is, the Foreign Trade University and the FPT University, provided further insights. The Foreign Trade University is an established public university in Vietnam with a strong reputation for offering professionally relevant training programs, mostly in business-related areas. The University is highly responsive to employer needs in terms of how it designs and delivers its curriculum. Not surprisingly, therefore, it achieves a high graduate employability rate and is strongly selective in terms of student admissions. In 2018, it had an enrollment of approximately 25,000 students.

In contrast, the FPT University is a private university specializing in information technology and telecommunications. It was established in

2006 by the FPT Corporation, the largest telecommunication provider in Vietnam. Employability rates for graduates from FPT University are also very high and starting incomes for graduates from this institution are among the highest for graduates in Vietnam. In 2018, it had an enrollment of 18,000 students.

Rice, Feters, and Greene (2014), drawing upon data collected in six countries, three located in the United States and one located in each of Latin America, Europe, and Asia, identified seven factors affecting the success of university-based entrepreneurship ecosystems. These were: vision, engagement, and leadership by senior academic managers; strong academic and administrative leadership at every level within the institution; the attainment of a critical mass; the development of an appropriate, robust and effective organizational infrastructure; a commitment to continuing innovation in the elements of the entrepreneurship ecosystem; the commitment of substantial financial resources; and a sustained commitment over a long period of time.

Aspects of each of these elements may to a greater or lesser extent be seen to be present in the approach taken by both the Foreign Trade University and the FPT University. Each has an institutional vision, which embraces entrepreneurialism and innovation; each strives to implement an internal management and administrative system capable of giving expression to the institutional vision; each demonstrates a strong commitment to innovation; and each expresses a long-term commitment to being entrepreneurial. A significant difference between the two universities, however, is that FPT University is generously funded by its owner, the FPT Corporation, whereas the Foreign Trade University must ultimately rely on the more limited resources provided by the State.

The faculty members interviewed as part of the review of the IPP also reported a number of challenges encountered during the implementation of the University Collaboration Program. One of these, which related to *sustainability*, as well as to *impact*, concerned the fact that the notion of an entrepreneurship and innovation ecosystem was difficult for policy-makers and academic managers to understand because there is no easy way of expressing the concept in Vietnamese. The closest translation is one involving a *national innovation and start-up ecosystem*, or a *national*

innovative start-up ecosystem, which are exactly the terms employed in *Prime Ministerial Decision No. 844*.

In fact, however, the notion of an entrepreneurship and innovation ecosystem is broader in scope than either of these translations implies. Even the interviewees themselves were mostly inclined to refer only to start-ups. There is a risk here is that, by interpreting entrepreneurship and innovation ecosystems as being solely concerned with start-ups, the academic community will perceive these ecosystems as having a focus that is too narrow and too specific. Given that research-based innovation in Vietnam tends more to be concerned with technological re-customization than with the creation of “new to the market” goods and services, a related risk is that these ecosystems will not be expected to provide a culture for genuine creativity in the design and development of completely new products and processes.

Another challenge, also relating to *impact*, and potentially to *sustainability*, concerns the limited amount of time faculty members had to devote to the establishment of institution-based entrepreneurship and innovation systems. The interviewees frequently reported one of the main obstacles to progress in achieving a stronger institutional commitment to entrepreneurialism and innovation was that faculty members felt overwhelmed by the scale of their day-to-day workload commitments, leaving them with little time for engagement with the commercialization of their research, or even for attending to their research responsibilities. Individual universities were reported to have introduced financial incentives to encourage quality research, but these incentives were generally considered not to be of sufficient value when compared with the additional earnings possible from accepting extra teaching responsibilities.

Curiously, therefore, some of the most enthusiastic adopters of the notion of entrepreneurship and innovation ecosystems within individual institutions were reported by the participants to be students, rather than faculty members. Most participants in innovation and start-up competitions, for example, were students, and not faculty members.

Yet another challenge concerns the difficulties public universities in particular face in seeking to establish themselves as entrepreneurial universities, as envisioned by the IPP. Ten of the 13 participating higher education institutions were line-managed by government ministries

and related instrumentalities and so were required to obtain official approval from within the state bureaucracy before engaging in significant curriculum reforms. Though opportunities for many of these institutions to raise income from student fees have improved over recent years, all public higher education institutions in Vietnam remain reliant upon the state for critical financial support. These institutions cannot, therefore, act freely in deciding on a long-term investment in the establishment of business incubators. The supply of public funds available to them is unreliable and senior academic managers are in a position of being personally accountable for any institutionally-incurred financial losses.

A further challenge for *impact* and *sustainability* was reported to be that, although the legal framework for doing business in Vietnam has improved significantly over recent years, it remains the case that there is a lack of clear guidance regarding the ownership of inventions, technological know-how and patents. Laws and regulations in Vietnam concerning intellectual property are not nearly as well-developed as is the case in most advanced economies.

Finally, concerning *efficiency* and *effectiveness*, there was a challenge associated with the general lack of quality control concerning the various training programs on entrepreneurship and innovation being conducted within the participating higher education institutions. These programs had not been officially recognized by the Ministry of Education and Training, and so could not be said to have been securely embedded as approved training programs leading to a higher education qualification. Furthermore, the ways in which they were being introduced within existing programs were highly variable, meaning that there was no standardized form of training being provided with respect to entrepreneurship and innovation education.

4 Implications for Policy and Practice

There are many policy and practice lessons to be learned from the experience of the IPP. These are now addressed at three levels, including national, faculty development, and senior academic management.

4.1 National Level

The significance of the contribution made by the IPP notwithstanding, it remains the case that institutionally based entrepreneurship and innovation ecosystems in Vietnam remain largely underdeveloped. Largely missing from policy discussions about the topic is an appreciation of the need for a coordinated plan to bring together each of the elements in Isenberg's (2010) model in such a way as to "turbocharge venture creation and growth" (p. 43). In particular, public universities are not being fully appreciated for their potential role as catalysts for the mobilization of other elements in Isenberg's model. In Vietnam, universities continue to be regarded as being primarily responsible for teaching, and the need to become more entrepreneurial in a way that is consistent with the concept of an entrepreneurship and innovation ecosystem has to date received little focused attention at a national policy level.

A significant constraint for public universities is that they continue to lack sufficient institutional autonomy. Traditionally, public universities in Vietnam have been line-managed and tightly controlled by State Ministries and instrumentalities. Recently, a total of 23 public universities out of 163 public universities in Vietnam have opted to become financially independent of the state in exchange for having much more institutional autonomy than has previously been acceptable to the Government.

Even these universities, however, remain tied to the state in multiple ways, including: the need to comply with national higher education policies issued by the Ministry of Education and Training; the need to comply with financial regulations issued by the Ministry of Finance; the need to comply with employment regulations issued by the Ministry of Internal Affairs; and so on. These regulations, though typically outmoded, are rigidly applied, leaving limited opportunities for the emergence of entrepreneurial policies and practices at an institutional level.

According to Clark (2001), an entrepreneurial university is one that can succeed in the face of complex and uncertain environmental conditions. Public universities in Vietnam, even the small number of them with enhanced levels of institutional autonomy on account of being

financially self-reliant, simply do not have the level of freedom required to be able to address the kinds of conditions referred to by Clark.

It is worth noting that FPT University, one of the two case-study institutions for this review, is a well-resourced private university. The Foreign Trade University, the other case-study university, is a self-financing public university, constrained in ways similar to those mentioned above, though it has had a tradition of being entrepreneurial, which has enabled it to exercise more institutional autonomy than nearly all other public higher education institutions in Vietnam.

In addition to a lack of institutional autonomy, most public universities in Vietnam are also affected by a lack of financial autonomy. Except for the 23 public universities now accepted to be financially self-reliant, the funds provided to them by the state are never sufficient to meet their needs, and the conditions attached to how they may spend the funds they receive from the state are invariably restrictive.

Even the 23 public universities now able to raise their own budgets from student fees and commercial activities face a ceiling on the level of tuition fees they are permitted to charge, and there are also legal obstacles to being able to channel funds into institutional investment funds, or public-private partnerships capable of generating the capital required for significant business ventures. In this regard, the Foreign Trade University has been a notable exception.

A further matter requiring attention is the need for universities in Vietnam to have incentives to engage in entrepreneurial activities. These incentives might take a variety of forms, including recognition in the form of national ranking or accreditation, or even the provision of additional funding based on demonstrated entrepreneurial performance. Universities in Vietnam, as elsewhere, are acutely sensitive to their placement in rankings systems. A high rank is regarded by them as being desirable for its reputational value and subsequent marketing success. There is currently no official university ranking system for higher education institutions in Vietnam. It should not, however, be difficult to establish one that is focused on entrepreneurship and innovation. Relevant indicators might include: the extent of concentration on collaborations with industry; the success of university alumni in terms of entrepreneurial engagements; the number of patents registered; the

value of revenue obtained from consulting with industry and from the commercialization of research; the percentage of income derived from non-public sources; the extent of participation of industry in university governance, curriculum development and teaching; the number of entrepreneurship and innovation training programs provided; and the extent of the support provided for innovation, such as through the establishment of innovation incubation centers. In short, the extent of the contributions made by higher education institutions to entrepreneurship and innovation ecosystem development should be measured and recognized as an additional indicator of quality.

4.2 Faculty Development

For the long-term sustainability of entrepreneurship and innovation education, a focus on capacity building is needed. Firstly, priority should be given to training university teachers and researchers. As a focus on entrepreneurship and innovation becomes more firmly embedded in the higher education curriculum, there will be a significant demand for appropriately qualified faculty members. The need should be anticipated soon and programs to equip lecturers with relevant skills and knowledge for teaching about entrepreneurship and innovation developed as a matter of priority.

Undergraduate and postgraduate degree programs in entrepreneurship and innovation should be in place for preparing core teaching and research staffs, who will be expected to deliver future entrepreneurship and innovation programs in higher education institutions. The IPP approach of selecting faculty members for intensive training, who then train other faculty members, should be adopted here because of its evident success, as reported widely by the interviewees. Scholarships might be provided competitively on a merit basis to ensure that the most active and motivated learners become the core personnel for entrepreneurship and innovation education development. In the long run, Vietnam needs to have a critical mass of scholars whose expertise includes the latest global developments concerning entrepreneurship and

innovation ecosystems. International collaboration will be essential to the attainment of this goal.

Secondly, there needs to be a strong research base regarding entrepreneurship and innovation education. The concept of an entrepreneurial university, as envisioned by the IPP, is new in Vietnam. Matters needing to be investigated include the appropriateness and effectiveness of different formats for entrepreneurship and innovation education in Vietnam. The Isenberg (2011) model of an entrepreneurship ecosystem suggests the importance of local context to be understood, including its legal, market, and human resource circumstances. Knowledge of how these factors operate and are related to one another in a local context is fundamental for entrepreneurship and innovation education, as well as for entrepreneurship and innovation ecosystem development. These were unanswered questions during implementation of the IPP.

A typical challenge of entrepreneurship and innovation development is a poor quality of relationship between universities and industries. There is a need for more action research on this matter, for instance, by studying success stories and by sharing experiences among peers. State grants and special mechanisms for access should be in place for the promotion of this type of research. As suggested by the experiences of IPP participating universities, a guidebook would be the first step to equip academic managers and faculty members with basic knowledge and information needed for planning and implementing entrepreneurship and innovation initiatives.

Thirdly, entrepreneurship and innovation education should ideally involve experiential training, ideally in the form of work-integrated learning activities conducted under the guidance of an experienced professional coach or mentor. In this regard, an effectively functioning university-based entrepreneurship and innovation ecosystem (consisting of service units, science and technology enterprises attached to the university, start-up firms, university venture capitals, institutional strategies and policies, and linkages between universities, investors, industries and the government) will have a significant impact on the development of entrepreneurship and innovation culture within universities. IPP interventions did not include direct supports for participating universities, either for establishing or for operating these interventions,

except where funding was provided for some activities delivered by the institutions themselves.

The problem for entrepreneurship and innovation supporting units, however, is their sustainability. Their operational costs are based often upon obtaining external grants or projects. When funded in this way, they must adhere to specific agendas. It is also possible to raise additional revenue by hosting events such as contests, festivals, and competitions for the best entrepreneurship ideas. These kinds of projects do not, however, generate much additional revenue. Given the fact that institutionally based entrepreneurship and innovation units can play a vital role in providing a platform for initiatives for faculty members and students, an initial investment in their establishment should be considered, as should support for relevant project-based activities. This support should be seen as a form of training expenditure. In the long run, public-private partnerships may be considered as a possible financing model for these units.

Another approach would be to combine units that have a high possibility in generating revenue with supporting units for which the major function is the provision of entrepreneurship and innovation education. This model is adopted by the VNU-HCM Information Technology Park (ITP), which also includes an Innovation and Entrepreneurship Centre (IEC). Leadership provision, including the empowerment of authorities to delegate, is also needed. Tuition fees for most training formats should be applied to ensure sustainability when the entrepreneurship and innovation course/programs are seen to be highly helpful to learners. In the long term, such entrepreneurship and innovation supporting units within universities must connect with businesses and investors for sustainable development.

4.3 University Leaders

One of the most important success factors in entrepreneurship and innovation development within higher education institutions is the extent of the support provided by academic managers. As reported earlier, a strong commitment by university leadership is a prerequisite for success

in entrepreneurship and innovation development within higher education institutions. Entrepreneurship and innovation education can take various forms. The type of programs to be delivered should be decided at the institutional level, so that it can be consistent with university strategies. Similarly, the financing model for entrepreneurship and innovation supporting units is also dependent upon a particular context, i.e., resources available and purposes of the schools. Individual schools need to set their specific goals for entrepreneurship and innovation education depending on their mission, resources, and commitment to entrepreneurship and innovation development.

At present, the innovation capacity of faculty and staff in Vietnam remains limited. There is also a lack of faculty trainers within universities due to the lack of adequately trained and experienced professional personnel. Most staff members are co-functional because they have other major responsibilities. There are two problems concerning the issue of ownership issue: first, the origin of technology and innovation, and second, who owns the IP when the research has been conducted in the university using institutional/state/private funds.

The experiences of the Saigon Innovation Hub (SIHUB) in addressing this matter are noteworthy. SIHUB reported that they rendered (outsourced?) this task to a third party with expertise in analyzing the contributions of each partner and each element (resources, academics labor, associate contributions, etc.) and in determining the proportion of ownership. It is recommended that this experience be applied more widely.

International experience in this matter should also be considered. Aalto University of Finland has a functional unit that connects university faculty members with industries for the purposes of creating new products, as well as providing technical or business solutions. Experts then assess the possibility of commercialization of the research results, support patenting, and suggest a division of revenue generated from knowledge transfer or the granting of licenses. This approach remains unfamiliar in Vietnam, where faculty members must deal with research commercialization on their own and mostly outside of their university.

Innovation advancement concerns a wide range of diversified stakeholders. It results in a strong need for new approaches facilitated

by partnerships across various sectors, including government, university, industry, and various forms of institutions related to promoting entrepreneurship and innovation. More attention needs to be given to fostering interactions and spillovers at all levels through the promotion of networking and clustering.

Networks are also needed due to the increasing interdisciplinary of technical advancement (Mok, 2012). Networking is perceived as one of the major outcomes of IPP that was highly appreciated by the participating higher education institutions. Though establishing and maintaining relevant professional communities may go beyond the scope of responsibilities of individual universities, university leaders need to actively stimulate those connections.

Entrepreneurship and innovation lecturers/researchers also need an academic environment that supports the exchange ideas and knowledge, allowing them to learn from one another. This need is especially great in the context of Vietnam, where higher education institutions have been recently adopted entrepreneurship and innovation education. Even more important is the connection between university researchers and the business community, the entrepreneurs, the investors, the government officers, and other practitioners in entrepreneurship and innovation ecosystem, both at home and abroad. Such an engagement triggers collaboration opportunity and enables universities to move forward in Triple Helix directions. University leaders should be providing a platform for the development of these networks, as well as the conditions to make these networks productive.

The two case-study institutions, the Foreign Trade University and the FPT University, indicated clearly that a strong connection with industry is a success factor for entrepreneurship and innovation development within higher education institutions. It is recommended that linkages between universities and business community should be encouraged. Relevant initiatives here could include increasing business community participation in entrepreneurship and innovation education, for example, through the use of guest speakers from industry. These guest speakers could be business leaders, entrepreneurs, innovators, scientists, and alumni who are able to inspire people and share practical knowledge and

experience. Guest speakers should include local, national, and international practitioners with a view to providing students with a wide range of perspectives and experiences.

Additionally there might be: a focus on enabling co-supervision of graduate theses by faculty members and practitioners from the business world; encouragement given to faculty members to work closely with industries by participating in industry governing bodies, providing consultancy services, and collaborating in research; and the promotion of an entrepreneurship and innovation culture within universities by rewarding relevant initiatives in teaching and learning, and by emphasizing the importance of mentoring students and of encouraging faculty members to become more involved with the business world.

University-based start-ups should ideally be cross-institutional endeavors. Innovation hubs can take full advantage of each institution's strengths in contributing to an overall outcome. The Foreign Trade University was a showcase in this regard, having established its own successful Innovation Hub. Ideally, though, innovation hubs in Vietnam should be cross-institutional and inter-disciplinary, especially as mono-disciplinary higher education institutions remain relatively common in Vietnam.

5 Conclusion

This review was framed by the five DAC criteria of effectiveness, impact, sustainability, and so on. Whereas effectiveness focuses on the intended outcomes of an intervention, impact is a measure of the broader consequences of the intervention, such as its economic, social, and even political, effects. Therefore, when seeking to identify the outcomes beyond IPP, the impact of the initiative is being addressed. A related concern is sustainability, which is a measure of the effects of the IPP intervention over the longer term. In particular, the question is whether the benefits and impact of IPP support for university entrepreneurship and innovation ecosystems are likely to continue after the IPP support has been withdrawn. Sustainability is in many ways a higher-level test of whether or not the IPP project intervention has been a success.

Vietnam may be said to be a “latecomer” to innovation because many other Asian countries have already had to rely heavily upon public policies to drive innovation promotion. In Singapore, South Korea, Taiwan, and Japan, governments have been active in steering the development of research and development, as well as in promoting innovation, especially during its inception phase. In Vietnam, policy developments to date have focused mainly on science and technology, rather than on entrepreneurship and innovation. Little attention has been given, therefore, to technology development, the creation of new products, the development of markets for new products, and entrepreneurial education. In Vietnam, then, the disconnection between what universities do and what society needs remains large.

The IPP provided a valuable opportunity for Vietnam to generate ideas for entrepreneurship and innovation ecosystem development. It allowed entrepreneurship and innovation education programs for university lecturers to be tested; it raised awareness of the notion of entrepreneurship and innovation among university leaders; and it contributed to the establishment of networks with a focus on the transfer of entrepreneurship and innovation knowledge to lecturers engaged in delivering entrepreneurship and innovation courses/programs.

Through the University Collaborations Program, the IPP attracted the attention of university leaders concerning the importance of the “third mission” of universities. Lecturers participating in IPP activities were equipped with knowledge, skills, and teaching methodologies for delivering entrepreneurship and innovation programs. Mid-level managers, including heads of supporting units and of centers for entrepreneurship, realized new opportunities for adding value to university services.

The curriculum design and teaching methodologies for entrepreneurship and innovation programs that IPP has made available proved to be capable of being contextualized to meet local conditions and needs. This insight is important because *Project 1665* requests that entrepreneurship and innovation education be offered by all universities and colleges in Vietnam. The IPP materials provide invaluable input for further development in research and teaching entrepreneurship and innovation courses or programs across the higher education system in Vietnam.

Entrepreneurship and innovation education should not rely solely on taught courses, even where the course content seems ideal. The quality of entrepreneurship and innovation education requires not only lecturing but also immersion in an engaging learning environment that involves academics and industry partners. University-based entrepreneurship and innovation systems should include science and technology entrepreneurship attached to universities; co-working spaces; support units (start-up center, incubation centers, and the like); and social events (for example, Techfests, competitions for entrepreneurship ideas); and linkages with industries and investors.

A set of criteria for measuring and recognizing the attributes of entrepreneurial universities should be included in Vietnam's university rankings system, when developed, and in other forms of assessment or accreditation. The criteria should be designed to measure engagement with industries, entrepreneurship and innovation course and program initiatives and their outcomes, and the extent of institutionalization of entrepreneurship and innovation education commitments.

Establishing an entrepreneurship and innovation culture within Vietnam's higher education sector will require effort to minimize the extent of cultural resistance arising from a sense of entrepreneurship and innovation education perceived as being "different," or to entail risk and the possibility of failure. A national campaign might support the nurturing of the entrepreneurship and innovation spirit but might also be risky if it creates a movement that cannot point to concrete results.

Government clearly has an important role to play concerning the future of business incubators within universities in Vietnam. Public funding in the form of seeding grants to support the establishment of entrepreneurship and innovation centers will be required. Equally important, however, will be the value universities place on these centers. To this end, the intrinsic motivation of learners and institutions is important. The level of this intrinsic motivation will be higher if higher education institutions in Vietnam are given genuine autonomy and empowerment through the delegation of academic departments.

The literature on innovation policy interventions often distinguishes between supply-side instruments (influencing innovation generation) and demand-side instruments (influencing the demand for innovation)

(Edler, Cunningham, Gök, & Shapira, 2013). The IPP may be characterized as a supply-side instrument. Its impact was clearly significant, but the sustainability of that impact will now depend upon demand-side conditions, particularly a commitment by businesses in Vietnam to enter into partnerships with entrepreneurial universities for the purposes of creating wealth through innovation.

There is a long way to go before Vietnam's higher education sector might be said to be entrepreneurially- focused. Many obstacles remain to be overcome. The lesson learned from the IPP, however, is that the Vietnam's universities will be more relevant to society and will play a more important role in national socio-economic development, when they engage fully with the development of institutionally based entrepreneurship and innovation ecosystems.

First, for system management in entrepreneurship and innovation education and development, data must be collected and analyzed to provide a basis for the comprehensive evaluation of the performance of universities concerning the development of entrepreneurship and innovation services. The evaluative data must be linked to measurable performance criteria.

Secondly, because the notion of entrepreneurship and innovation education and development is new for Vietnamese universities, exploring experiences and best practices in entrepreneurship and innovation education and development around the world would be most helpful for institutional initiatives. The academic community in Vietnam should be supported to conduct research on those practices, concerning not only their own initiatives and achievements, but also the philosophical foundations of entrepreneurship and innovation education and its relevance to the state of higher education in Vietnam.

Thirdly, research should explore the potentials and the opportunities for entrepreneurship and innovation education and development at specific kinds of universities in Vietnam with a high level of potential for developing university-based entrepreneurship and innovation ecosystems because of the extent to which they have an intensive concentration of talent in technology development. Entrepreneurship and innovation development in research institutes is also worthy of close investigation.

Fourthly, cooperation between industry and universities is at the core of the notion of an entrepreneurship and innovation ecosystem and especially entrepreneurship and innovation education. The topic attracts general interest in Vietnam, but actual empirical data related to the factors that underpin successful cooperative ventures are relatively scarce. More research is needed for the purposes of identifying challenges and mechanisms or platforms for strengthening these linkages.

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6

Preparing Competent Business School Graduates for the Emerging Vietnam: A Critical Human Resource Development Issue

Hang Thi Tran, Diep Luc Tra, and Anh Thi Ngoc Nguyen

1 Introduction

1.1 Vietnam—An Emerging Economy

Until the mid-1980s, Vietnam was among the less developed countries in the world (Iram & Malik, 2017). Against this background, Đổi Mới, the economic renovation policy in Vietnam, was introduced at the 6th National Congress of the Communist Party of Vietnam in 1986. This change resulted in the shift from a planned to a market economy,

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the development of an export-led growth model, the involvement of political leaders in business operations, the deployment of market mechanisms, market competition, freedom pricing, reduced transaction costs, the establishment and growth of capital markets, and dramatic social changes in Vietnam (Hoang, Dung, Napier, & Ha, 2013).

In 2010, 24 years after the *Đổi Mới* program was launched, Vietnam became a middle-income country (Bodewig & Badiani-Magnusson, 2014) and has recently emerged as the new manufacturing powerhouse in Asia (Iram & Malik, 2017). Moreover, according to World Development Indicators published by the World Bank, Vietnam's economy was ranked 46th in the world in 2018 with GDP reaching \$244.948 million and an economic growth rate of 7.1% (World Bank, 2019).

Despite these achievements, the sustainable growth of Vietnam encounters considerable challenges (Bodewig & Badiani-Magnusson, 2014). For example, the pace of development has slowed in recent years, primarily because of contextual changes and its heavy dependence on factor accumulation rather than an increase in productivity, which is considerably lower than those of neighboring countries (Bodewig & Badiani-Magnusson, 2014). Being accounted for productivity issue, skill gaps and the accessibility of information call for the need to develop human resources and upskill the workforce (Bodewig & Badiani-Magnusson, 2014). Preparing competent business entrepreneurs, in particular, is crucial to the development of future business enterprises in Vietnam (Ly, Vickers, & Fernandez, 2015).

1.2 Overview of Business and Management Education in Vietnam

During *Đổi Mới*, the importance of large and state-owned organizations to Vietnam's economy has been declined, whereas the contribution to the economy of private business enterprises has been increasingly importance (Hoang et al., 2013). For instance, according to MPI, private-sector enterprises accounted for 43.22% of GDP during 2018 and also employed 85% of Vietnam's labor force. Business enterprises in Vietnam, however, need entrepreneurial individuals to renew business

and production processes, and bring about innovative services and strategies (Ly et al., 2015). This has created the need and opportunities for Business and Management Education (Hoang et al., 2013).

The discipline of Business and Management prepares students for future global challenges by equipping them with essential and effective job-related behaviors (Emiliani, 2006), and managerial and entrepreneurship skills (Taatila, 2010). Business and Management Education thus emerge as a key supplier of highly trained human resources to support the development of transitional Vietnam (Neelankavil, 1994). Moreover, educated entrepreneurs are more likely to apply innovative and modern business models, and employ technology in their ventures (Taatila, 2010). These entrepreneurs exhibit a strong level of risk-taking, an internal locus of control, ambiguity tolerance, and can handle uncertainty (Taatila, 2010).

As a developing country, contemporary Vietnam needs well-qualified and trained graduates to modernize its management practices and make decisions in turbulent environment (Davey et al., 2011). In particular, employers have identified managerial skills as the “hardest-to-fill,” challenging the innovation and productivity of the country (Cunningham & Pimhidzai, 2018). These are considered core career-related skills and competencies that are quality indicators for Business and Management Graduates in local institutions, Quang Duoc and Metzger (2007) argued that the gap between graduates’ competencies and employers’ expectations has disappointed many employers in Vietnam. The greater the amount of resources spent on business education, the harder it is to find qualified graduates, or even postgraduates, who satisfy the criteria mentioned in job descriptions and specifications. This is caused by a quality issue related to domestic Business and Management Education and by the unqualified candidates themselves (Hoang et al., 2013).

Alternatively, transnational education is expected to address current challenges in the higher education system and empower Vietnamese people to proactively engage in the development of the country and in the global business environment (Ly et al., 2015). With a population of approximately 97 million people, 70% of whom are under 35, an education-oriented culture, and a booming economy, Vietnam has become an attractive destination for educational exports (Ly et al., 2015).

The tendency on the part of Vietnamese talent is to seek exposure to a Western academic and professional environment, satisfying the demand for a skilled workforce in the emerging economy and for new political thinking during the transitional period (Hoang et al., 2013).

Transnational education, however, is not free of shortcomings. Although a Western management philosophy may help ensure successful global operations, Western theory, managerial methods, and approaches are not sufficient for success in the business context of Vietnam, which is embedded in a different cultural history and mindset (Davey et al., 2011; Ly et al., 2015). Moreover, Napier (2006) suggested that foreigners can acquire sound knowledge from domestic learners. This facilitates an exchange of knowledge, enhances the importance of local knowledge and values, and raises awareness of cultural adaptability (Napier, 2006).

By recognizing the importance of Vietnamese business graduates to the further development of the country, we argue that developing the competence of Business and Management Graduates is a critical human resource development issue for domestic business schools, employers, and students. Such competence, which is a function of Business & Management Education, needs to satisfy employers' demands as well as contribute to institutional and national growth. It is, therefore, important to develop a comprehensive and effective framework for developing Business and Management Graduates. Each of these issues will be addressed in the following sections.

2 Graduates' Competence and the Gap with Employers' Demand

2.1 Graduates' Competence Framework

The concept of competence is broad and ambiguous (McEvoy et al., 2005). Graduate competency used to be referred to as only professional competency (not considered skills and others as competency), resulting in the gap between business degree and business careers. (Pfeffer & Fong, 2002). Competence, according to HR scholars and practitioners, includes knowledge, skills, and behaviors that contribute

to one's successful career and organizational roles (Cohen, 2015). In management education, a competence-based approach had been applied (Pfeffer & Fong, 2002) and an expected learning outcomes framework becomes more popular in the contemporary context (Tam, 2014). At the student level, expected learning outcomes include three levels: cognitive or knowledge, affective or skills, and psychomotor or attitudes (Bloom, 1956). As the terms "competence" and "expected learning outcomes" overlap in their crucial elements: knowledge, skills and attitude (KSA), we use the KSA model to develop our further argument regarding graduates' competence issue embedded in a Business and Management Higher Education context.

The KSA model is used in the design of education domains as it frames the criteria used to assess student achievement. These criteria are based on an aggregate of the fundamental expectations of graduates, which are likely to be measurable as well as assessable (Bakarman, 2005). The model is not only beneficial for educators; it is also beneficial for students and employers in terms of recruitment. Elements of KSA are derived from Vinke's (2002, cited in Bakarman, 2005) definition of competency as "the ability of an individual to select and use the knowledge, skills, and attitudes that are necessary for effective behavior in a specific professional, social or learning situation" (cited from Bakarman, 2005). These elements are not separate but interconnected. Specifically, knowledge is socially constructed and stems from the interaction between learning capability and the learning context; it constitutes theory, concepts, and tacit knowledge achieved from practical experience. The accumulation of knowledge can facilitate the transformation of knowledge into skills (Klieme, 2004). Regarding the term "skill," More (1980, p. 16) defined this as "any combination, useful to industry, of mental and physical qualities which require considerable training to acquire." Proctor and Dutta (1995, p. 18) identified a skill as a "goal-directed, well-organized behavior that is acquired through practice and performed with economy of effort." While knowledge acts as an incentive to acquiring skills (Chase & Ericsson, 1982), attitudes/personal attributes impact on the transfer of skills to the workplace (Leberman, McDonald, & Doyle, 2006). Contemporary research on transfer has demonstrated the role of certain characteristics and attitudes (Robinson, 1992), ability (Baldwin

& Ford, 1988), learning styles (Mbawo, 1995), job and career attitudes (Kirwan, 2009) and the Big Five personality characteristics (Noe, 2000) in successful skills transfer.

2.2 Graduates' Knowledge Development and Market Demands

Within the KSA model of Business and Management Programs, the knowledge component is further divided into social knowledge (including knowledge about social science, natural science, politics, laws, etc.), general professional knowledge (including knowledge about economics, market, organizations, etc.), and professional knowledge (including business administration, functional management, business projects, business plans, etc.). According to the ELO, a graduate is expected to be equipped with comprehensive and relevant knowledge about specific professions. Knowledge remains a central concept in the model of graduate employability and is considered a motivator to enter higher education as candidates with better qualifications are believed to have greater employment opportunities (Johnes, 2006). A survey conducted with Vietnamese graduates in 2010 by Tran supported the indispensable role of professional knowledge in pursuing jobs after graduation. This is because applicants with a solid knowledge foundation are expected to successfully answer questions related to the field in job interviews. Therefore, it is reasonable for most educators to attach the utmost importance to developing knowledge.

Knowledge is predominantly developed through the systematical curriculum of courses ranging from the courses of general knowledge to course of professional knowledge. While the educational curriculum has been persistently updating to more economic-oriented, there appears to be considerable misalignment between the curriculum content with the ever-changing society and the global employment market. The curriculum content indeed is criticized to laden with rigid, outdated curriculum and lack of "international currents of knowledge, new developments of knowledge and technologies, world-standard scientific

research and social research” (Tran, Le, & Nguyen, 2013, p. 96). Consequently, despite being expected to provide students with breadth and depth of essential knowledge, the insufficient emphasis of knowledge development on keeping pace with the contemporary market demand can fail to enhance graduates’ knowledge development.

Further on, the role of pedagogy should be highlighted in terms of efficiency in knowledge development. Currently, numerous Vietnamese universities have put effort to shift the focus from teachers to students as the centre of the learning process in the designation of teaching methods. Yet the traditional transmission methods positioning the teacher as the transmitter of knowledge along with student spoon-fed principle are still amongst the prominent approaches for knowledge construction in Vietnamese higher education (Tran et al., 2013). This, in turn, hinders the students’ critical and creative thinking which is the indispensable ability required in modern society.

At the same time, although an evaluation system using heterogeneous examination methods to assess the knowledge attainment, in Vietnam this system is frequently criticized for being outcome-driven rather than focusing on enhancing student learning. As a result, being theory-oriented, the exams are chiefly to check the level of knowledge committed to memory, which could lead to passive learning and ignores the process by which knowledge is reviewed and retained (Nguyen, 2012, cited in Tran et al., 2013). The significance of acquiring knowledge should be transferred to an ability to put this knowledge into practice. Indeed, Vietnamese employers place a much greater emphasis on the ability to apply knowledge at work than other forms of professional competence (logical thinking, communication skills, academic excellence, computing proficiency, ability to adapt to change, ability to handle pressure, critical thinking). Although the GPAs of Vietnamese students are not bad, the ability to apply what they have learned is of concern to employers (Quang Duoc & Metzger, 2007).

2.3 Graduates' Skill Development and Employers' Expectation

In terms of skills, education in Vietnam is theoretically heavy; therefore, there is a requirement for soft skills to emerge to meet the demands of and transition to the new market economy. The role of skills development becomes an urgent issue as “the quality of the next generation of business leaders will be determined by ways in which business schools respond to a host of dramatic changes emerging in the environment of higher education” (Acito, McDougall, & Smith, 2008).

Skills development has been a perpetual problem for the Vietnamese educational system due to the discrepancy between employer demands and university responsiveness, which is signified by a lack of skills and work-related competencies in graduates, and an increase in graduate unemployment. Previously, the development of professional or soft skills among students was not paid appropriate attention in the design of curricula (Oliver, 2002; Institute of International Education, 2004). Nowadays, however, employment-favorable skills have become increasingly important in the comprehensive development of students and are included in the expected learning outcome system of a small number of Vietnamese universities including the University of Danang, National Economics University, Foreign Trade University, The Vietnam National University.

The expected skills generally include hard skills/technical skills and soft skills. Hard skills are business administration and management skills that enable graduates to carry out business issues as well as exhibit proficiency in job-specific tasks, such as building business plans and business strategies, and performing managerial functions. Soft skills vary, although the most popular soft skills are communication skills, teamwork skills, and thinking skills. Furthermore, in tandem with globalization and the increasingly rapid pace of e-commerce development, IT skills and linguistic skills (e.g., English) are also included in all ELO systems. However, educational providers still fail to place an adequate focus on entrepreneurial skills, which are the most essential skills for business students, and higher education systems are held accountable for learning and improving these skills (Taasila, 2010).

From the perspectives of employers, Bodewig et al. (2014) found that Vietnamese employers are searching for candidates who possess an adequate level of cognitive, behavioral, social, and technical skills. Watts and Watts (2008) argue that soft skills are responsible for 70% of a person's success while the rest is attributed to technical knowledge. Indeed, the importance of soft skills in the business world has now been recognized and has increasingly attracted the attention of contemporary recruiters (Nealy, 2005; Pittenger et al., 2004). Nevertheless, students in Vietnam remains deficient in soft skills with 83% of higher education job applicants not meeting these requirements (Tran, 2010). Consequently, the number of unemployed bachelor's degree graduates reached 200,000 in 2018. In Vietnam, most of industry sectors, especially modern technology related industries, are experiencing the lack of applicants with sufficient skills (Jennings, 2017).

A substantial amount of research also supports the significance of such skills in the business sector. Recruiters in the country require employees to possess skills that align with the modern workplace, including learning, communication, problem-solving, and interpersonal skills (Trung & Swierczek, 2009). The importance of these skills has also been emphasized in other research studies (Future Skills Scotland, 2005; Meisinger, 2004; Raybould & Sheedy, 2005; Stasz, 2001). Swierczek and Lan Anh (2000) found that, in Vietnam, a skill set comprising decision-making, leadership, problem-solving, and information management are ranked as the most important for managers in the textile and garment, and plastics industry. Students, academic experts, and business leaders have argued that critical analysis and problem-solving skills are the most important criteria when assessing graduates (Quang Duoc & Metzger, 2007). This is because Vietnam is an emerging economy facing unpredictable changes. Critical thinking and problem-solving skills are essential in helping employees deal with changes. However, the different perspectives of stakeholders when choosing what factor to develop remain a controversial issue. Trung and Swierczek (2009) also found that whereas employers focus more on interpersonal skills (negotiation, conflict control), tertiary institutions pay more attention to problem-solving skills such as decision-making and information processing.

2.4 Graduates' Attributes and Job Requirement

In terms of personal attributes, most ELO frameworks generally include work ethics, professional ethics, and social responsibilities. While knowledge is afforded the utmost importance in ELO systems and there are some positive transformations in terms of skills, attitudes continue to be underrated. However, statistics published by the Vietnamese Student Association in Ho Chi Minh City on Vietnam's recruitment requirements suggest that attributes are as significant as knowledge or skills (Tuoi Tre online, 2016).

Thus, as noted, personal attributes have a significant influence on the transfer of skills to the workplace (Leberman, McDonald & Doyle, 2006). Efforts to improve skills development in universities would be pointless if the transfer process was assumed to be automatic and the factors affecting it ignored. An individual's motivation to utilize and apply his/her skills in the workplace is much more important than the level of his/her skills/knowledge. In this domain, the disparity between employers' and students' perceptions becomes evident as students appear to be more focused on willingness to learn while employers usually focus more on "enthusiasm" (Quang Duoc & Metzger, 2007).

The development of students' attributes will therefore pose many relational challenges that education providers will need to pay attention to. In particular, the teaching and learning activities designed in the curriculum to guarantee the achievement of personal attributes in the ELO system, as well as the assessment of the level of attitudes acquired, remain vague. In general ELO frameworks are able to meet the requirements of society and enhance graduates' employability. However, the important problem lies not so much in the content of ELO frameworks but on whether educators can implement these successfully.

3 Competence Gaps and Stakeholders' Responsibilities

Previous studies undertaken by various scholars have demonstrated that a skills and competency gap in university graduates is a problem for many countries (Bodewig et al., 2014; Lindorff, 2011). In Vietnam, a skills gap in young graduates has been identified by multiple researchers (Trung & Swierczek, 2009; Tran, 2015; Bodewig et al., 2014). Employers have claimed that 61% of workers need to be trained in soft skills, 53% in leadership skills, and 92% in specialized or technical skills (Ha, 2011). In business, the lack of qualified human resources in relation to management is a severe problem in businesses such as marketing (Nguyen & Robinson, 2010) or sales, manufacturing (Nguyen & Robinson, 2010; Manpower Group, 2011), which has been a source of alarm. Overall, 94% of workers in more than 500 companies in the business sector in Vietnam need to be retrained to ensure they have the skills needed for their job (Ha, 2011) and 50% of employees need to be retrained because their professional skills do not meet employers' requirements (Huynh, 2011). Unequivocally, it is advocated among researchers and practitioners in Vietnam that graduate work-readiness, which refers to graduates' characteristics, skills, competences that meet the demand of employers (Nankervis, Prikshat, & Dhakal, 2019), has not been highly assessed by employers, and more widely, has not met the expectation of their societies.

The reason for this might be a lack of experience and a traditional mindset that concentrates on production rather than market demands. It is controversial on which stakeholders take the main responsibilities of this issue. Verma, Nankervis, Priyono, Moh'd Saleh, Connell, & Burgess (2018) opines that employers, higher education institutions are among the most important stakeholders as employers decide job requirements and assess the work and higher education system contributes mostly to the graduate outcomes. In addition, Students and their families are considered as the most important stakeholder- the customers of the whole education chain. A body of research on Vietnamese graduates reveals that while most researchers blame this matter on higher education system (Harman et al., 2010; Nghia, 2018; Nguyen, 2016), the

other stakeholders, including students and employers, have now been considered as main cause for the competence gap (Le & Truong 2005; Tran, 2005; Duoc, 2006; Trung & Swierczk, 2009). In this regard, the responsibilities of higher education system, employers and students will be examined.

3.1 Responsibilities of Higher Education System

Vietnam's higher education system has undergone a fundamental transformation since *Đổi Mới* (1986). The number of tertiary institutions has increased dramatically in recent years, from 101 public universities, no private universities, and 133,000 students in 1987 to 171 public universities and colleges, 60 private institutions, 5 universities with foreign investment, and approximately 1.7 million students in 2017. Over the last 30 years, the higher education system has experienced an unprecedented transformation in curricula, teaching methods, facilities, student services, and management style (Tran et al., 2013). For example, in skill delivery methods, the increasing prevalence of group projects in Vietnamese universities provides an example of skill-theory teaching. Working in groups, students not only exchange knowledge with each other, they also develop a variety of skills, including teamwork, communication, and conflict management and negotiation.

Although the higher education system has developed strongly, it has not met the demands of the continually changing market. Nghia (2018) argued that the higher education system is primarily responsible for skill gaps among graduates. Higher education system in Vietnam fails to equip students with the skills needed for the twenty-first century as training in hard skills outweighs that of soft skills (Dang, 2009). In business programs, in particular, employers in Vietnam have complained about the lack of soft skills and human-related skills included in such programs. Nguyen and Chaisawat (2011) also stated that higher education hospitality programs in Vietnam focus more on the quantity than the quality of human resources. It has been said that higher education institutions are not only under pressure to meet the varied expectations of employers regarding students' technical, social, cognitive, and personal

skills, they are also struggling to develop and maintain a system that fits a new form of economy.

First and foremost, the rationale for this issue includes impractical curriculum and obsolete teaching methods (Nghia, 2018; Tran et al., 2013; Harman et al., 2010; Nguyen, 2016). Nghia (2018) claimed that an impractical curriculum is the primary factor leading to the failure of students to meet employers' expectations. In terms of teaching methods, Nguyen (2016) declared that the teaching methods applied by universities consist of "notetaking, learning, and memorizing." Students have complained that teaching styles are passive, textbooks are outdated, and knowledge is obsolete and not relevant to their future career (The World Bank, 2008). Furthermore, most exams simply recheck what they learn and do not examine critical thinking. Skills are typically not taught as specific or separate training courses; instead, they are integrated into conventional study programs and are not assessed properly.

In addition, universities have also had to contend with a lack of qualified teaching staff (General Statistics Office, 2012; Olive, 2002). Teachers often lack the requisite teaching and research skills (Trung & Swierczek, 2009). In 2012, the number of lecturers who held a master's degree and PhD degree accounted for 46 and 16% of all teachers, respectively. There are plans in place to increase the percentage of lecturers who hold master and doctoral degrees to 60 and 35% respectively by 2020. However, a poor salary and unsupportive infrastructure and environment continues to lead to the shortage of a qualified workforce.

Skills development in Vietnam is suffering from a system where there is a disconnection among higher education, employers and students (World Bank, 2013). Universities act independently and do not interact adequately with other stakeholders, which has resulted in a high level of dissatisfaction among students and employers. Some scholars have also added that a poor education-industry connection has resulted in students becoming dissatisfied with their internship experience because it does not help them to reflect on their career (Tran, 2015, 2018). Higher education has no control over the way students undertake their internship. Internship programs do not fulfill their role as a bridge for students to understand their future jobs due to their poor structure, leading to a disconnection between universities and companies (Nghia, 2018).

Consequently, universities do not provide exactly what the market needs, leading to the emergence of a widening skills gap between the market and education. Apart from that, there is a consensus among researchers that a poor infrastructure, ineffective career management service, and the inexperience of lecturers contribute to the low level of skill responsiveness among graduates (Harman et al., 2010; Tran et al., 2013).

Recently, the higher education system in Vietnam has attempted to restructure its curricula in order to bring it in line with the needs of the job market. Active teaching and learning approaches have been introduced and applied in several schools. However, this transformation is progressing slowly, as it is not an easy task to change the mindset of academic leaders (Hayden and Thiep, 2007). The concern is whether the higher education system is able to keep pace with the continually changing requirements of the market, for example, in relation to the development of skills, as discussed previously.

3.2 Responsibilities of Other Stakeholders

3.2.1 Responsibilities of students

Various research studies have indicated that tertiary education is primarily responsible for the lack of necessary skills and competence of students. However, a list of reasons for the gap between student quality and employers' expectations was published by Tran (2018), which indicated that higher education is not the only stakeholder that has to bear this burden. Other causes of skill gaps are nonviable teaching programs, changes in the market, poor preparation of students when it comes to developing their own career, a lack of attempts by graduates to improve their skills, insufficient facilities and services to support students' careers, and no role for employers in training and development.

In terms of students, various scholars have argued that students are ill-prepared for work (Tran, 2005; Duoc, 2006; Trung & Swierczek, 2009). For instance, an in-depth qualitative study by Tran (2018) indicated that although students are aware of the significance of generic skills for their

future career, they do not put enough effort into developing such skills. They play a passive role and rely on universities to help them acquire these skills. Although students always criticize schools for obsolete and uninteresting curricula and teaching methods, they admit they rarely approach teachers to ask questions even when the teachers are experts and willing to help. The reason for this passivity can be traced back to the way in which they learned in secondary school (junior high) and high school, where knowledge is transmitted passively from teachers to students and students are required to listen and do what they are told. This passive teaching style has had a chronic effect on students' minds and has resulted in them being underprepared for the school–university transition.

In addition, students appear to concentrate on classroom courses and homework and underestimate the importance of extracurricular activities and part-time experiences (Hager, 2006; Tran, 2015). Because “working experience” is still one of the top criteria for recruiters, a part-time job or internship can contribute to the future success of students. Moreover, extracurricular activities and a part-time job also enable students to acquire the generic skills and attitudes needed for the contemporary workplace.

3.2.2 Responsibilities of Recruiters

Employers expressed several contrasting issues. They expected students to have some work experience to enable them to keep up with the job. However, they do not seem to be generous in giving students proper part-time jobs and internship opportunities. Graduates suggested that during their internship they are barely allowed to do any work relevant to their profession and this is not helping to provide them with knowledge about their future job (Nghia, 2018). They do not know what employers expect, nor do they know what they should prepare to do well.

Moreover, employers tend to place all the training responsibility on the shoulders of higher education, whereas training and development is also their main duty (Le & Truong, 2005). Also relevant in this regard is the disconnection discussed earlier between employers and higher education

as it relates to the development of skills, which has increased the level of dissatisfaction among students.

To conclude, the university-to-work transition has emerged as a major concern for the government, universities, employers, students, and wider society. Market demands for the knowledge and skills of graduates have constantly transformed and accelerated as employers not only concentrate on knowledge and professional skills, but have extended their attention to English skills, technology, work experience, and soft skills. It is therefore important for all stakeholders, including students, higher education, and others, to take responsibility for changing the nature of university-to-work transition in Vietnam.

Although multiple issues need to be fixed, universities have taken substantive steps by switching to active teaching methods and introducing ASK (attitudes, skills, knowledge) that are aligned with employers' demands. However, this will not work without the involvement of other stakeholders, especially employers. The gap between the higher education system and the market is primarily due to a deficiency in the exchange of information between employers and universities. Finally, a more integrated system cannot be achieved without the cooperation of students. Students' needs should be heard and they should be better prepared for the career that lies in wait for them.

4 Integrated Approach to Developing Business Graduates for Future Employment

4.1 Addressing Internal Issues

To comprehensively deal with the issue of graduate employability, it is crucial to develop an integrated approach, addressing both the internal problems of higher education institutions and the disconnection between universities and their stakeholders (Tran, 2015). Critically, higher education governance and staffing, pedagogical practices and linkages, and partnerships with stakeholders all merit close attention (Dao, 2015;

Pham & London, 2010; Tran, 2015). The latter three issues are addressed in this section and the former is discussed in the next section.

Currently, the higher education system in Vietnam falls under the governance and management of multiple ministries and state instrumentalities (Dao, 2015). The Ministry of Education and Training regulates the establishment of universities and colleges, student recruitment, training program design, finance, quality management, and staffing, while other ministries and state instrumentalities complicate the operation of higher education institutions by applying their own regulations. For example, the Ministry of Science and Technology has established its own priorities and policies for the national research budget (Dao, 2015). Additionally, insufficient financial resources also affect the quality of local universities. The major sources of funding for public universities come from the State budget (which is around \$300–350 USD per student), tuition fees that are set at flat rates, and services and cooperation projects. The increase in revenue, however, is not keeping pace with the increase in student numbers and the need to invest in infrastructure (Dao, 2015). To cope with this problem, higher education institutions need to expand in-service training, and reduce distance learning problems. They also need to prevent the downgrading of teaching quality across the system caused by low enrolment criteria, teaching overload, and poor scientific research and professional self-development (Dao, 2015).

The situation calls for dramatic changes in higher education governance (Marginson, Trần, & Đỗ, 2014; Pham & London, 2010). The government is expected to create transparent, flexible, and easy-to-understood rules for budgeting and accounting. Furthermore, allowing higher education institutions to be autonomous and accountable in academic decision-making and human resources, and to balance their financial revenues and expenditures, will be crucial in reforming higher education in Vietnam (Pham & London, 2010). Moreover, all students should finance their higher education for individual benefits and grants should only be offered to students from low-income families and areas that promote public benefits (Pham & London, 2010).

In terms of pedagogical practices, higher education program in Vietnam can be divided into two different categories: research and professional development. While research-oriented programs focus

on research activities, professional-oriented programs aim to satisfy the market requirements of human resources. Professional-oriented programs need to equip students with skills in self-learning, flexibility, business administration, financial management, information management, problem-solving, foreign languages, Internet use, and communication (Pham & London, 2010). Research-oriented programs need to encourage students to undertake research and work on their own thesis or dissertation under the guidance of their supervisor. Teaching renovation should focus on students' passion and desire to learn, and the utilization of materials, information, and communication technology. Equally important is the time spent on fieldwork and practical work. These renovations in programs, curricula, and teaching need to be accompanied by appropriate quality assurance measures, self-assessment, and accreditation (Pham & London, 2010).

Attracting, maintaining, and developing highly qualified academic staff is also a crucial aim of the higher education system. It is anticipated that by 2021 higher education institutions will encounter serious shortages of lecturers and researchers with postgraduate qualifications. Human resource management practices such as recruitment, reward, promotion, and development should be based on transparent and well-defined performance indicators (Pham & London, 2010). Additionally, higher education institutions should be autonomous in promoting associate professors and full professors who satisfy an assessment by qualified professionals in their areas of expertise. Encouraging overseas scholars to return to Vietnam to engage in teaching and research in higher education institutions is also important (Pham & London, 2010).

4.2 Linkages and Partnerships Among Stakeholders

As mentioned previously, the disconnection between universities, businesses, and students is one of the key features of higher education in Vietnam, especially in business and management (Bodewig & Badiani-Magnusson, 2014). Considered the principal driver of HRD, higher education needs to develop a better-connected system involving parents,

students, and external stakeholders such as employers, industry experts, alumni, social organizations, and local authorities (Bodewig & Badiani-Magnusson, 2014; Nghia, 2018).

To connect universities effectively with their stakeholders, a top priority should be to transform the current information system into one that is accessible, accurate, and integrated (Bodewig & Badiani-Magnusson, 2014). Academic institutions and parents and students need to know about labor market conditions, the demands of employers, and study returns. Prospective students and employers need to know about training content, educational quality, and autonomy level of universities (Bodewig & Badiani-Magnusson, 2014). Several incentives have been introduced to address these requirements. First, quarterly reports by the labor force survey have recently been published presenting an overall picture of national employment trends. Further effort toward connecting students with job vacancies and job search information from work agencies can facilitate career decision-making and the matching of skills (Bodewig & Badiani-Magnusson, 2014).

Secondly, public announcement on internal and external quality assurance systems is good practice as it will disclose transparent information about the quality of academic institutions (Bodewig & Badiani-Magnusson, 2014). The existing system of internal and external quality assurance and accreditation should also be strengthened. Currently, the National Accreditation Body and internal quality assurance systems of academic institutions are devoted to specifying and ensuring minimum quality standards for higher education. However, both independent and external accreditation is needed to ensure agreed upon quality standards (Bodewig & Badiani-Magnusson, 2014).

Thirdly, graduates' employment status after a certain period is another crucial indicator of the quality and relevance of educational programs. Applying tracer studies of employment to all universities in Vietnam will enable future students to choose the most suitable universities and programs and will impel academic institutions to invest in quality management. Finally, consolidating coordination and partnerships between universities and industries will be critical in developing an interconnected information system of higher education (Bodewig & Badiani-Magnusson, 2014).

In theory, business can help universities by consulting them in relation to curriculum content; offering work-related training to students; providing, supervising, and assessing student internships; and evaluating the delivery of educational programs (Bodewig & Badiani-Magnusson, 2014; Nghia, 2018). Universities, in turn, can supply qualified staff for business. In reality, these relationships are unfortunately limited to recruitment activities. A role for central or local governments as facilitators of academic-industry linkages is required for future development (Bodewig & Badiani-Magnusson, 2014). Notably, the government and relevant ministries have issued policies to prepare graduates for entering the labor market (Nguyen, Ngoc, & Montague, 2019). In fact, industries and businesses are encouraged and required to codesign training programs, offer internship opportunities, provide extra training for new graduates as trainees, recruit students from universities, and send staff to attend classes at universities (Nguyen et al., 2019).

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7

STEM Education and STEM-Focused Career Development in Vietnam

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1 Introduction

Despite historical colonization and conflicts, following the reunification of Vietnam under Communist rule in 1975, the government pursued a central planning economy, but then pivoted in 1986, through the *Đổi Mới* (or Open Door) policy that combined government planning with free-market incentives, readjustment and liberalization of trade with an aim to establish a “socialist-oriented market economy.”

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Economic and political reforms under Đổi Mới were successful, transforming Vietnam from one of the world's poorest nations into a lower middle-income country with robust economic growth of 5% or above since 1988. According to the World Bank (2019), between 2002 and 2018, more than 45 million people were lifted out of poverty, with poverty rate declining from over 70 to below 6%. GDP per capita increased by 2.5 times, standing at over US\$2500 in 2018. Despite all these achievements, the country has also faced with numerous challenges including the risk of lagging behind economically and technologically, an outmoded education system, weak technology-science-innovation system, and lack of quality human resources. Subsequently, the Vietnamese government has set a target of turning the country into an industrialized status by 2020. To achieve this the government has centered on investing in science and technology. An integral element of its science and technology policy is STEM education and developing a high skilled workforce that can participate in the global economy.

This chapter is about STEM and STEM-focused career development, thus significant because in contrast to the growing body of knowledge of research concerning the preparation of Vietnamese graduates for employability (Montague, 2013; Tran, 2015; World Bank, 2014), few contributions have studied government-orientated CD plans. This chapter highlights varying aspects of STEM education and career development at K-12 and high education levels in Vietnam against the background of a growing economy with a government-led education planning. This study may benefit the Vietnam's Ministry of Education and Training (MOET), teachers, career counselors, and students in understanding the lacuna that exists in STEM-focused career development knowledge and practices.

The purpose of this chapter is to provide a descriptive analysis of STEM education and STEM-focused career development in Vietnam. Specifically, we describe STEM education at K-12 and higher-education levels. We also identify various STEM-focused career development (CD)-related plans exist in Vietnam. Further, we outline the factors that affect career guidance and development in STEM fields then provide recommendations for STEM Education and STEM-focused Career Development Vietnam. In this chapter, career development is the lifelong process

of managing learning, work, leisure, and transitions in order to move toward a personally determined and evolving preferred future (Coetzee and Roythorne-Jacobs, 2007). Additionally, career guidance and counseling program develops an individual's competencies in self-knowledge, educational and occupational exploration, and career planning (Coetzee and Roythorne-Jacobs, 2007).

2 Socio-Economic Context and Education System Influencing STEM Education

Vietnam's Prime Minister Nguyen Xuan Phuc (Vietnam Insider, 2019) acknowledged Vietnam's risk of lagging behind and falling into the middle-income trap. Economically and geographically, Vietnam is situated in a region that is very dynamic—the Association of Southeast Asian Nations (ASEAN). ASEAN now represents a market of about 420 million people and a regional Gross Domestic Product (GDP) of over US \$500 billion (ASEAN, 2019). In the 2009 Vietnam Development Report, the World Bank pointed out that Vietnam lagged behind Indonesia by 51 years, Thailand by 95 years, and Singapore by 158 years based on income per capita and income growth rate per capita. Vietnam's gross national income (GNI) is equal to 12% of total income of South-east Asia, while the GNI per capita is equal to 48.3% of the region's average level in US dollars and 52.5% based on purchasing power parity (PPP) (Vietnam Insider, 2019).

One of the main reasons for economically lagging is lack of developed in technology. As the country is integrating into the regional and the global economy, it has no other option but to move up the value chain and away from the traditional low-wage, low-tech model (VN Express, 2016). Since 2001, Vietnam has consistently set aside about 2% of the annual state budget, or 0.5% of the GDP, to introduce scientific and technological advances to various industries. According to the Ministry of Science and Technology, Vietnam is still 50 to 100 years behind the most modern countries in the world in terms of technology. Compared to the world's average level, its technology is about two to three generations, or 20 years to 30 years, behind. As a result, the economy has

experienced low labor productivity, low-wage rate, and low level of efficiency. Vietnam ranked 42 out of 129 economies around the world in the Global Innovation Index (GII), lower than Malaysia (35), and one rank higher than Thailand (43).

To meet the needs of the growing economy and to bridge the economic and technology gaps with other countries and the world, Vietnam needs to improve its education system and the quality as well as productivity of the labor force. Demand for education is booming on the heels of strong economic growth. Vietnam is facing major skill gaps and local qualifications in many fields (Vietnam Briefing, 2019). In 2019, the country is 90,000 IT engineers short of the needed 350,000, and this shortage is estimated to increase to 100,000 and 190,000 engineers in 2020 and 2021 (Vietnam Economy, 2019; Thanh Nien, 2019).

Although Vietnam has seen an increase in the number of scientists and engineers, quality remains an issue. The rankings of research institutions and universities are lagging behind other ASEAN countries. Vietnamese scientists and engineers tend to excel in areas of mathematics and computing science where it requires little capital to establish a laboratory. The research institutions tend to conduct research alone with little or no collaboration with other domestic institutions. Quite often, university professors do not possess wide industry experience (Eurosia Review, 2019; Vu, 2019). World Bank (2014) stated that:

Despite its historical record of scientific research, Vietnam's innovation system in the modern sense is only emerging. Current science, technology and innovation capabilities are weak, and the national innovation system is in a nascent and fragmented state. Research and development both in the public and private sectors still have a lot of room for improvement (p. 4).

To overcome the above challenges and to benefit from the opportunities brought about by the Industrial Revolution 4.0, Vietnam urgently needs to invest in science, technology, engineering, and mathematics (STEM) education and career development to achieve its development goals in Vision 2035. Accordingly, by 2035, Vietnam aspires for modernity, industrialization, and a higher quality of life. These aspirations

are guided by three pillars: economic prosperity balanced with environmental sustainability, equity and social inclusion, and State capacity and accountability (World Bank, 2016).

3 Status Quo of STEM Education and STEM-Focused Career Development

Students often feel fearful in making decisions about their education and future. The growing number of career options increases the fear. Establishing a sound sense of self, an independent identity, frees the student from the forces around them, at least in part, and allows them to form a single voice and direction: their own.

Society exposes students to an untold number of social signals regarding the operations of the society around them and their role within its activities. It is particularly true that such signals can affect the student's perceptions of his or her future career. In this section, we will introduce STEM education and STEM-focus career development which help the students better understand in their education and occupation.

3.1 STEM Education Development in Vietnam

Coined by the National Science Foundation (NSF) in the United States in the early 2000s, STEM ("Science, Technology, Engineering, and Mathematics") education is an interdisciplinary approach to learning where rigorous academic concepts are taught together with lived experiences (Tsupros, Kohler, & Hallinen, 2009). This approach enables students to develop STEM literacy, to apply science, technology, engineering, and mathematics in contexts that make connections between school, community, work, and global enterprise, and to compete better in the new economy (Tsupros et al., 2009). The STEM curriculum varies depending on the countries due to their political, social, and technological histories (Williams, 2011). Currently, there is a shift toward

including arts in this curriculum, hence Science, Technology, Engineering, Arts, and Mathematics (STEAM) education (Land, 2013; Shin & Han, 2011).

STEM was informally introduced in Vietnam during 2006–2007 when the Ministry of Education and Training piloted some high school science research groups to prepare for international science and engineering fair (ISEF) at the provincial and city levels. Since then, this program has been organized regularly and widely at local, regional, and national levels to select the best teams to compete internationally. In the early 2010s, private education centers began importing STEM programs from abroad to teach in the extracurriculum in some schools in big cities (VNU University of Science, 2019). On a similar pattern, STEM was integrated into Vietnam's education system from a robotics competition sponsored by Vietnam tech-companies and foreign organizations (Trang Thông Tin Điện Tử, 2019). Since then, STEM education programs have begun to spread in different formats and models and began getting more attention from the government and non-government organizations in Vietnam.

Pathways to education and STEM-oriented careers in Vietnam are formed indigenously and/or by collaboration projects between various foreign governments and the Vietnamese government. According to Vu (2019), multilateral bodies such as the World Bank, Asian Development Bank, United Nations, European Union, and multinational corporations play a key role in supporting the business and tech sector in Vietnam. Australia's aid program to Vietnam is committed to enhancing human resource development through education and training by offering scholarships and supporting workplace human resource development practice and vocational education (DFAT, 2014).

At the beginning of 2016, the United States Agency for International Development (USAID) and Arizona State University created and implemented the Building University-Industry Learning and Development through Innovation and Technology (BUILD-IT) alliance project in Vietnam. Administered by the Higher Engineering Education Alliance (HEEAP), BUILD-IT is the latest advancement in a series of initiatives in Southeast Asia led in partnership between USAID and Arizona State University's Ira A. Fulton Schools of Engineering. The main objective of

the BUILD-IT alliance is to facilitate collaboration between universities and the private sector by providing students opportunities to prepare for, and later pursue, STEM careers. To achieve this, the project organizes forums to develop academic initiatives and provides scholarships and networking opportunities for women in STEM (HEEAP, 2019). HEEAP has provided engineering education support and training to nearly 5500 Vietnamese participants, 27% of whom are women, and has invested more than \$25 million in higher-education innovation. In addition, 436 female students pursuing technical education in Vietnamese vocational colleges have received scholarships, and two Women in Engineering Master's Fellows have attended Arizona State University.

The British Council STEM Education Program in Vietnam aims at supporting knowledge exchange and partnership opportunities between the UK and partner countries around STEM education approaches (British Council, 2019)—particularly with the goals of building human capacity, revitalizing the economy, and improving the wellbeing of the society. The British Council is involved in improving pedagogies that enhance STEM subjects, supporting centers for educational excellence, and imparting knowledge about appreciating the importance and necessity of STEM education.

3.2 Promoting STEM Education in K-12 and Higher Education

There are a range of programs that have been deployed by the government, organizations, communities, parents, and schools to promote STEM education in K-12 and higher education. These include a day dedicated to STEM and STEM clubs. Additionally, there are specific activities such as robotics competitions and computer development skills. Here we discuss the strategies and the various activities.

In 2015, Vietnam's Ministry of Science and Technology and the STEM Education Alliance officially launched the first STEM Day, marking the formal start of STEM education familiarization to the public in Vietnam. Since then, STEM Day is held annually to connect the STEM community and embrace the STEM education spirit to

students and teachers all over the country. Following the first STEM Day, many similar events are regularly organized not only in big cities but also in local provinces like Nam Định, Thái Bình, Lào Cai, Quảng Ninh, Đồng Tháp, in remote mountainous areas like Hà Giang, Nghệ An, and in coastal areas like Hải Phòng and Hạ Long (Kramer et al., 2015; Trang Thong Tin Dien Tu, 2019; VNU University of Science, 2019).

STEM education is implemented in many schools in big cities and local provinces in the forms of STEM clubs supported by many private enterprises, domestic and foreign organizations, universities, and research institutes as well as individuals. Without government funding or any STEM formal curriculum from the Ministry of Education and Training, there are two main types of STEM clubs depending whether they are in cities or in the countryside. (1) In the cities, the club is co-organized by the schools and private education companies. City parents pay for these extracurricular programs, which mainly focus on robotics and computer coding. (2) In the countryside, the club is organized by the schoolteachers as a voluntary free after-school program. Examples of these local STEM clubs can be found in Thái Thụy, Thái Bình, Nam Trực, Nam Định, Thanh Chương, Nghệ An, Bắc Từ Liêm, and Hà Nội. Voluntary organizations and individuals sponsored the training programs for STEM clubs' lead teachers and part of the costs for purchasing equipment. Part of the funding may come from the schools' budget.

STEM activities are diversified in different formats including robotics competitions (both inside and outside Vietnam), as well as the Vietnam International Science and Engineering Fair (VISEF). Vietnamese students recently have participated in science and technology competitions for elementary and junior high levels in Thailand and South Korea.

Some foreign organizations have invested in Corporate Social Responsibility programs, including an education emphasis and provided technologies like smart libraries and smart classrooms across universities and schools in Hồ Chí Minh City and other location. Students experienced smart classrooms setting and developed mobile apps to research scientific information, leading Vietnamese students to compete in the US

LEGO competition (Tuoi Tre, 2018). Vietnam's Ministry of Education and Training (MOET) and Vietnet-ICT, a non-profit supported by Microsoft, co-developed the Youth Spark Digital Inclusion, with the aim to develop computer science skills for Vietnam's younger generation, especially those in the remote areas. With the help of governmental and organizations, Microsoft is engaged in strengthening the STEM in education and promoting economic growth (Microsoft, 2018). Overall, the STEM activities inside and outside schools are diversified, but still mainly focus in big cities due to the high cost. STEM models in the countryside are operating under low-cost solutions given limited school resources, volunteer teachers, and local community support.

3.3 Views About STEM Education in Vietnam

STEM education has been viewed favorably and considered as integral to developing a well-rounded student who is more equipped to face a society based on science, technology, engineering, and mathematics. In seminars organized by MOET, most teachers think STEM is necessary in a modern society. During the conference "STEM Education in new school curriculum" in 2015, many teachers and administrators shared positive views on STEM education system for Vietnamese learners. We argue that positive views from teachers and administrators can shape and inform student's performance leading to positive outcomes.

Mr. Lê Xuân Quang, a professor from Hanoi Teachers' Training University, shared his views about some requirements that guide the outcomes of the students as follows:

STEM education through extra curriculum activities must provide students with diverse scenarios and circumstances that require critical thinking to develop, apply multiple knowledge and skills, creative thinking and problem-solving skills to provide solutions in various ways to achieve better results; promote confidence and creativity among students. (MOET, 2017)

In contrast to traditional methods of teaching and learning, STEM learning emphasizes creativity and innovation (Salzman, 2013; Yang and

Baldwin, 2020). Students are able to build on their new innovations and ideas which further allows for integration into the digital world of learning and the application of such knowledge to the problems that they may face in the real world. Moreover, STEM is vital to K-12 education as it helps students to build resilience against failures and to see failure as an integral part of learning and building a career. Here, students can fail, but they are taught to try again even after they have failed. Therefore, students will develop skills that the traditional educational methods do not facilitate and become more confident in knowing that perseverance ultimately leads to success.

Results from the surveys conducted by the Dong Nai Department of Education and Training showed that students participating in STEM pilot programs provided positive feedback on the model (Le, 2019). Le (2019) also reported an idea of a female teacher teaching at Lạc Long Quân high school that when using the STEM method; each lesson is meant to challenge students with a practical problem that needs solutions and she also had to adapt and renew her method constantly to meet the needs of the students. Each lesson of experimental experience will make students learn faster and independently. Additionally, Le (2019) adumbrated that students are able to experiment as individuals or as a team. They develop the skills that allow them to take risks and to experiment with new ideas as an individual, or they can work as a part of a team with other students of varying abilities to create solutions to problems. The whole idea of experiment also helps to equip students with skills for making presentations, creating reports and recording data among others so that they are better able to apply their knowledge to the careers in business or science.

Additionally, the students will also recognize the value of teamwork as they enter the workplace and appreciate the future moments of working alongside others in the workplace. Technology has become an integral part of learning where students are trained to appreciate the power of innovation and technology. Student Trương Giáng My, at Phù Đổng elementary school in Xuân Lộc district, remarked:

During the class, the teachers usually organized very lively games, based on which they introduced the lesson that helped us learn the knowledge very fast. When working in groups, we managed to divide the work among ourselves and actively engaged, worked together on our tasks as a team of two. (Le, 2019)

Through the STEM program, students become better able to experiment, solve problems, respond to failures and success, use technology and integrate these skills when they enter their various career fields. Therefore, integrating STEM at K-12 introduces students to the variety of career options and real-life situations from which they may choose when they enter the field of work.

For Vietnam specifically, STEM education is important in ways similar to other nations, as it offers possibilities and promises sustainable development, improved economic and political status in the world arena, improved quality of the workforce, a modernized and improved education system to meet the needs of industrialization and globalization, territorial sovereignty and freedom from foreign threats, and comparative advantage in international trade with exports of high-tech products.

3.4 STEM Education and STEM-Focused Career Development

Career development refers to “organized and formalized” efforts to recognize people as a vital resource of an organization (Gomez-Mejia, Balkin, & Cardy, 2012, p. 285). Career development is not a one-time training workshop or a career-planning program, given its broader focus, more extensive scope, and longer time frame. While an important objective of training per se is enhancement of one’s performance, the aim of career development, in contrast, is enrichment of ones’ knowledge and an expansion of their capabilities. As career opportunities and direction are now more loosely structured and less predictable than in past eras, uncertainty with regard to career path looms for a majority of school students. Previously, while one’s career conventionally consisted of stages of positions with increasing levels of authority in an organization—and some careers are, in fact, still defined by such a forecasted path within

the same organization—reality in the business world relative to competitive pressures prompts today's employees to follow a career path that is frequently neither linear nor limited to a single organization (Rodrigues, Butler, & Guest, 2019).

Relatedly, many college students are still exploring their career options while attending academic pursuits and preparing themselves to enter the workforce; they have not yet established their professional identities. While the application of career development practices in higher-education claims to have some influence on their career decisions, the transition from childhood to adulthood requires a level of occupational identity or an understanding of what interests the students' have are necessary to guide the decision-making process (Matthews, 2017).

This indicates that a level of career development, specifically introducing the college student to potential career alternatives, must occur at some point prior to college. This is necessary to ensure that the student entering college has the basic skillsets to know what direction, academically, is necessary to pursue their desired career paths. Too often, however, the process has either been neglected or short circuited by earlier experiences, most typically from social, familial, or parental influences (Matthews, 2017). This neglect can lead to a dislike for challenging fields perceived as "high-risk" for failure, such as engineering or other STEM fields. It is noted that such concerns and perspectives stem from the negative images of the particular field as being "hard" and psychological undermining of the student's confidence in their own abilities (van Tuijl & van der Molen, 2016).

Nowadays, many organizations turn to "technological change and downsizing" in response to the ever-changing external environments, the responsibility for career development is increasingly being shifted to the individuals (Gomez-Mejia et al., 2012, p. 285). Consequently, individuals are likely to focus more on increasing their own marketability than their employment security or career-long tenure in view of the fact that careers may move toward several directions across multiple organizations (Arthur, Khapova, & Wilderom, 2005; Chan et al., 2015). As such, the current generation of individual tends to follow more of a "spiral" (than linear) career road characterized by crossovers between fields of expertise and between organizations (Noe, Hollenbeck, Gerhart, & Wright,

2016). Today's career workers, then, tend toward *protean careers*, which are characterized by frequent changes relative to the changes in the individual's focus of interest, capabilities, and values, as well as changes in the occupational environment (Noe et al., 2016, p. 238).

For their part, organizations may use one or more of the four general approaches to development of employees: formal education, assessment, job experiences, and interpersonal relationships (Noe et al., 2016). This is similar in a school setting. Formal education may range from workshops and short courses conducted by consultants or university educators at the workplace or off-site to executive MBA programs on campus, in-training institutions, or online. Prior to the provision of formal education to employees, organizations use data derived from employee assessments identifying their potential for higher positions to direct a career path toward the right direction within the organization. To increase the capability, as well as the marketability, of employees, organizations may take advantage of job experiences—a mixture of problems, tasks, demands, relationships, and other attributes associated with an employee's job. In this regard, organizations may apply job enlargement, which is the addition of challenges or new tasks to an employee's current line of occupation, through promotion, job rotation, transfer to another department, subsidiary or another organization (for externship), or even downward movement (though equivalent to demotion). Moreover, employers may use interpersonal relationships to enrich the knowledge of their employees and widen their skills set through mentoring and coaching. These strategies outline approaches that Vietnam can use in conjunction with STEM education and career development generally.

Career development has played a significant role in the evolution of STEM education. According to Kolb (2015), STEM education affords an experiential learning environment that generates pleasure in the learning process itself.

3.5 Promoting STEM Focused Career Development in Vietnam

Global Partnership for Education (2019) indicates that the government of Vietnam recognizes education as a national priority and therefore, since 2008, has spent 20% of its budget on education. Additionally, the government's strong commitment to education and long-standing cultural and social support for education have led to significant progress in the sector (Global Partnership for Education, 2019).

Since being introduced by the private sector, STEM education has been getting more attention from the Vietnamese government. The Vietnamese government advocates for the integration of STEM into the education system using of creative and experiential activities, such as designing toys, since the economy is currently dependent on technology (Thang & Quang, 2005). This gives Vietnamese students a penchant for technological training due to acquisition of technical skills and knowledge at an early age. Additionally, the government has put in place directions and policies to govern the implementation of STEM Education such as:

- Decree no. 90/CP, dated 2 December 1998. In 1998, the government decreed that higher-education programs could only be undertaken at a designated university or college.
- Decree no. 43/2000/ND-CP, dated 30 August 2000. In 2000, a further distinction was drawn between universities, which were expected to provide opportunities for study across a wide range of disciplines and to develop a research capability, and colleges, which were expected to provide opportunities for study within a single field of study and not to have a research role.
- Decision 1269/CP-KG, dated 6 September 2004. In 2004, a select group of 14 universities was identified as comprising the “key” higher-education institutions in Vietnam.
- Resolution no. 05/2005/NQ-CP, dated 18 April 2005. In 2005, the Cabinet resolved that, in future, higher-education institutions in Vietnam would be either public or non-public.

- In 2014, MOET listed STEM as a non-obligatory responsibility of junior high and high schools. In 2015, MOET for the first time officially directed the establishments of STEM clubs in schools. In 2018 regarding new education curriculum, MOET highlighted STEM by requiring comprehensive teaching and learning, facilitating STEM topics engagement, help develop interdisciplinary knowledge and problem-solving skills for students (VNU University of Science, 2019).
- Decision No. 404/QĐ-TTg was introduced in 27 March 2015 by the Prime Minister of Vietnam on approval of renewing school curriculum with a focus on intensifying computer science programs, along with IT trainings to increase students' competitiveness in the job market (Hao & Huong, 2018).
- Vietnam Ministry of Education and Training stated that STEM is one of the “school responsibilities” in its official Referendum 4325/BGDĐT-GDTrH to all schools in the new 2016–2017 school year.
- On 4 May 2017, Vietnam Prime Minister issued Directive 16/CT-TTg for tackling challenges posed by the fourth industrial revolution by enhancing STEM education curricula in high schools and requested the MOET and Ministry of Labor Invalids and Social Affairs (MOLISA) to promote STEM education nationwide (Nguyen, 2017).
- On 8 August 2017, the MOET issued Directive 2699/CT-BGDĐT emphasizing human resource development, especially the high quality in STEM fields.

3.6 Opportunities of STEM Focused Career Development in Education

STEM education and career development in Vietnam is bound to thrive because of the opportunities such as support from the government, a young population that is willing to adapt to new technology, learning from other global STEM education practices, and public and private sector partnerships. These opportunities are discussed as follows:

First, government commitments supportive of public policies for education and STEM education create a great opportunity for STEM career development in Vietnam. Since 2000, the government has committed approximately 15–20% of public expenditure on education—one of the highest in ASEAN (Vietnam Briefing, 2019). Second, Vietnam has a young workforce, which can adapt to, and adopt, new technology very quickly (Eurasia Review, 2019). With a total dependency ratio below 50, Vietnam currently has a “golden population structure,” providing the country with a major potential for training a quality labor force in science and technology. MOET reported that the literacy rate among people age 15–35 was 98.5%, with 43.7% of laborers having basic knowledge about computers and foreign languages (VietNamNet Bridge, 2016). The report also indicated that Vietnam still has more than 1.3 million illiterate people (VietNamNet Bridge, 2016). In general, Vietnam is ranked 48 out of 157 countries and territories in terms of human capital index (HCI), and second in ASEAN countries, behind Singapore (World Bank, 2019).

Second, as a less developed country, Vietnam can benefit from technology spillovers from Multinational corporation (MNCs) and domestic firms through Foreign Direct Investment (Le & Pomfret, 2011). We argue that such spillovers and STEM education programs that have been successfully implemented in other developed countries like the United States, the United Kingdom, Australia, Singapore leading to technological and education leapfrog effects.

Lastly, Vietnam seeks a higher-education system that will contribute to the national economic growth by providing a high skilled workforce that can participate in the global economy. According to Tran (2013) some of the strategies put forward include “...a variety of degree types and of fields of education, diverse instructional methods, a mix of public and private providers, ‘tiered’ systems with elite institutions and multiple forms of university–industry collaboration” (p. 11).

4 Factors Affecting STEM Education and STEM-Focused Career Development

The greatest challenge for STEM and CD in Vietnam was a lack of resources and infrastructure. Although investment in scientific and scientific development has undergone many changes, it has only reached 2% of total state budget expenditure, a figure which is too low compared to the needs of science and technology activities. Developed countries invest in the development of science and technology, especially in researching applied in science products, with 3–5% of the budget (Ngo, 2019). The lack of resources in-school laboratories, experiment equipment, and teacher qualification to teach and guide students in STEM career development is a nationwide problem, particularly in the countryside and remote areas.

Vu (2019) has further noted that a lack of clear vision and a need for adequate resources also challenge Vietnam STEM education. Additionally, the lack of a legal framework and public policies to support STEM career development, as well as challenges to access and obtain quality education at lower secondary levels in terms of class, gender, ethnicity, and geographical location can impact CD (Vu, 2019). Currently, most high school students in Vietnam are not well-informed about job markets and career choices. Some are heavily influenced by their peers or parents' opinions, which may be outmoded. As such, this suggests a huge need for CD counseling and guidance.

5 Recommendations for STEM Education and STEM Career Development

As demonstrated in this chapter, Vietnam clearly has a potential to develop its STEM and career development to the level of other ASEAN countries, if not globally. Vu (2019) underscores that the challenges that Vietnam faces for developing a strategy for science, technology, and innovation (STI) within the *Vision 2035* framework, which would

involve applying technology to all fields and industries while also leveraging the benefits of the Internet of Thing (IoT). Perhaps the most outstanding thing about STEM and CD in Vietnam is the fact that the government of Vietnam invest and commit to Vietnam's aspiration that, by 2035, Vietnam will be a modern and industrialized nation (World Bank, 2016).

5.1 Recommendation for STEM Education and Career Development for Students

As demonstrated in the chapter, there are opportunities for research on STEM education and career development and practice in Vietnam but this is not well documented. This chapter adds to the body of knowledge on Vietnamese STEM career development that can inform policy and practice such as identifying trends for comparison with practices globally.

Related to that, Vu (2019) notes that “Vietnam must provide adequate resources and finance to invest in research facilities and create an environment where innovation is encouraged. This could mean increased levels of research flexibility, autonomy and transparency in career development” (p. 4). From our research, we concur with Vu (2019) and urge that there be further investment in research and focused research in career development. The current financial limitations prevent generative research and implementation in STEM and career development scholarship.

This chapter shows that the Vietnamese government puts effort into investing in education. Indeed, the state has invested in the education of women in Vietnam since gaining independence; nonetheless, the participation of women decreases at university and college level (Evans & Rorris, 2010). According to (Vietnam News, 2019) the number of Vietnamese women and girls in STEM is low. Efforts to include girls and women in STEM range from strengthening the STEM curricula (UNESCO, 2017) to strengthening women in STEM leadership program (Quade, 2018). Nonetheless, in our research, we observed that there is little empirical research on this subject, therefore, we urge for more research on girls and women in Vietnam STEM.

According to a survey by ILO in 2016, majority of Vietnamese students choose their majors in economics, commerce, finance while not many want to pursue engineering, math, science and technology as their future career. STEM majors were chosen by only 23% of male students and 9% of female students—a rate lower than the average in ASEAN countries (28% male and 17% female) (Nguyen, 2019). Therefore, the long-term sustainable solution is to offer STEM programs from early age from elementary to high school students even before they choose their careers in college in order to create interest and special programs for human resources in the field. The key is to make learning fun and to inspire students to consider learning as a lifelong journey. With the changes in science and technology in modern history, each student should be equipped to continue educating themselves, broadening their knowledge, and improving their skills over time. A standardized STEM curriculum from kindergarten to college and graduate schools would make it easier for teachers and administrators to get started.

5.2 Improvements in Career Services and STEM Guidance

Students need to be well-informed and counseled regarding the STEM job market and career opportunities. Since the start of economic reform in Vietnam, most students have been oriented toward economics and business fields, and very few toward science, technology, engineering, and mathematics. This lack of career counseling services leads to a mismatch between labor market demand and labor skill supply. Career counseling services can be offered by trained career counsellors in learning institutions and workplaces (Coetzee & Roythorne-Jacobs, 2007). Among college graduates, 60% of Vietnamese bachelor Engineering degree holders could not find jobs in their field. Only 5% stated feeling well-informed and knowledgeable about the career choices; another 20% felt relatively knowledgeable, and 15% stated being poorly informed of the majors and careers they chose (IPCS, 2019).

Career guidance by career counsellors will help students and workers choose their future career based on their self-assessment and evaluation.

In addition, collaboration and coordination such as advising, mentoring, coaching, and facilitating the implementation and management of career support activities by education administrators, businesses, industry organizations, universities, colleges, vocational schools, recruiters, parents, and students would assist this process.

5.3 Policy Support System Toward STEM Education and Career Development

The Vietnamese government is increasingly supporting training in STEM human resources for modernization and industrialization must be, nonetheless there is room for improvement. While there is ongoing training for STEM teachers and administrators, providing incentives for teachers to work on their new STEM approach to teaching and learning, and for universities and companies to collaborate to train quality human resources are also needed. Specifically, providing more favorable learning and working environments for future STEM graduates may attract better-fitted human workers from inside and outside the country.

More broadly, a better legal framework to protect intellectual property rights, promote innovation and new technology development, and give tax breaks and other incentives to businesses that invest in STEM education would help. Providing funding and training materials for in-home, in-school, and/or after-school programs to attract more attention and update knowledge about STEM education and career development for all parties involved is needed as well. In general, human resource policies that attract talents in STEM fields to stay and work for the better future of Vietnam will support these goals.

6 Conclusion

In this chapter, we illustrated the still burgeoning STEM career development situation in Vietnam by discussing engagement by the Vietnamese government and other non-government organizations on these topics,

highlighting current STEM programs and their influencing factors. We also outlined the opportunities and challenges Vietnam faces as well as the general importance of STEM education and CD for Vietnam. Significantly, while an ideal scenario for STEM education would include support for all fields addressed by STEM, financial constraints in Vietnam as well as preexisting strengths in mathematics and computer sciences suggests building on that strength above all.

Fortunately, the booming interest in interdisciplinary STEM education in Vietnam has support and investment from the government along with multilateral, bilateral, and international organizations. But providing the education is only half of the equation in steering students toward the needed STEM workforce requirements. Here, career development affords a key part of efforts to achieve personal, national, and international best outcomes for Vietnam in a typically quickly changing global world-scene. To date, while Vietnam has been able to afford only relatively little infrastructure for STEM strategies generally, it has shown very promising national development and mobility benchmarks for achieving success in multiple sectors. Its demonstrated capacity for achieving world-class gains in PISA, for instance, highlights the tremendous promise of the country. To realize this promise, improvements to STEM career development policy and practices will go a very long way.

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Part III

Human Resource Development in Organizations



8

Corporate Training and Firm Performance: Evidence from Vietnam

Thang Ngoc Nguyen and Gary N. McLean

1 Introduction

Training is one of the most important tools for enhancing employees' knowledge and skills, individual performance, and organizational productivity (Bell, Tannenbaum, Ford, Noe, & Kraiger, 2017; Garavan et al., 2020; Kim & Ployhart, 2014), all of which are considered essential for a firm to remain competitive and survive (Cascio, 2019). In fact, successful organizations are assumed to invest more in training activities than unsuccessful ones (Kraiger, McLinden, & Casper, 2004). Thus, investments in training are made with the expectation that these

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investments will lead to improvements in organizational performance or results (Cascio, 2016; Dolezalek, 2005; Jiang, Lepak, Hu, & Baer, 2012). However, training is often criticized for being too expensive, and skepticism exists about the link between training and firm performance (Kraiger, McLinden, & Casper, 2004; Tharenou, Saks, & Moore, 2007).

In Vietnam, there is an urgent need to improve the quality of Vietnamese workers at all levels of labor because the quality of the labor force is not sufficient to meet the needs of employers (Thang & Quang, 2007; Thang, Quang, & Buyens, 2011). Thus, training and retraining Vietnamese employees are vital keys to the continued productivity of the labor force. Vietnam's government is encouraging companies to commit to investing in labor development to ensure that employees are qualified for their jobs. Investment in training can help companies have employees with the necessary knowledge and skills. Some researchers have suggested that employers need to evaluate the effect of training not only at individual and group levels, but also at an organizational level (Sitzmann & Weinhardt, 2019b; Thang, Quang, & Buyens, 2010). Thus, examining and estimating the benefits of investing in training by companies at the organizational level can shed light on the relative importance of various aspects of training in enhancing the firm's performance and can provide evidence for both employers, stockholders, and policymakers.

This chapter is organized in four sections. First is a review of the theoretical work on general and specific training, the conceptual relationship between training and firm performance, and a framework that estimates the relationship between training and organizational-level outcomes. Second, we report on a survey in 2018 of 965 companies in Vietnam to collect data about their employment and training practices and firm performance indicators. Third, we demonstrate the relationship of training on the sales of the companies in our survey and discussed the results. Finally, we summarized key findings, implications, limitations, and directions for future research.

2 Literature Review and Estimation Framework

Before undertaking the empirical research, we reviewed literature on training, especially on its relationship with performance, both generally and in Vietnam.

2.1 General and Specific Training

The knowledge and skills of employees have become increasingly important for firm performance and competitiveness. Company training is now considered to be an essential tool for an organization to provide the knowledge and skills of its employees (Kim & Ployhart, 2014; Sitzmann & Weinhardt, 2019a). According to Becker (1975), and still well accepted (Barrett & O'Connell, 2001; Thang, Quang, & Buyens, 2010), there are two types of training: general and specific. Both can improve employees' future productivity. However, general training improves productivity not only in the firm that provides the training, but also in other firms. Thus, the employer providing general training will not be able to capture unique future returns. In fact, Hatch and Dyer (2004) found that new employees with prior industry experience from external sources significantly reduce the need for on-the-job training, and the new employer receives appropriate knowledge from its rivals.

In contrast, specific training is considered to be a human capital investment that improves productivity only in the firm in which it was provided. Therefore, the employer will be less willing to invest in general training (Barrett & O'Connell, 2001; Thang, Quang, & Buyens, 2010), while the employer may be willing to invest in specific training because it can provide unique returns on its investment (Garavan et al., 2020).

Since Becker proposed the distinction, several authors have doubted whether the employee receives all the benefits and pay for all general training costs. Bishop and Kang (1996) developed a model to predict phenomena in which employers share the costs of general training. They found that wage rates were not lower in jobs that offered large amounts of employer training. In addition, general training did not have greater

effects on wage growth than productivity growth as predicted by their model. Loewenstein and Spletzer (1999) failed to find any difference in the wage returns to general and specific training. They also found that the returns from training were not related to the skills that the employee received from general training. Therefore, they concluded that the employees were not paying for either type of training.

Barrett and O'Connell (2001) used data to test for differential effects of general and specific training on productivity growth. They found that general training had a positive effect on productivity growth, while specific training had no significant effect on productivity growth. This finding was contrary to expectations based on the theory.

Overall, organizations invested in both general and specific training because they expected returns from both types of training investments through perceived improvements in organizational performance (Dolezalek, 2005). However, most organizations still evaluate training programs, whether general or specific, using only simple ways, and very few estimate the impact of each type of training on firm performance (Kraiger, McLinden, & Casper, 2004; Thang & Quang, 2011), perhaps because of the difficulty of establishing a causal relationship between these two variables. Thus, in the future, organizations need to analyze and examine the relationship of each type of training with firm performance and determine whether either type of training pays off in organizational effectiveness (Garavan et al., 2020; Thang, Quang & Buyens, 2010; Tharenou, Saks & Moore, 2007).

2.2 Training and Firm Performance

Over the years, researchers have examined the relationship between training and firm performance. Training activities are frequently associated with productivity, sales, quality, general performance outcomes, and perceptual measures of organizational performance (Ahmad & Schroeder, 2003; Aragón-Sánchez, Barba-Aragon, & Sanz-Valle, 2003; Ballot, Fakhfakh, & Taymaz, 2006; Black & Lynch, 2001). For example, Aragón-Sánchez et al. (2003) investigated the perceived impact of training on performance using a sample of 457 European small-medium

enterprises and claimed that training had significant effects on sales and quality of products. Similarly, Ballot et al. (2006) used panels of firms in France and Sweden to examine their perceptions of benefits of investment in training. They claimed that training had a positive effect on labor productivity (value-added per worker).

Kraiger et al. (2004) suggested that successful organizations invest more in training than other organizations. Some scholars have estimated that training has a perceived impact on the financial outcomes of the organization. Bernthal and Wellins (2006) found that investing in training was associated with a higher profit margin, return on equity, and return on assets. Paul and Anantharaman (2003) found that training was related to higher perceived financial performance (growth in sales, net profit, and return on investment). Similarly, in a study of relationships between training and financial outcomes, Storey (2002) found that training was associated with increased cash flow, prior-year profitability, and rate of return on capital. However, some researchers reported that relationships between training and firm performance were not significant or were negative (Faems, Sels, De Winne, & Maes, 2005; Ghebregiorgis & Karsten, 2007; Guerrero & Barraud-Didier, 2004). An additional concern, however, is that these studies all explored relationships, not causalities. So, while relationships may exist, this does not suggest that training leads to improved productivity, or any other measure of desirable outcomes (McLean, 2005).

In Vietnam, few studies have been conducted on the relationship between corporate training and firm performance. Dang et al. (2018) and Thang and Quang (2005, 2011) examined the relationship between workforce training and firm performance. Thang and Quang (2005) used data collected from a survey of 137 enterprises in Vietnam in 2003 to examine the relationship between corporate training and firm performance. They found that there was a positive relationship between training and market share and organizational performance. However, this study used a subjective measure of human resource training practices and productivity. Therefore, the research was not comparable across firms, and it estimated rates of return to training.

Other studies, such as Thang and Quang (2011), examined the relationship between training in 2006 and sales and productivity in 196

manufacturing and non-manufacturing companies in Vietnam. They found that only the manufacturing companies that implemented training in 2006 had increased sales and productivity in 2007, but no such effect was observed for training in non-manufacturing companies. The study also found that manufacturing companies were solely focused on training for technical engineers.

Dang et al. (2018) linked data from a survey about human resource management practices from SMEs in 2009–2013 and their relationships with firm outcomes. These surveys were jointly carried out every two years by the University of Copenhagen, the General Statistics Office of Vietnam, the Vietnamese Institute of Labor Science and Social Affairs, and the Central Institute for Economic Management of the Vietnamese Ministry of Investment and Planning. They found that perceived returns to training investments for new workers are positive, suggesting an increase in output value per worker, value-added per worker, and gross profit per worker. More specifically, an additional ten days of training for new employees led to a 4.1% increase in output value, a 3.0% rise in value-added, and a 3.0% growth in gross profit. However, the limitation of the study focused only on relationships for new workers, not all incumbent workers, and no causal evidence was explored.

2.3 Estimation Framework

Based on previous studies (e.g., Barrett & O’Connell, 2001; Lynch & Sandra, 1998; Ng & Siu, 2004), we assumed that the relationships between inputs and output at the company level had a Cobb-Douglas specification (Bartel, 1994). Output Y of a company is a function of two inputs, capital K and effective labor EL. The production function is:

$$Y = A * K^{\beta} * EL^{\gamma} \quad (1)$$

where A is an efficiency parameter, β and γ are numbers greater than zero. Effective labor includes the number of workers employed (or reported labor, RL) and the stock of training that the workforce had

received. The relationship between EL and RL is represented as:

$$EL = RL^*(1 + \lambda T) \quad (2)$$

Reported labor (RL) is the amount of labor employed; T is the proportion of training provided. Substituting Eq. (2) into Eq. (1), the rewritten Eq. (1) is:

$$Y = A * K^{\beta*} [RL^*(1 + \lambda T)]^{\gamma} \quad (3)$$

If we log-transform model (3), we obtain:

$$\ln(Y) = \ln A + \beta \ln K + \gamma \ln RL + \gamma \lambda T + \varepsilon \quad (4)$$

Equation (4) presents a model of productivity in which the impact of training on productivity will be estimated as just one factor influencing productivity. Equation (4) is, therefore, a linear regression model.

3 Survey

In order to suggest return on investment of company-provided training and identify trends in the demand for skilled labor, Hanoi School of Business and Management (HSB) implemented a national survey of firms and their employees in May and June of 2018. The HSB National Employer Survey (HSB-NES) was designed by Nguyen, Ngoc Thang of HSB in collaboration with colleagues. The focus of the questionnaire was on firm characteristics (total value of revenues, sales, or receipts; total value of capital, or the cost of goods and materials used in production), use of education and training investments (types of training programs, total training costs, reasons for company training, sources of trainers, subsidies for training), employment, and work organization (number of employees, human resource management policies).

With respect to firm characteristics, the major questions were, “What is the principal product you produce (*line of business*) at your company?” “What was your company’s total value of sales, receipts, or shipments

(gross revenues, sales, or receipts) for calendar years 2015, 2016, and 2017?” “At the end of calendar years 2015, 2016, and 2017, what was the total book value of the fixed capital stock in your company (for example, structures, equipment, furniture, vehicles, and others)?” “At the end of calendar years 2015, 2016, and 2017, what was the cost of goods and services used in the production of your sales (for example, energy costs, raw materials, and intermediate goods)?”

With respect to training investments of organizations, for example questions were, “What methods of training (on-the-job training, classroom training, self-training, and others) did your company provide for your employees?” “What was your company’s total cost of training programs for calendar years 2015, 2016, and 2017?” “Does your company evaluate the effectiveness of training programs?” “How does your company evaluate the effectiveness of training programs (reaction sheets, number of employees trained, measurement of behavior change, and others)?”

With respect to employment and work organization, the sample questions were, “How many full-time employees were on your payroll at the end of calendar years 2015, 2016, and 2017?” “What percentage of your currently employed workers have been with the firm for less than one year?”

A nationally representative sample of 2000 enterprises with more than 20 employees was randomly selected from the Registration Management Agency, Ministry of Planning and Investment. Of the 965 companies that chose to participate in the survey, not all respondents completed all parts of the survey. The final number of surveys for which all parts were completed was 446 companies for a response rate of 46.2%.

Because recipients were free to choose whether or not to participate, Institutional Review Board review was not deemed to be necessary. Cronbach’s alpha was used to determine the stability of the measurement instrument, resulting in an alpha of 0.82, which reveals that the instrument was reliable. No follow-up procedures were used to increase the response rate.

4 Results

In this section, we provide the results of the survey.

4.1 Types and Methods of Training Programs

Table 1 shows the percentage of companies offering each of ten main types of training. More than three-quarters of companies offered health and safety training, while two-thirds reported financing or providing new methods or procedures and basic skills training.

Table 2 shows the methods of training offered. For example, more than 80% of companies reported using on-site training and coaching methods. Other on-the-job training methods included workshops, seminars, or rotation. Table 2 also provides the percentage of companies using each type of off-the-job training method. More than 50% of companies used e-learning methods or coordinated with outside training providers to implement training, while fewer than 50% use off-the-job training methods from equipment suppliers, headquarters, or self-funded training programs.

Table 1 Types of training offered

Rank	Type of Training	<i>n</i>	Percent
1	Health and safety	358	80.2
2	Basic skills	323	72.5
3	New methods/procedures	316	70.8
4	New employee orientation	273	61.3
5	Line supervisory skills	232	52.0
6	Sales or customer service	186	41.8
7	Executive development	177	39.7
8	Teamwork and problem solving	172	38.6
9	Computer literacy	156	34.9
10	Cross-training	103	23.1

Source The authors of the chapter

Table 2 Companies engaged in each method of training

Rank	Methods of training	<i>n</i>	Percent
<i>On-the-job training</i>			
1	Coaching	413	92.6
2	On-site training	370	82.9
3	Workshops, seminars	232	52.0
4	Rotation	187	41.9
<i>Off-the-job training</i>			
1	Line supervisory skills	232	52.0
2	E-learning	230	51.6
3	Other self-funded training programs	211	47.3
4	Equipment suppliers or headquarters	150	33.7

Source The authors of the chapter

4.2 Training Objectives

Table 3 shows the companies' training objectives. More than 85% of all companies reported that training was a means of enhancing employees' knowledge, skills, and attitudes. More than three-quarters offered training because they wanted to provide practical knowledge, skills, attitudes, and orientation for new hires, improve the quality of outputs, and enhance employee productivity. More than half of employers stated that they used training to upgrade employee skills as

Table 3 Training objectives

No.	Reasons for providing training	<i>n</i>	Percent
1	Develop employees' knowledge, skills and attitudes	383	85.9
2	Train newly hired employees (both KSAs and orientation)	373	83.6
3	Need to improve the quality of the output	358	80.2
4	Need to improve employee productivity	346	77.6
5	Changes in products/services company provides	278	62.3
6	Changes in technology	252	56.5
7	Need to train more to remain competitive	226	50.7
8	Reduce employee turnover rate	144	32.3

Source The authors of the chapter

changes occur in technology, products, and services, as well as remain competitive, while only a little over one-quarter of employers offered training to reduce employee turnover rate.

4.3 Corporate Training Trends in Vietnam

Economic globalization, technological change, and shifting demographics patterns are three major dynamic forces that will shape corporate training in the twenty-first century (Cascio, 2019). These forces have important implications for future workplace and corporate training in Vietnam. Through our survey, we identified three key trends in corporate training and development in Vietnam.

4.3.1 Focusing on Specific Training

Over the past decades, but before the COVID19 virus pandemic, Vietnam had achieved the second-fastest GDP growth rate worldwide, surpassed only by China. The country's continued economic rise requires a highly skilled labor force. Vietnam's education system has recovered and has made transnational progress to deliver a new way of learning. However, Vietnam's workforce continues to face some challenges (e.g., quality problems) and does not closely connect to company demand (Thang, Quang, & Buyens, 2011) because a lack of high-quality universities, inadequate foreign language training, and curricula that do not prepare students for entry into the labor force (Vallely & Wilkinson, 2008). This is the reason why continuous corporate training ensures that employees have consistent knowledge, skills, and abilities, and keeps employees on the cutting edge of industry development.

Our survey shows that some form of training is offered by 46.2% of companies; within these companies, 80.2% of employers provided safety and health programs and more than 70.0% provided training that offered specific skills and new methods/procedures to their employees. These skills are directly applicable to the performance of current jobs. Unfortunately, only about 5% reported offering general training to

their employees. The survey results are closely consistent with Becker's distinction that companies will not pay for general training.

4.3.2 Increasing Effective Learning

Learning is now viewed as a continuous process throughout the employee lifecycle. Thus, to encourage and inspire learners, training must be interesting, motivating, and challenging. Tews and Noe (2019) suggested that the company design training that is both fun and effective because learners will be more engaged and favorable to the experience. In addition, the role of trainers is very important because enthusiastic, friendly, and expressive trainers have a positive influence on the learning environment and trainee reactions (Tews, Michel, Xu, & Drost, 2015; Towler & Dipboye, 2001). In the context of corporate training, there are several ways in which fun can be incorporated into training design and delivery. Relaxation exercises, case studies, group discussions, games, video clips, and outdoor adventure training have been used to enhance the training environment. Besides, enthusiastic, friendly, and expressive trainers can increase trainee satisfaction and knowledge acquisition.

4.3.3 Growing Use of Active and E-Learning

Traditionally, companies have provided classroom instruction and on-the-job training. In the digital economy, however, employees may attend online training (e-learning), which are highly flexible and can help employers improve the knowledge and skills of their employees. Several companies (e.g., Viettel, FPT, BIDV) in Vietnam provide training and development opportunities for their employees through online training. At the same time, many companies (e.g., Topica, Tinhvan, OES Vietnam) are providing complete e-learning platforms, developing e-learning systems, building e-learning courses, and, most importantly, assisting their customers in every step of training implementation. Another advantage of e-learning is that learners can access content anywhere and anytime. They do not need to take time out from their jobs to attend classes, though this is clearly a benefit for the company,

while it might well be perceived as a negative by employees. Therefore, according to Ambient Insight (2013), e-learning has become a trend in Vietnam with the highest growth rate in the world (44.3%). Furthermore, increased government efforts to grow e-learning in Vietnam, adoption of modern technology by learners, and the growing use of learning management systems by companies to integrate their process are expected to drive e-learning development in the future (Ken Research, 2019).

Our survey also showed that more than 50% of companies report using e-learning to train their employees. This evidence implies that companies have increased awareness of the benefits of digital education. These companies were incorporating e-learning as a secondary form of training and are willing to change completely from traditional methods.

4.4 Relationship Between Corporate Training and Firm Performance

Before presenting the results of our estimation of Eq. 4, we present how we calculated the variables. Output Y_i is calculated by the Vietnam Dong value of sales, receipts, or shipments for the calendar year 2017 for the company, i . K_i is the 2017 book value of capital stock and the cost of goods and services (including energy) used in the 2017 production for company i . RL_i is the total labor cost for 2017 for company, i . TR_i is the ratio of total persons trained to total employment, and TE_i is the ratio of total expenditures on training to total payroll.

Table 4 presents the results from a standard Cobb-Douglas production function. Keep in mind, however, that the results are suggestive only, as none of the statistics is causal; they are only relational. In two models, training has a positive and significant effect (based on t -test analyses) on sales growth. More specifically, the estimated coefficient in model 1 implies that a 1% increase in the number of trainees in 2015 leads to a 0.035% increase in-company sales in 2017. Our finding is consistent with previous studies (Bartel, 1994; Lynch & Sandra, 1998) that suggested that the number of trainees is an important determinant of company sales.

Table 4 Determinants of log sales (Cobb-Douglas Production Function)

Independent variable	Model 1 Number of trainees/reported employees	Model 2 Training expenditure/total payroll
Constant	0.068 (0.763)	0.415 (1.204)
Capital 2017	0.837** (13.884)	0.879** (9.735)
Reported labor 2017	0.075** (2.117)	0.112* (1.012)
Training 2015	0.035* (1.159)	0.025* (0.442)
Training 2017	-0.101 (-0.426)	-0.49 (-0.864)
N=	446	446
Adjusted R ²	0.86	0.84

Note T-tests are given in parentheses

*Significant at the 10% level

**Significant at the 5% level

Source The authors of the chapter

As seen in model 2, a 1% increase in training cost in 2015 induced a 0.025% increase in-company sales in 2017, a finding similar to Ng and Siu (2004) in China. However, the results from model 2 are opposite to that of Barrett and O'Connell (2001) where the expenditure on training failed to find a significant effect on company sales. These contradicting findings could be linked to different countries and industries to which the surveyed firms belonged.

Both the number of employees trained and training expenditures in 2017 had no perceived impact on sales growth in 2017. There are two possible explanations. First, training might not transfer immediately to the job. Second, employees who attended on-the-job training might have reduced their working hours to participate in the training. Unfortunately, we cannot explore this issue in more detail with our data.

5 Conclusions

In this chapter, we examined the relationship of corporate training with firm performance. Using a firm-level data set, we estimated the relationship between persons trained and training expenditure on company sales. The major findings indicate that the number of trainees and training expenditure in 2015 positively related to company sales in 2017, while the company-provided training in 2017 had no relationship with company sales in 2017.

In addition, we identified three key corporate training trends in Vietnam, including focusing on specific training, increasing effective learning, and growing use of active and e-learning.

We suggest several practical implications based on our study. First, based on the three key training trends identified, companies need to pay attention to effective learning, especially e-learning and smartphone applications using short and interesting digital lessons. Fun plays an important role in the learning process in organizations. Thus, companies should do everything they can to make the training enjoyable. Second, both general and specific training can improve the knowledge and skills of employees. Thus, employers should focus on skills that are directly applicable to the current job of employees, as well as general application of training outputs. In addition, companies should cooperate with universities or schools to develop relevant curricula and combine classroom training with practical applications in organizations. More specifically, cooperation aims to improve student employability and boost the working skills of future graduates. Third, to support transfer of training, trainers should focus not only on the design of the training content, but also on delivery and communication to the trainees about what is expected from training. Thus, companies should focus on selecting trainers from inside and outside of the company. Although a trainer's main duty is to facilitate training activities, a good trainer is expected to be a facilitator of change because company processes and knowledge that are suitable today might become obsolete shortly. Finally, the company can provide training for their employees, but the extent to which such activities are transferred to the job depends on the employees, the working environment, the market environment, and other factors.

Therefore, company-provided training should be evaluated to optimize learning activities and diminishing skill decay.

Although we provide insights into the relationship between training and firm performance in Vietnam, some limitations of this study follow. First, there are several factors that affect firm performance. As this was a relational study, we cannot draw any conclusions related to cause and effect relationships. As we know, there are many factors other than training that influence sales, including competitive market environment, relative cost of products, innovation in the company, and many others. In fact, it is likely that it will never be possible to draw a causal connection between training and company performance. Thus, we still are not capturing all company characteristics linked to productivity because we have concentrated on capital, reported labor, and training variables. Future studies should strive for a larger number of independent variables in order to provide further insights into the training and firm performance relationship. Second, different industries/types of firms (e.g., start-ups and small businesses) might need different types of training. Future research needs to investigate the relationship of training with firm performance and survival among start-ups and small businesses in different industries. Third, as seen in many other empirical studies, this study used a cross-sectional research design; thus, we might have a problem of endogeneity. Future research may consider using longitudinal data to address some of the endogeneity issues and use a follow-up survey of our sample to obtain more information on how training practices change over time. Finally, although our study shows that corporate training displays a positive relationship with firm performance, future research could use a qualitative, multiple case-study research strategy to investigate the training-organizational performance relationship because this approach has been valuable in enabling researchers to gain a deep understanding of the role of training in organizations.

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9

Characteristic Descriptions of Women on Boards of Vietnamese Listed Companies

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1 Introduction

For decades, the subject of women's leadership has been raised with numerous debates and controversial arguments. Since the 1970s, women

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have steadily emerged in leadership roles in all aspects of society (Chandler, 2011). There are a number of studies emphasizing the presence of women leaders in corporate enterprises and organizations. Many researchers affirm the crucial role of female directors in creating value for enterprises and organizations (Abdullah, Ismail, & Nachum, 2016). Power balance between male and female directors could enhance the financial performance of the firm, thereby adding to the sustainability of the company.

Other studies indicate that women in leadership bring diversity to the workplace and through this distinction in management style the business performance is improved. Other research, however, cites that the impact of women as board members could be lessened due to their limited experience in top positions (Dargnies, 2012).

Research conducted in developed and emerging countries has shown that there is a close correlation between gender diversity in board structure and firm performance in the U.S., Spain (Campbell & Mínguez-Vera, 2008), China (Liu, Wei, & Xie, 2014), Korea, Thailand, and Vietnam (Adhikary, Huynh, & Hoang, 2014). Chandler (2011) points out that women in top corporate positions demonstrate leadership characteristics such as self-confidence, intelligence, and the work efficacy to contribute to the overall goals of the company. Their “feminine side,” displayed in interactions with employees and new customers, creates a friendly working environment through empathy, loyalty, mutual respect, and team spirit.

Women’s leadership and gender equality have evolved in Vietnam over the years. Vietnamese women have been active in the workforce during both war and peace. The Economist (2019) acknowledges the fact that Vietnam has one of the highest female labor-force participation rates in the world with some 79% of women aged 15–64 in the labor force, compared with 86% for men. That figure is higher than in all the members of the OECD except Iceland, Sweden, and Switzerland, and is 10% higher than China. According to the World Economic Forum’s (WEF) “Global Gender Gap Report in 2018,” Vietnam is among the top 25 countries in the world when it comes to closing the workforce gender gap.

Woman-led businesses are on the rise in Vietnam (The Asean Post, 2019). Vietnam's economic reform called "Đổi Mới" in 1986 transformed the economy and provided opportunities for female Vietnamese entrepreneurs to affirm their efforts and talents in both domestic and international markets. In the "Women in Business 2019" report by Grant Thornton (2019), women are said to hold 36% of senior management positions in Vietnamese businesses, ranking second highest in the region after the Philippines at 37.5%.

With great potential for growth in small and medium enterprises (SMEs), Vietnam has experienced an increasing demand for entrepreneurs, especially young women leaders. An International Finance Corporation (IFC) (2017) report on "Women-owned enterprises in Vietnam: Perceptions and Potential," shows that Vietnamese women entrepreneurs are reported to own 95,906 or about 21% of the formal enterprises, of which the majority 57% or 55,049 are microenterprises, 42% or 44,003 are SMEs and 1% or 854 are large enterprises. This report also reveals the average annual revenue of USD548,000 for small women-owned enterprises vs. USD543,000 for men. However, Vietnam's labor market still shows gender segregation with women being employed in "feminine jobs" such as marketing, human resources, and accounting, with only a small number of women occupying top positions in the boardroom.

More research about women on boards of Vietnamese companies should therefore be conducted. In this chapter we describe the trends and characteristics women board members in Vietnam, using the data from the population of 753 Vietnamese listed corporations in the Ho Chi Minh City Stock Exchange (HOSE) and the Hanoi Stock Exchange (HNX). The timeframe, 2015–2017, is an appropriate period to provide the recent information of the characteristics of female leaders in the listed firms in Vietnam after the Vietnamese Enterprises Law of 2014 became effective in 2015.

This chapter contributes to the literature on women's development, particularly the significant features of female leaders in Vietnam firms. As board process is considered the main mechanism of corporate governance, having female board members may have a considerable impact on board effectiveness. As a result, the findings of this study may help Vietnamese firms to take full advantage of having female leaders on their

boards and to make decisions concerning the board member appointment. The findings may be of interest of those who are concerned with the tendency of female leadership in emerging countries, who want a deeper look into the human capital and competence of women in board positions, and to develop better policies for women's development.

2 Background for the Study

2.1 Board Structure of Vietnamese Listed Companies

According to the Vietnamese Enterprises Law of 2014, a Vietnamese listed company follows a two-tier board system, meaning that the higher tier for owners, i.e., shareholders and directors, and the lower tier for managers. The directors form a board of directors (BOD); and the managers form a board of management (BOM), who co-exist. As a dominant body and representatives of all shareholders of a listed company (Adhikary et al., 2014), the board of directors is legalized to supervise, control, and manage the top management of the company or board of management in other words. The number of BOD members ranges from a minimum of three to a maximum of 11. A Vietnamese listed company can be run under the supervision of another board which the Vietnamese Enterprises Law of 2014 names as a control board or supervisory board or board of supervision in other words, usually led by a financial controller. Such supervisory board monitors not only the BOM members but also the BOD members in terms of financial management.

2.2 Women on Boards: Vietnam Context

With 51% of the population being women (General Statistics Office of Vietnam, 2018) and the percentage of women-owned enterprises reaching 31.3% in 2018 (Mastercard Index of Women Entrepreneurs, 2018), Vietnam is seeing a growing number of women serving on boards. Over the past 20 years, after the first-ever Vietnamese Enterprises Law

came into effect in 1999, women-led public companies have been viewed positively in Vietnam. Furthermore, a study by Deloitte (2018) notes that 16.6% of board members in a survey of a sample of top 50 listed Vietnamese companies are women; is higher than Asia's average female board member percentage of 9.3%.

3 Methodology

3.1 Research Method

This research is designed to provide a description about the typical features of women in the boardroom in the Vietnamese listed companies. The study takes advantage of a descriptive method that encompasses a “mixture” of secondary and primary data. The authors used numbers and statistics for measurement, and both secondary and primary approaches were employed flexibly to produce the most accurate findings in accordance with the purpose of the study.

Responding to recommendations by Cook and Glass (2014) and Eagly and Karau (2002), the authors used a descriptive approach for analyzing the data collected from the population of 753 listed firms in Vietnam as of March 2019. First, the authors captured the data of women in different leadership positions in the population of the Vietnamese listed companies. Then, the dataset was analyzed based on the following characteristics: age, education level, foreign education, executive expertise vs. accounting and finance background, geographical area, birthplace, and the registered location of the companies at which they work. These features were presented in graphs, tables, and figures.

3.2 Data

Between April 2018 and March 2019, we collected the data, both manually and automatically, from five sources: (i) FiinPro, a large financial database about Vietnam, developed by StoxPlus and Quick Corp; (ii) statistics collected from two credible websites which are <http://finance.vie>

tstock.vn and <http://cafef.vn>, (iii) magazine journals and market reports of reputable organizations; (iv) websites of firms and other organizations such as Vingroup, Catalyst, World Bank Group, and (v) the 2017, 2016, and 2015 annual reports of all of the listed companies on HOSE and HNX, the two official stock exchanges in Vietnam. At the end of March 2019, the research team collected primary data related to the woman board members of the firms that have missing data in the raw dataset. By *primary data*, we mean that the data was not available, whether published or unpublished, to the best of our knowledge, at the time we collected the data. This collection is conducted by making phone calls to the firms to ask the relevant questions of the board members with missing data, which added 34 observations/rows without missing data to our raw dataset.

The authors chose 2015 as the lower cut-off year as the Vietnamese Enterprise Law, amended in 2014, has been in effect since 2015. In addition, we chose 2017 as the upper cut-off year since on 3 June 2017 the Communist Party of Vietnam issued Resolution Number 10 stating “development of the private sector into the important momentum of the nation’s socialist-oriented market economy.” The Party has promulgated the official and crucial document recognizing the “important momentum” of the economic role of the private sector.

The raw dataset includes a population of 753 Vietnamese listed firms as of March 2019. In the dataset, the total number of the men and women who were on BOD and/or BOM and/or control boards and/or chief accountants between 2015 and 2017, with no full-name duplicates, in the 753 companies is 7585.

One advantage of this research is that it covers a population of 753 Vietnamese firms listed on the two official stock exchange markets in Vietnam, which is quite a large sample. In addition, the data were collected from credible sources, one of which is company annual reports, to enhance quality of this research. Based on the descriptive method, the authors collected the data for each of the female leaders in BOD, BOM, members of control board, and chief accountants.

The final dataset has a total of 4976 woman-year observations, in which 1558 observations in 2015; 1632 in 2016; and 1786 in 2017.

The dataset related to women's representation on boards in these enterprises is divided into 26 categories distinguished with a total of 4976 woman-year observations.

The authors transformed the dataset from 26 categories into ten groups, and then combined and modeled the data into nine figures and one table. The goal is to compare the descriptive statistical patterns in 10 groups that lead to key findings and offer insights to initiate discussion on women leadership in Vietnam, and to project current trends of Vietnamese women leaders on boards.

4 Results

4.1 The Trends of Women on Boards

The trends of female leaders on boards are depicted and explained in terms of board titles, two-title holding, top power positions, and the trends of women holding both Chair of the Board of Directors (COB) and Chief Executive Officer (CEO duality, in other words) as illustrated in Figs. 1, 2, 3, and Table 1.

In this study, board titles include the member of Board of Director (BOD), Board of Management (BOM), and supervisory board; the supervisory board is also called board of supervision or control board in

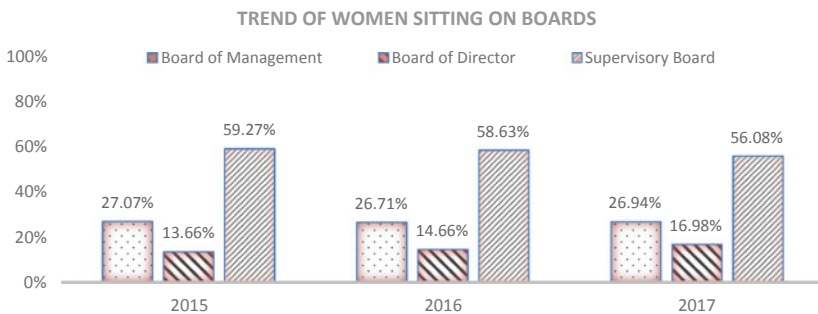


Fig. 1 Trend of women sitting on boards in 2015–2017 (Source The authors of the chapter)

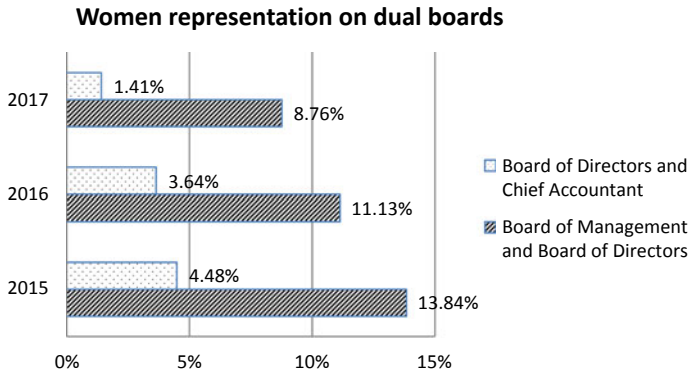


Fig. 2 Trend of women representation on dual boards in 2015–2017 (Source The authors of the chapter)

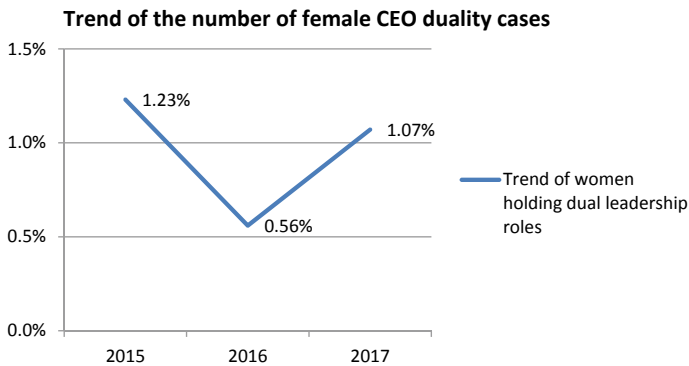


Fig. 3 Trend of the number of female CEO duality cases in 2015–2017 (Source The authors of the chapter)

Vietnam. Two-title holding refers to (i) being in BOD and/or BOM and (ii) being chief accountant and in BOD. Top power position is defined as being membership of Board of Director (BOD) and/or Board of Management (BOM). CEO duality refers to the practice of a single individual serving as both COB and CEO (Krause, Semadeni, & Cannella, 2014).

Table 1 Trend of women in top power positions of the Vietnamese listed companies in 2015–2017

Year	No of women COBs		No of women CEOs		No of women holding dual positions of COB & CEO		No of women holding dual positions of COB and CEO		Total female members in BODs and/or BOMs		Total female members in BODs and/or BOMs	
	Absolute	Relative	Absolute	Relative	Absolute	Relative	Absolute	Relative	Total female members in BODs	Total female members in BODs	Total female members in BODs and/or BOMs	Total female members in BODs and/or BOMs
	iii = ii/x	v = iv/xi	vi = v/xii	vii = vi/xii	viii = viii/xii	ix = ix =	x = x	xi = xi	xii = xii =	x + xi	x + xi	x + xi
2015	31	9.60%	25	15.34%	6	1.23%	441	90.74%	323	163	486	486
2016	36	10.34%	32	16.75%	3	0.56%	489	90.72%	348	191	539	539
2017	41	10.05%	40	16.19%	7	1.07%	588	89.77%	408	247	655	655

COB: Chair of board; CEO: Chief executive officer; BOD: Board of directors; BOM: Board of management

Source The authors of the chapter

Figure 1 illustrates the trend of women in BOD, BOM, and control board during the three-year period 2015–2017. Overall, the proportion of women sitting on BOD experienced an upward trend, whereas the figures for BOM and supervisory board witnessed a slight decrease during the period.

Women sitting on BOD accounted for 13.66% of the total women in the dataset in 2015 but increased from 1% in 2016 to 14.66% and reached 16.98% in 2017. Meanwhile, the percentage of women leaders on BOM fell from 27.07% in 2015 to 26.94% in 2017. Similarly, the proportion of women holding positions on the board of supervision declined from 59.27% in 2015 to 56.08% in 2017.

Another visible trend is that women still held the highest percentage in the control board among the three boards in the 2015–2017 period, followed by the BOM and then the BOD. In 2015, the percentage of women sitting on supervisory board was the highest, with 59.27%, followed by Board of Management and Board of Director with 27.07 and 13.66% respectively. More than half of control board members are women suggesting that more woman leaders have financial and accounting educational background than men.

Regarding two-title holding, i.e., the number of women on dual boards which includes BOD and BOM, and the number of women on BOD and Chief Accountant during the period 2015–2017 (see Fig. 2), women in charge of positions of BOD and BOM are recorded with the largest number, followed by the number of women holding responsibilities for both BOD and Chief Accountant.

Another remarkable feature is that the trend of women sitting on dual boards holding positions of Board of Management and Board of Directors gradually decreased with a steady decline from 13.84% in 2015 to 8.76% in 2017. Similarly, there is a downward trend in the proportion of women holding two positions of BOD and Chief Accountant with a marginal decrease from 4.48% in 2015 to 1.41% in 2017.

Overall, among the female leaders in the listed companies in Vietnam, the number of women holding two positions on the BOD and BOM is extraordinary.

Next, the Chair of the Board of Directors (COB) and Chief Executive Officer (CEO) are two positions that hold the highest power on the

boards. COB is most powerful leader who oversees the operations of the firm and is appointed by the shareholders in the general annual meeting, while the CEO is the decision-maker in day-to-day business of the listed firm, and accountable to the BOD for firm performance. In many listed companies, a CEO and a COB can be held by the same person; however, the accountability of each position is distinctly different.

To illustrate the female characteristics in board leadership, the proportion of female leaders holding top power positions, i.e., in membership of COB and/or CEO is illustrated in Table 1.

In 2017, the percentage of women holding both of the highest positions in a firm as COB and CEO was insignificant (1.07%) compared to total female members in BODs and/or BOMs. A similar trend can be seen in 2015 and 2016, more or less 1%. This means that although the boardroom diversity is increasing (see last three columns), female leaders remain underrepresented in the highest positions leading the firms and the progress is slow (see the first three columns).

Finally, the trend of women on board as both COB and CEO (CEO duality) is illustrated in Fig. 3. The figure shows some fluctuation in the number of female leaders helming the two highest leadership roles in the firm. During the 2015–2017 period, the number of female CEO duality cases witnessed a fall from 1.23% in 2015 to 0.56% in 2016, then rose up to 1.07% at the end of the period. This trend is likely to experience a recovery that may reinforce the role of female leaders on dual boards.

4.2 The Trend in Human Capital Factors and Geographical Area

4.2.1 Women on Boards: The Human Capital Factors

The first category examined in the study is age. According to OECD (2019), the working age population refers to people aged 15–64. However, in the case of Vietnam, for the study period 2015–2017, the age of employee is full 15 or over, and the age of retirement is full 60 years for males and full 55 years of age for females (Labor Code, 2012). In other words, the working age of women in Vietnam is from

15 to 55. The youngest woman leader in the dataset is 20; therefore, the authors decide to categorize the data into four age groups; they are 20–25, 26–35, 36–55, and 55 or over (Fig. 4).

As can be seen from Fig. 4, the pie chart illustrates the distribution of female leaders holding positions in the boardroom in terms of specific age groups. The current time for calculation of age is December 31, 2018. Overall, women aged 36–55 account for the largest proportion (72.59%) of positions in the boardroom of listed firms and enterprises, while the figures for those aged 20–25 are the smallest (0.66%). From this data it can be determined that the older the women are, the more likely they are to be included as members of the board.

In two remaining groups, the figure for the female leaders aged 26–35 is marginally higher than that for the group of 55 or over, at 16.05% and 10.70%, respectively. The greater proportion of women sitting on board in the 26–35 aged group is due to the fact that they are in the working age under the Labor Code (2012), whereas most women in the 55 or over age group are officially retired and therefore not counted in the labor working group.

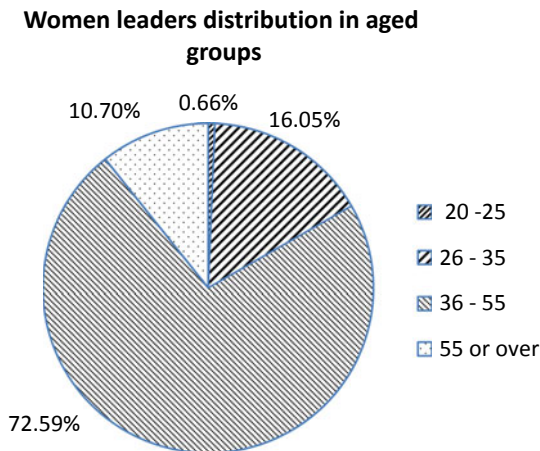


Fig. 4 Women leaders distribution in age groups (Source The authors of the chapter)

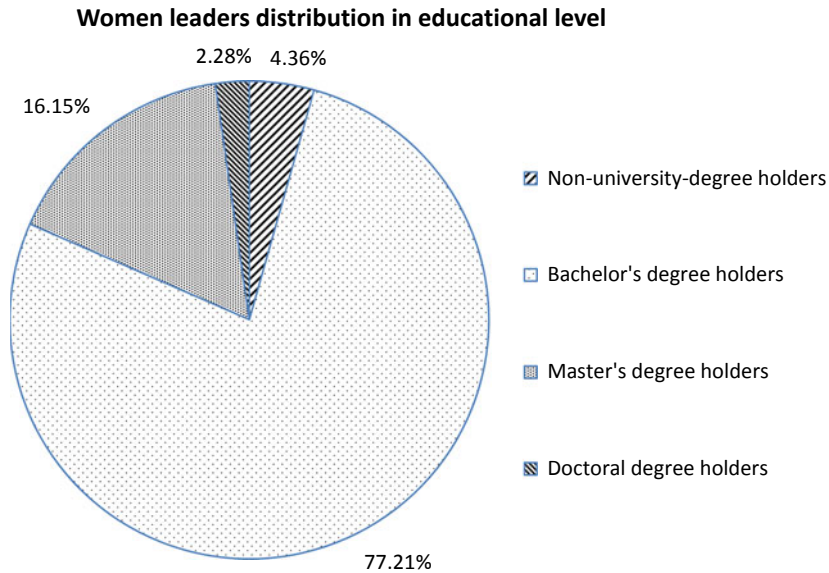


Fig. 5 Women leaders distribution in education level (*Source* The authors of the chapter)

The second category examined in the study is education level, in which the women leaders are divided into four groups including not having university degree, undergraduate degree, Master's and Ph.D. degree holders.¹ Education, to a certain degree, may shape a person's values, cognitive preferences, knowledge, and skill base. Educational qualifications of leaders might have a significant correlation with the firm's performance and their positions on leadership boards (Ahmad, Rashid, & Gow, 2018) (Fig. 5).

The portion of female leaders on the board having undergraduate degree accounts for the largest, compared to that of the women having doctoral degrees, which is smallest, with 77.21 and 2.28% respectively. Almost all of the women in board positions reported have a university degree related to majors in Business, Management, Accounting, and

¹See the Vietnamese Qualifications Framework in Decision No. 1982/QĐ-TTg dated October 18, 2016 by the Prime Minister of Vietnam.

Finance. The number of female leaders who earned a doctoral degree is limited possibly because this is time-consuming and quite hard to achieve.

Another significant feature of the data is that the percentage of women with Master's degrees is greater than those not having a university degree with 16.15 and 4.36%, respectively.

Overall, the number of women with a university degree dominates the four categories. A large proportion of women holding positions in the board room have graduate education at the master's level and may even pursue a doctoral degree.

The third category examined in the study is foreign-related education. Figure 6 illustrates the percentage of women who have a foreign degree compared to those who do not. As can be seen from the pie chart, the number of females in leadership positions without a foreign degree substantially outnumbers those who have one, with 820 females, or 94.47%, not having a foreign degree and only 48 females, or 5.53%, with a foreign degree among a total of 868 female leaders in this category of data. This data shows a dramatic gap of 88.64%. This can be explained in the fact that before the economic transition from a "closed door" to

Proportion of women leaders with and without foreign-related education

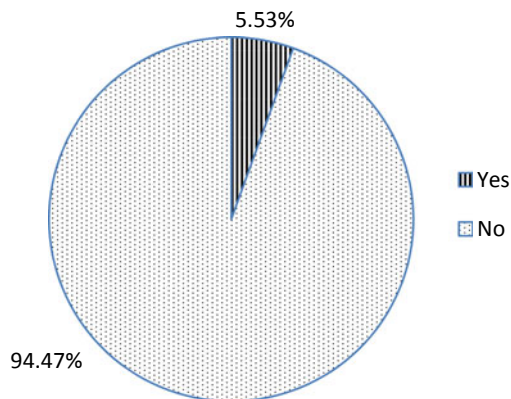


Fig. 6 Proportion of women leaders with and without foreign-related education (Source The authors of the chapter)

an “open door” policy in 1986, women in Vietnam had few opportunities to pursue higher education abroad. The high educational and living costs in developed countries hindered Vietnamese women from pursuing an overseas education.

The fourth category examined in the study is women’s executive experience and background in accounting and finance (Fig. 7). The proportion of the women having accounting and finance background substantially surpassed the figure for those having an executive experience in 2015–2017. The largest portion of women having education related to accounting and finance was recorded in 2016 with 54.18%, which was four times greater than those only having executive experience (14.21%) in the same year. On the other hand, 11.69% was the lowest portion of women having executive experience, compared to 52.57% of those having background in accounting and finance in 2015. Similarly, in 2017, the difference was 13.91 and 51.91%.

Women leaders who have accounting and finance background are more likely to be given positions of chief accountant or members of

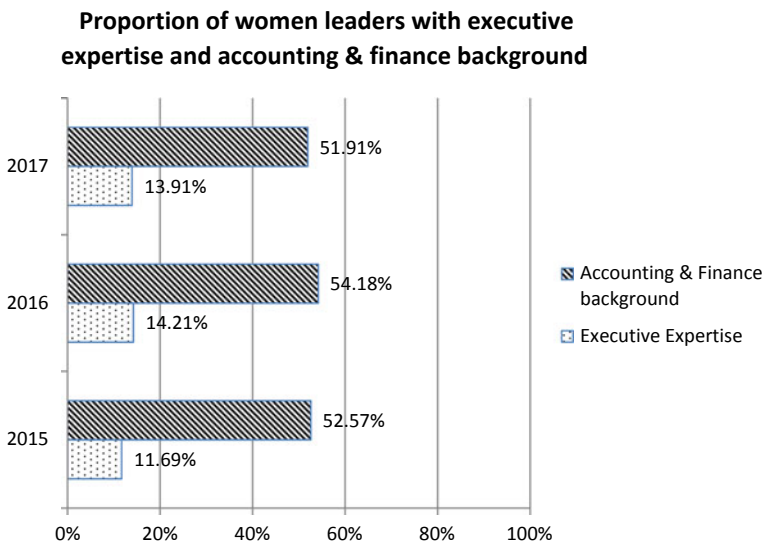


Fig. 7 Proportion of women leaders with executive expertise and accounting & finance background (Source The authors of the chapter)

supervisory board or head of the supervisory board since they have knowledge of accounting as well as the ability to comprehend and control the financial information of the firm; while the positions in BOD and BOM are given to females with executive experience, i.e., whose tenure is related to senior managers.

4.2.2 Women on Boards: The Geographical Area

The fifth and sixth categories examined in the study are birthplace of the woman leaders and registered locations of the firms. The aim of this analysis is to identify which geographic area has a higher density of female leaders and which area has the lowest distribution of female leaders among the listed firms. The 753 public companies in this study listed on the two stock exchange markets of Vietnam: Hanoi Stock Exchange (HNX) and Ho Chi Minh City Stock Exchange (HOSE).

In Fig. 8, among the total number of 982 women sitting on board whose birthplace information is reported, the largest proportion is 580 women born in northern Vietnam (59.06%), followed by 214 women born in southern Vietnam (21.79%), and 188 women born in central Vietnam (19.14%). From this data it can be concluded that the women

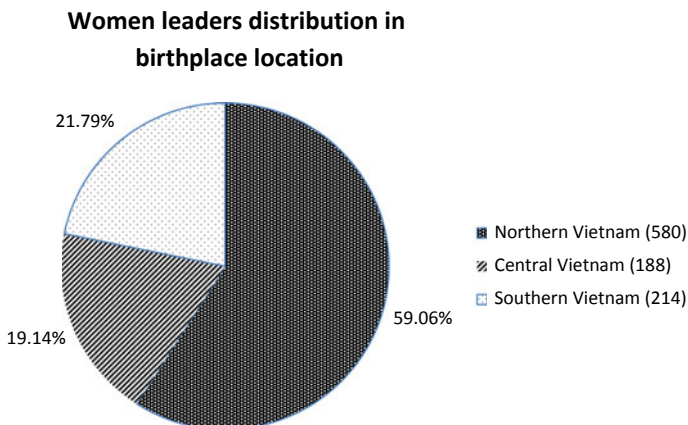


Fig. 8 Women leaders distribution in birthplace location (Source The authors of the chapter)

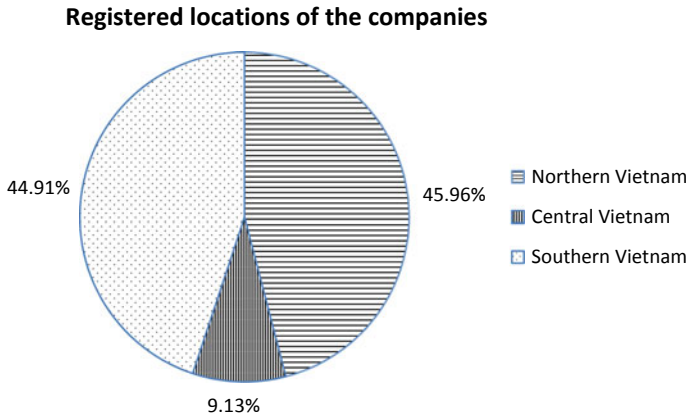


Fig. 9 Registered locations of the companies the women leaders worked in 2015–2017 (Source The authors of the chapter)

in corporate boards were mostly born in the North and South of Vietnam, where the two stock exchange markets HNX and HOSE are located, whereas central Vietnam has a smaller percentage of female leaders.

Figure 9 illustrates the distribution based on the registered location of the companies. As can be seen, the registered locations are mainly in the North of Vietnam, with 45.96% of the firms, followed by 44.91 and 9.13%, respectively, for the southern and central Vietnam. When comparing both Figs. 8 and 9, the birthplace of the women leaders and the registered locations of the companies are mainly in the North and South of Vietnam, with the lowest distribution in central Vietnam. It is likely that the number of women on board is related to the geographic location of stock exchanges and level of economic development in all three regions of Vietnam.

5 Findings, Discussions, and Conclusion

After analyzing the descriptive data of woman leaders of Vietnamese listed companies, based on the information provided above, the

following paragraphs will now discuss the major findings as well as the implications of the findings on Vietnamese female leader development.

5.1 Findings

5.1.1 Trends of Women on Boards

Trend of women holding board titles: Female leaders held the highest percentage in supervisory board among three boards in the 2015–2017 period, followed by the BOM and BOD. There is a downward trend in the number of women sitting on supervisory board and Board of Management, while Board of Directors records an increasing trend during the three-year period (Fig. 1).

Trend of women representation on dual boards: The trend of women sitting on boards who hold dual positions in Board of Management and Board of Directors gradually decreased from 13.84% in 2015 to 8.76% in 2017, while the proportion of women holding dual positions of Board of Management and Chief Accountant showed a marginal decrease from 4.48% in 2015 to 1.41% in 2017. Overall, the number of women holding dual positions on Board of Management and Board of Directors surpasses the number of those whose presence is recorded in Board of Management and Chief Accountant (Fig. 2).

Trend of women in top power leadership: The trend of women holding the highest positions as COB and CEO (CEO duality) is recorded with a small proportion, while the figures for those who are not COB and CEO but in membership of BOD and BOM are noticeable. Specifically, the percentage of female CEO duality cases only accounted for a small proportion of the total female members on BOD and BOM, 1.23 vs. 90.74% in 2015 down to 1.07 vs. 89.77% in 2017 (Table 1).

Trend of female holding dual leadership roles, Chair of the Board and Chief Executive Officer: The fluctuating trend of female leaders holding dual highest leadership roles in the firm, COB and CEO, was recorded during the research period. During the first half of the period,

the line graph witnessed a substantial decrease from 1.23% in 2015 then experienced a further decline in 2016 to 0.56%, and rebounded to 1.07% at the end of the period. The trend is likely to experience a full recovery (Fig. 3).

5.1.2 Women Distribution Among Human Capital Factors

Women distribution in age groups (in 2017): Women on boards focused densely in the 36–55 age group, while there were fewer in the 20–25 age group. In addition, the proportions for groups aged 26–35 were substantially larger than that of the group aged 55 or over (Fig. 4).

Women distribution in education level (in 2017): The proportion of female leaders on the board having a bachelor's degree accounted for the largest, at 77.21%, followed by women having a master's degree, women without-a-university-degree and those with doctoral degree at 16.15, 4.36, and 2.28%, respectively. The number of female leaders with a doctoral degree was small. Another significant feature is that the percentage of women holding a master's degree was greater than those without a university degree with 16.15 and 4.36%, respectively (Fig. 5).

Women distribution in foreign-related education (in 2017): The number of females in leadership positions not having a foreign degree substantially outnumbered those with one with 820 females (94.47%) compared to 48 females (5.53%) among a total number of 868 female leaders (Fig. 6).

Executive expertise vs. accounting and finance background (in 2017): Overall, in 2017, the proportion of women on boards having accounting and finance background substantially surpassed the figure for executive background, with 51.9 and 13.9%, respectively. Furthermore, the trend of women leaders with an accounting and finance background and executive expertise witnessed a slight fluctuation during the three-year period (Fig. 7).

5.1.3 Women Distribution Among Geographical Areas

Women distribution in birthplace location (in 2017): The largest figure for birthplace location of female leaders was recorded in northern Vietnam with 59.06%, followed by 21.79% for southern Vietnam and 19.14% for central Vietnam (Fig. 8).

Registered address location of companies (in 2017): Most registered address locations of companies were in northern Vietnam with 45.96% (785 observations), followed by 44.91 and 9.13%, respectively, for southern and central Vietnam (Fig. 9).

5.2 Discussions of the Findings

The study describes the recent trend of women on board of listed companies in Vietnam and women distribution in terms of features of human capital and geographical area.

First and foremost, regarding the trend of women on board, the findings of the study are consistent with previous studies including Adhikary et al. (2014), MSCI ESG Research (2017), and Deloitte (2018). In those studies, listed companies have female leaders holding board titles in BOM, BOD, board of supervision.

Moreover, their research shows the increasing trend of women sitting on Board of Management and Board of Directors, which coincides with the survey of Boston Consulting Group that found that some 25% of CEOs or board directors in Vietnam are women. This study also found that the number of female senior management was still limited, which coincides with the results from Boston Consulting Group. The two viewpoints are similar but still different in many details. Boston Consulting Group compared Vietnam female holding CEOs based on 2000 employees with other countries in South East Asia, while this study's findings focused only on women on the boards of 753 Vietnamese listed firms as of March 2019. Deloitte (2018) noted that 16.6% of board members in a survey of top 50 listed Vietnamese companies were

women, whereas the findings only focused on female leader data of 50 Vietnam-listed firms, which is a lack of “generalization” and “diversity.”

In this chapter, the number of women holding powerful positions such as COB and CEO also gradually rose between 2016 and 2017, which is not revealed in any previous research. After the Vietnam Enterprises Law of 2014 came into effect in 2015, as an emerging market, it is projected that the number of female leaders holding important positions on boards in SMEs will possibly increase substantially in the future.

Secondly, the women business leader distribution in age group focused densely in the 36–55 age group, while they focused scarcely for the 20–25 and 55 or over age groups, which can be elucidated that the women at older age seem to hold higher and more important positions on boards. In addition, the study found that the proportion of women on board with an undergraduate degree accounted for the largest, which is also indicated in the survey of Boston Consulting Group. The significant relationship between the levels of education and the positions on boards is also affirmed in the study of Ahmad et al. (2018). In terms of women on boards having foreign education, it is still not described in any previous research. Moreover, the trend of women having accounting and finance background and executive expertise fluctuated during the period of 2015–2017; however, it is projected to experience a recovery in the future.

This finding to some extent coincides with the finding of Yusoff and Armstrong (2012, p. 148) that financial expertise was the most highly valued competency for top leaders of listed companies in a sample of Malaysian public listed companies. However, in Yusoff and Armstrong’s study result (2012), non of the chair and/or CEO of the companies is female. Therefore, the finding of the proportion of Vietnamese women on boards having accounting and finance background that surpassed those having executive expertise is of importance.

Finally, the distribution of women’s birthplace and registered address location of companies mainly focused in the North and South of Vietnam with relatively few in central Vietnam, which was not concluded in any previous research. However, this distribution can be explained in that women on boards concentrated most in the North and the South of Vietnam, two largest economic centers where the two

stock exchange markets, HNX and HOSE, are located, whereas central Vietnam had fewer female leaders, possibly due to the lower level of economic development of this region.

5.3 Implications

The findings of this study may be of interest of those who are concerned with female leadership in businesses in Vietnam and seek a deeper look into the human capital and competence of women in board positions. In this period of global economic integration, Vietnam not only receives investment from foreign sources, but also actively penetrates the international market. It is undeniable that women sitting on boards have played a crucial role in many developed countries, which is becoming a trend in developing countries. Thus, Vietnamese women have opportunities to exercise their leadership in Vietnamese enterprises, especially those who have executive experience and a background in accounting and finance when they were younger, have foreign education, as suggested by the findings. This study, therefore, reinforces the beliefs about the importance of female leaders when there has been a flurry of complex economic changes and the impact of foreign factors.

Furthermore, the findings of this research highlight the significant features of female leaders whose representation are recorded in the boardroom and directorial positions in the Vietnamese publicly traded firms. However, the important role of female leaders on board is not fully recognized in the small and medium enterprises (SMEs) and the companies that have not gone public. In Vietnam, the group of SMEs accounts for more than 97% of the total enterprises (Nhu, 2017). The low level of awareness of the importance of female leaders on boards falls mostly in this group, which poses a difficult problem for both policymakers and the government.

Last but not least, it can be seen that in Asian developing countries like Vietnam families are more concerned about rapid development in terms of men holding the “highest” and “top power” positions in society rather than women. This reality has been acknowledged for several years

by international organizations, which have advised the Vietnam government and public to make significant improvements in gender equality and women's development.

5.4 Recommendations

While many countries and regions around the world are promoting the role of women's leadership in their organizations and listed firms, Vietnamese businesses also need to be aware of the benefits of the female leaders for board diversity. More research about this topic is necessary. Therefore, the authors would like to recommend a number of solutions to promote the number of women on boards and boost firms' performance in the long term.

First, board diversity needs to be implemented in firms to help attract and motivate talented employees. Ahmad et al. (2018) explained that companies need strong female role models to attract talented employees. Moreover, board diversity encourages females to have more opportunities to be nominated in the boardroom with higher positions. On the other hand, a diverse board boosts decision-making quality. Women also need to be proactive in the annual board selection process.

Secondly, the authors recommend that female leaders improve their management skills, including executive expertise and enhance their accounting and finance background. Women on boards need to have knowledge, qualifications, and skills to be effective in their positions, which directly affect a firm's performance. Therefore, training and comprehensive transformation programs may help women who seek to be directors compensate for a lack of experience and ensure gender diversity in all aspects of the business. Whatever leadership experience a woman can obtain will be useful, especially if the leadership experience includes profit and loss responsibility (Pollak, 2000).

Thirdly, regarding geographical area, women who wish to be present in the boardroom need to develop strong networks and alliances in the North (Hanoi) and the South of Vietnam (Ho Chi Minh City) that will support their promotion as directors. Women may need to rely on strong ties with significant strategic allies. The connection with allies

should include overlapping interests with friendship, trust, and mutual commitment. In a recent study of women directors of public companies, Sheridan (2001) reaffirmed the importance of networks for facilitating board appointments.

6 Conclusion

This study aims to elucidate the characteristics of women sitting on boards and holding important positions in Vietnamese listed companies. Based on the Vietnamese business context, the study uses a combination of primary and secondary data to demonstrate that companies in Viet Nam have experienced an increased awareness in women leadership over time.

From five sources, including annual reports of 753 listed companies during a three-year period from 2015 to 2017, the research portrays the featured characteristics of women on boards that were in alignment with ten main findings. The results show that the number of women sitting on boards in Vietnamese listed firms was still limited; however, the highest number of women sitting on boards was recorded in the supervisory board and is projected to experience an upward trend in the future, while the trend of female leaders in positions of Board of Directors and Board of Management is limited. Moreover, women on boards are concentrated mostly in the North and the South of Vietnam, where two the largest stock exchange markets (HNX and HOSE) are located, whereas central Vietnam had fewer female leaders, possibly due to the lower level of economic development.

In conclusion, this study can be used as a reference for further studies on women in leadership in Vietnam in particular and in emerging countries in the future in general.

The current study has a number of limitations, suggesting directions for future research. First, as mentioned in research gaps, the research selected the population of 753 companies listed on Ho Chi Minh City Stock Exchange (HOSE) and Hanoi Stock Exchange (HNX); however,

it did not cover all the small and medium enterprises and other Vietnamese unlisted firms. The dataset is not representative enough of the entire population of the Vietnamese business establishment types.

Moreover, this study only endeavored to discover and describe the trend of women sitting on boards through main factors: board titles (women holding positions on the board), trends of female leaders holding “top power” positions, human capital (age, specialized background, geographical area related to birthplace and registered locations of the listed firms). Other elements of the descriptive report are not discussed in this study.

It is hoped that future research will continue to explore boundaries of the relationship between board diversity and firm outcomes such as social performance. Most importantly, the authors hope that this study spurs research that helps to establish both what is unique about the cognitive frames (e.g., education, experience) women and men bring to boards and how female representation on boards contributes to improving board decision-making processes and, ultimately, firms’ performance.

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10

Managing Culture for Management Innovation

Loi Anh Nguyen and Anh Lan Thi Hoang

1 Introduction

Innovation has long been considered as a way to create or maintain a competitive edge for organizations (Amit & Schoemaker, 1993; Prahalad & Hamel, 1990). Among many different types of innovation, management innovation (MI) is viewed as innovation that has pushed organizations to overcome their performance threshold for the last century (Hamel, 2006; Khosravi, Newton, & Rezvani, 2019). MI refers to a

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management tool, process, or idea(s) that is new to the adopting organization. It is an important topic in organization development, a subfield of HRD, which relates to organizational planned change efforts.

Organizations all around the world have been trying to implement management innovation but the rate of failure is high. Some reported a failure rate of 70% and even higher, up to 90% in some industries (Fisher, 2014; Gómez & Carnero, 2011). Vietnamese organizations are no exception. They have learned and implemented new management practices from their partners in more developed countries. Many popular management practices in developed economies have been implemented in Vietnam such as Management by Objectives (MBO), Performance Management, 360-degree feedback, Balanced Scorecard (BSC), metric-driven cultures, corporate governance practices, etc. However, the implementation faces daunting challenges stemming from a lack of tangible and intangible resources, wavering leadership commitment, a lack of external motivation, etc. Among these challenges, cultural differences have been most blamed for the lengthy implementation of new management practices in Vietnam. In this chapter, we will briefly describe MI and discuss the implementation of management innovation in Vietnam and its emerging practices, followed by a discussion of implications for practices of HRD in Vietnam.

2 Management Innovation

There are two types of management innovation (MI): generative and adoptive, differentiated on the level of novelty. While generative MI is new to the world, the adoptive MI is new to the adopting organization. Examples of the generative management innovation include the first implementation of quality circles in Japan; the holacracy management experienced at Zappos recently; the ranking performance management system at GE in the 1990s, etc. These generative MIs became adoptive MIs when being implemented elsewhere such as quality circles in other Asian countries in 1970s, the ranking performance system adopted in other organizations in twentieth century. Adoptive MI can be seen as a diffused version of a generative MI. It is more prevalent as almost all

organizations are, at a particular time, considering or implementing some MIs (Lin, Chen, & Su, 2017).

2.1 How Is Management Innovation Different from Other Types of Innovation?

Innovation is defined as the adoption of an idea or behavior that is new to the adopting organization (Damanpour, Szabat, & Evan, 1989). There are many types of innovation such as product innovation, process innovation, radical innovation, incremental innovation, transformational innovation, etc. These typologies of innovation were mostly formed based on two categorizations: content-based and change-based.

On the basis of content, innovation is often divided into product innovation, process innovation, paradigm innovation, and position innovation, which forms a model of 4P's of innovation (Bessant & Tidd, 2007). Product innovation is change in products and services offered by an organization. Process innovation consists of changes in the way in which an organization creates or delivers its products or services (Poole & Van De Ven, 2004). Position innovation represents changes in the context in which the products or services are introduced, and paradigm innovation is changes in the underlying mental models which frame what the organization does (Bessant & Tidd, 2007). MI creates changes in organizational management which may alter both organizational operations and mental models. MI, thereby, resemble not only process innovation but also paradigm innovation.

On the basis of change, innovation is divided into incremental innovation, modular innovation, and radical innovation corresponding to the level of change which it may create. Incremental innovation corresponds to small changes, modular innovations corresponding to middle-range changes, and radical innovation corresponding to radical, structural, transformational changes in organizations. MI tends to create transformational changes but may also create middle-range ones as illustrated in various case studies in management innovation (Ding, 2017; Yi, Berry, & Chen, 2018).

The concept of MI does not fit neatly into the pre-determined categories. The term was possibly coined in Golightly (1967), a description of an innovation in airline industry. However, the piece had not provided any definition on MI (Golightly, 1967) until the 1980s' studies in which MI was considered as one of the two dimensions of administrative innovation (Smith & Taebel, 1985). Smith and Taebel (1985) defined MI as procedures and methods of an administrative innovation. Kimberly (1981) coined a closely MI-related term, managerial innovation which captures new organizational structures, management practices, procedures, and techniques that create values for the organization. In recent years, the concept of MI has revived with the study by Birkinshaw and Mol (2006) which emphasized the importance of MI to organizational sustainable development and exemplified MI as a distinctive type of innovation.

MI is distinguished from other types of innovation in many ways. Birkinshaw, Hamel, and Mol (2008) pointed out several distinctive characteristics of MI such as tacit in nature and almost impossible to be protected by patent (Tece, 1980); pervasive, complex, and adaptive; and top-down (Birkinshaw et al., 2008). It is associated with various types of changes though it tends to produce radical change in organization. Prior studies also found that MI tends to bring about fundamental changes in the management aspect of organization, resulting in changes in management mindset and organizational culture (Damanpour & Aravind, 2012; Hsieh, 2011; Walker, Damanpour, & Devece, 2011).

2.2 Antecedents of MI: The Critical Role of Organizational Culture

MI has been considered the most important innovation that organization should focus on (Birkinshaw & Mol, 2006). It is closely associated with technical innovation and organizational outcomes (Khosravi et al., 2019; Li, Zhao, Zhang, Cao, & Chen, 2018; Lin, 2018; Lin et al. 2017; Nieves, 2016; Rasmussen & Hall, 2016). Given the potential implications of MI on organizational success, many studies have explored the factors affecting MI. These studies were often based on the theory of

innovation diffusion, the theory of firm behaviors, institutional theory, theories in organizational learning, and cultural perspectives (Birkinshaw et al., 2008), producing insights on various factors of successful implementation of MI.

Many external factors have been found such as local government policy (Fabić, Zekić, & Samarija, 2016), market structure (Heracleous & Barrett, 2001; Vitari & David, 2017), external knowledge supply (Ma, Hou, Yin, Xin, & Pan, 2018), and national culture (Strang & Kim, 2005). Besides external factors, internal factors are also found to be significantly associated with MI, including organizational structure (Vitari & David, 2017), leadership (Alas & Tuulik, 2004; Vaccaro, Jansen, Van Den Bosch, & Volberda, 2012), human resources practices, organizational size (Černe, Jaklič, & Škerlavaj 2013; Mamman & Bakuwa, 2012), and organizational culture (Basile & Faraci, 2015; Büschgens, Bausch, & Balkin, 2013).

Among internal factors, leadership and organizational culture appear to be the most important factors of MI (Büschgens et al., 2013; Lin et al., 2017; Nguyen Huu, Yunshi, Ping-Fu, & Sheng-Hung, 2014; Rauth, Carlgren, & Elmquist, 2014; Slinták, 2015). The impact of leadership on MI has been found to be mediated by other internal factors such as organizational size. Transactional leadership tends to perform better in MI at smaller organization, while transformation leadership performs better in large organization (Vaccaro et al. 2012). Organizational culture also plays an integral role in moderating the relationship between MI and leadership (Chang, 2016). Chang (2016) found that organizational empowerment cultural values strengthen the relationship between leadership and MI.

Research on the implications of organizational culture on MI has shown the make-or-break role of organizational culture on innovation implementation. Yet, we have not found a conclusive answer on either the characteristics of organizational culture that promote MI, or ways to manage organizational culture for improving MI. Besides, some studies suggested that organizational culture, given its nature of stability, inherently collides with transformational change induced by MI (Lin et al., 2017; Naqshbandi, Kaur, & Ma, 2014; Skogland & Hansen, 2017). The effects of organizational culture on MI also depend on the stage of

implementation of an MI. MI is a complex process with different mechanisms involved in each of its sub-processes or stages (Van De Ven, Polley, Garud, & Venkataraman, 1999). Sub-processes of MI might include generation of ideas or invention or reinvention, adoption, development and implementation (Garud, Tuertscher, & Van De Ven, 2013; Knight, 1967; Mol & Birkinshaw, 2009; Nguyen, 2018). Because these sub-processes are different in nature, the effects of organizational culture on each sub-process, hence, might be different (Büschgens et al., 2013). The relationship between organizational culture and MI, while recognized as crucial, remains a puzzle waiting to be solved with further investigations.

3 Management Innovation in Vietnam

Vietnam is a transition economy which has been transformed from a centrally planned economy into a market economy with relatively young business communities. Except for state-owned enterprises and their equitized companies that were formed more than fifty years ago, other members of business communities in Vietnam such as foreign-invested enterprises and private organizations were mostly established after *Đổi Mới* in 1986. There were some exceptions of family businesses that had branded images and historical roots dating to the early twentieth century. But even for these families, their stories were interrupted for decades during Vietnam's centrally planned economy.

3.1 Implementation of Management Innovation in Vietnam: An Overview

The Vietnamese business community was blossomed in the 1990s with the creations of many private organizations after the ratification of Vietnam's first Enterprise Law. Many first generation private organizations in Vietnam have become large and sustained business organizations such as Vingroup, FPT, Trung Nguyen, etc. Currently, the private sector contributes 42% of the GDP and accounts for 83.3% Vietnam's workforce (Gso, 2019). For over 30 years of development, the young

business communities in Vietnam have been eager to learn and apply various management tools and innovations from their partners in more developed economies.

At the beginning of *Đổi Mới* in 1986, most business organizations in Vietnam struggled with new policies. The legal framework for business activities was not created until the 1999 Enterprise Law. In the early 1990s along with Vietnam's integration into ASEAN, common economic concepts started to emerge and to be embraced in Vietnam such as market, customer, independent accounting, and advertising. One of the first MIs in this period was the adoption of the daily market price news circulated by the State Committee on Pricing. The newsletters were considered essential for every businessperson at the time (Nguyen, 2008). Another example of change was business leaders' way of working and managing. Regular functions in businesses became formalized. Factories, cooperatives, manufacturing units changed names to companies, corporations, and groups. Marketing units were formed. Since Vietnam joined Association of Southeast Asian Nations (ASEAN) in 1997 and World Trade Organization (WTO) in 2007, its organizations have tried to learn and apply so-called modern management practices such as best practices in marketing management (Rowley & Truong, 2009), ISO standards (Ratnasingam & Ioras, 2014), vision and mission statement, organizational culture, strategic human resource management practices, total quality management, and balanced scorecards, etc. The surge of new concepts related to the market economy and the birth of the private sector after 1986 changed Vietnam's business communities.

The implementation of MIs in Vietnam was heavily affected by organizational ownership structure (Thang & Quang, 2005; Zhu, Collins, Webber, & Benson, 2008). Vietnam's business organizations were mainly divided into foreign enterprises, state-owned enterprises, enterprises with state ownership of less than 50%, and private organizations. Foreign businesses in Vietnam have traditionally adopted the best practices in their operation and used to be a major source of MIs in Vietnam before 1997. They were often the earliest adopters of MI. For an instance, Unilever was the first organization in Vietnam to have its own assessment center in Vietnam. These foreign businesses were also the first organizations in Vietnam to implement human resources information systems

and strategy management practices (Rowley & Truong, 2009). Being the earliest adopters of MI in Vietnam, these enterprises often possess modern and best-in-class management practices.

The other players in the national economy have been trying to catch up with the foreign-invested enterprises. Many private companies have become the early adopters of MI (Rowley & Truong, 2009), especially in marketing or strategy management. Examples include brand management via franchise at Trung Nguyen, a large private coffee company; organizational culture at FPT with many trademark programs and practices; continuous improvement management in virtually every organization; management by objectives via Key Performance Indexes, and Balanced Scorecard. Private enterprises, however, are often less receptive to adopting new human resource management practices and have yet to integrate strategic human resources into their management practices. The reasons may lie in their lack of resources, the lack of readiness among human resources practitioners, and the hegemonic philosophy of human resource management in Vietnam which prefers “soft management” to “hard management” (Dung & Anh, 2019). Recent studies show the philosophy of human resource management in business communities in Vietnam is far from considering human resource as strategic (Nguyen & Teo, 2018; Zhu et al., 2008). Even in a big and pioneering IT company like FPT which is often praised with its emphasis on developing talents, the department in charge of human resource management changed its name from personnel department to human resource just few years ago. The trend to strategic human resource is moving faster (Nguyen & Teo, 2018).

Meanwhile, the late adopters of MI, state-owned enterprises, have slowly restructured. These organizations are big corporations in key economic sectors such as energy, natural resources, and industrial engineering. All were deeply tangled into the outdated and traditional management models in which all business activities were mandated by the government. The economic crisis in the 1980s, the reform, and the independent accounting rule forced organizational leaders to acquire customers, jobs, and contracts in order to prevent from closures. In our informal interviews with leaders and managers in Vietnam, a retired CEO of state-own companies in Vietnam recalled that in 1990s

for the first time organizational leaders had to secure work outside of government-provided projects. As a result, the urgency to improve productivity was higher than ever. His major focus was to reduce the cost and improve productivity so they could win contracts during bidding efforts. They also had to pay attention to markets brand, and price, which had been alien concepts among managers in the public sector. As a result, they implemented quality management systems such as ISO 9001, enterprise resource planning systems.

The privatization of state-owned enterprises has dramatically changed the face of the public sector. The process transformed some state-owned organizations into public companies with state ownership of less than 49% such as Vinamilk,¹ a successful case of the transformation. The privatization brought corporate governance into management practices in Vietnam. Management practices at these public companies become more transparent and data-driven. Even 100% state-owned enterprises like EVN or Viettel are also moving toward “modern” management practices² with their implementation of balanced scorecards, market-based compensation, and linking pay to performance.

After more than 30 years of development in a market-oriented economy, business organizations have adopted many best practices in management. Our informal interviews with managers working in the IT and banking industries also revealed that companies in Vietnam started to build their business intelligence about ten years ago. The most updated technologies such as Artificial Intelligence, Block Chain, Cloud Services, etc., are increasingly utilized in their day-to-day operations. Vietnamese firms are better managed than their peers in countries with similar income levels. In the following we will describe some emerging MI implemented in Vietnam in recent years.

3.2 Emerging Management Innovation in Vietnam

Vietnam’s organizations have caught up with trends in management tools with implementation of learning organization, digital transformation,

¹Vinamilk is currently the biggest dairy company in Vietnam.

²“Modern” management practices refer to ones with a theoretical or analytical foundation.

management by objectives with key performance indexes, balanced scorecards, objectives and key results (OKR), and human management capital with employee engagement and competency modeling, to name a few. In addition, they are also focusing on developing organizational culture and exploring new ways to design organizational structure. In the following, we describe the implementation of some noticeable trends in Vietnam: learning organization, digital transformation, and organizational culture.

3.2.1 Learning Organization

Learning organization was coined by Peter M. Senge in his well-known pamphlet *The Fifth Discipline* and quickly attracted attention in the knowledge-based economy. Learning organization refers to an organization that is good at organizational learning (Tsang, 1997). For Senge (2014), it is “groups of people who, over time, enhance their capacity to create what they truly desire to create” (p. 18). A learning organization is based on five disciplines: personal mastery, mental models, shared vision, team learning, and systems thinking. These disciplines comprise of lifelong programs of study and practice. The personal mastery and mental models focus on individual learning to continuously learn, grow, and reflect. The shared vision emphasizes on building a sense of commitment in a group. Team learning refers to transforming conversational and collective thinking skills to develop the team. The fifth discipline, the systems thinking, is the way that shapes the behavior of systems to help change systems more effectively (Senge, 2014).

In Vietnam, learning organization was probably first adopted by FPT corporation, a pioneer company in IT in Vietnam, and quickly diffused to other organizations such as Vingroup, Viettel. Learning organization in Vietnam has been supported by the government agenda of lifelong learning, as well as the education virtue of Confucianism. Besides, Vietnamese organizations have a long tradition of training employees. All large corporations, including state-owned and private ones, have established training institutions specializing in training their employees (Nguyen, Dao, & Nguyen, 2017). It is one of the rare MIs which is viewed favorably in Vietnam and has not faced cultural barriers during its

implementation. However, similar to other organizations in other more developed countries, Vietnam's organizations have not successfully built the fifth discipline.

Vingroup Corporation³ is an example of attempting to build a learning organization mainly via achieving personal mastery and a shared vision. One of the most successful strategies used by Vingroup to build its personal mastery is through recruitment of outstanding candidates who could be ideal models for all other employees. The company used poaching tactics to create a high quality workforce, meeting the demands of its dynamic businesses. Vingroup has also upheld its shared vision of investing in human capital and employee learning. In addition to off-line training courses for all levels of employees, Vingroup has cooperated with professional companies in training and learning to design specific courses for high-level managers. It also promote individualized learning programs by setting up an online training website⁴ in which employees can choose specialized modules for their own learning.

However, the learning organization that Vingroup claimed to pursue remains in an embryonic form of an ideal learning organization. Employees have yet to feel free to express, learn, or give and receive feedback. The practice of mental models for learning organization which helps to unearth deeply ingrained assumptions is rare. The disciplines of team learning, and system thinking have not yet been embraced by Vingroup. Among many possible reasons, the company's rapid expansion, its organizational culture, as well as lack of leadership competencies may contribute to the lack of full-fledged learning organization practices at Vingroup. Its rapid expansion in many different businesses have not favored reflection for generating insights into one's assumptions. The high-pressure and competitive working climate also hinders trust and sharing among employees, thus affecting team learning. Vingroup is notorious for pushing employees to follow challenging performance targets with associated punishment measures, if the targets are not

³Vingroup Joint Stock Company (Vingroup JSC), formerly known as Technocom, was founded in Ukraine in 1993 by an ambitious group of Vietnamese youths. Website: <http://www.vingroup.net/>.

⁴<https://lms.vingroup.net/>.

met. In addition, Vingroup leaders, while being seen as successful businessmen, appear to run the workplace with the goal of controlling rather than developing employees.

FPT Corporation is probably a more successful case of implementing learning organization in Vietnam. The company is committed to self-managed learning and an environment for learning. At FPT, employees are expected to learn regardless of experience and position. Learning activities are provided regularly such as training sessions, leadership talks, and seminars. These programs not only focus on personal mastery but also facilitate team learning via team building activities, mentoring programs, and in-depth discussions incorporated into the programs. The company is also known for its culture of respecting differences. Employees feel that they are listened and often express their opinion quite often and freely. FPT also reassesses its mental models through virtual community of practices on Facebook at work with various discussions on the company's strategy and culture. It is rare in Vietnam to have such a large corporation in which employees can give and receive feedback in an instant, including critical feedback. The discussion in these groups has yielded many fruitful assessments of FPT strategy, its way of creating and managing innovation, and its business models. The lack of leadership involvement in these discussions, however, appears to hinder the substantive practices of learning organization at the company yet building a learning culture is seen as one of FPT's highest priorities.

The more advanced implementation of learning organization at FPT may be due to its culture of learning and appreciation for boldness and creativity. Different from Vingroup, where efforts on building its culture have been recently initiated, organizational culture at FPT has long been centered on its management philosophies. In its internal history brief, organizational heroes were those who possessed bold ideas, learned quickly, and took initiative (Nguyen, 2018). These values encourage employees to be open-minded, to learn, and to embrace change. Organizational values have also been considered as one of the most important factors for implementing adoptive MI. The congruence between its organizational core values and learning organization has made it much easier for FPT to create a learning organization.

3.2.2 Digital Transformation

Digital transformation has recently reemerged as one of the most important management trends (De La Boutetiere, Montagner, & Reich, 2018). In Southeast Asia, 84% of the region's economic leaders believe that organizations need to digitalize its practices in order to grow, especially incorporating cloud-based technologies and services in its management practices. Digital transformation consists of four dimensions, including the use of technology, a change in value creation, a structural change, and financial aspects (Matt, Hess, & Benlian, 2015).

Vietnam is regarded as the fastest growing digital economy in the region. Its government remains steadfast in its business agenda, urging businesses to reform and propose their innovation and competitiveness.⁵ Vietnam has also transformed from one of the poorest countries in the world to a lower middle-income nation with a sharp improvement in GDP per capita, basic services, and education.⁶

Digital transformation has been implemented in both the public and private sectors. Government agencies are implementing e-government and smart city initiatives to improve public services. Mobile wallet and digital banking are increasingly used in the banking industry. Artificial intelligence and big data are being implemented to create business intelligence for Vietnam's large corporations. In the agriculture sector, Vietnam's once traditional industry, PAN group is using technological manufacturing chain to provide a wholesome service for customers. Even state-owned companies, the often late adopters of innovation, are catching up with the digital transformation trend. Vietnam Electricity Corporation (EVN), and Vietnam Post Corporation (VNPost), two of the biggest state-owned enterprises, have cooperated with Landis+Gyr, Siemens, Fujitsu, and others to build and transfer their entire systems in Vietnam to the cloud, providing real-time delivery and customer feedback. Petrovietnam has implemented a smart methodology transformation, creating proven economic value for the company (Ngo et al., 2018).

⁵<https://www.pwc.com/vn/en/media/media-articles/180102-vbf-grant-dennis-en.pdf>.

⁶<https://www.worldbank.org/en/country/vietnam/overview>.

Companies in Vietnam have also digitalized their own internal management systems. A consultant working for IBM in Vietnam told us that cloud-based applications are growing in Vietnam, transforming not only enterprises' products and services but also their own management practices. Giving real-time feedback to employees is becoming more popular. Corporations like FPT are utilizing social media and cloud-based tools to transform their continuous improvement efforts, performance management practices, and marketing management. FPT has implemented the iKhien program in which organizational members propose initiatives for improvements and get immediate responses from other members and respective managers.

Cloud-based human resources information systems have been applied in organizations, including small and medium enterprises. Many previously refrained from digitalization due to lack of resources, but now consider it as critical to effectively manage their businesses. Training support chatbots are also used in several organizations to provide quick support for employees. The way and nature of working in Vietnam also seem to be changing with more people working remotely and having several professional jobs at the same time (Akbari & Hopkins, 2019).

As mentioned, the digital transformation is viewed favorably among business leaders in Vietnam but the implementation has faced many challenges such as the lack of a skilled workforce with understanding of these cloud-based, artificial intelligence, or block chain technologies and tools, as well as the lack of resources devoted to upgrading management systems. Moreover, cultural factors, though receiving more attention recently in Vietnam, are often neglected in the implementation (Vu, 2017). Many change consultants working in Vietnam have expressed that Vietnam's organizations' reluctance to embrace risk-taking values associated with digital transformation is the main barriers for successful transformation (Aasi & Rusu, 2017). Changing organizational culture to be more risk tolerant is challenging to many organizations, especially in Vietnam where an appreciation of risk-taking behaviors is not common (Vuong & Tran, 2009). Meanwhile, the digital transformation may alter organizational practices with new ways of working and interacting with each other and with customers. It could not be done without a cultural change. Organizations, thus, need to take into account

the cultural factors when implementing these innovations. They need to have a strategic plan for managing digital transformation, especially managing its culture when many tangible artifacts are changing.

3.2.3 Organizational Culture

Among the many management ideas and practices being implemented in Vietnam, organizational culture is also embraced by most business leaders. Although organizational culture proposed by its prominent guru, Edgar Schein in 1990s, is not a new concept, it became a buzz word only several years ago in Vietnam mostly thanks to the large number of management consultants working in Vietnam. In addition, there are some successful organizations in Vietnam that have learned and developed strong organizational culture such as FPT, Viettel, Vietinbank, Vinamilk, etc. (Duong & Swierczek, 2019). The successes from these organizations with strong cultures encourage the wave of building organizational culture in Vietnam. In addition, the Vietnamese government advocated for developing business cultures among Vietnam's business communities in 2015, helping to divert businesses' attention to building its soft power. Almost all businesspeople in Vietnam recognize the importance of building organizational culture as essential for the sustainable development of any organization (Nguyen & Dao, 2015).

The soft power was built through embracing the metaphorical image of organization as an "extended family" for employees. It is not difficult to find the elements of extended family and its associated values of solidarity in leaders' presentation at annual gatherings in Vietnam. Vietnam's organizations have recently concentrated on forming concrete manifestations of organizational culture such as values and artifacts via organizational goals, vision, business philosophies, slogan, and behaviors in communication. Details about organizational values can be easily found on the company websites. The organizational goals in Vietnam are remarkably linked to the nation. For instance, the mission of Electricity Vietnam, a state-owned company, is to "meet the needs of Vietnam's socio-economic development."⁷ Similarly, the mission of Vingroup, a

⁷EVN's website: <https://evn.com.vn/>.

private group, is “to create a better life for the Vietnamese people.”⁸ The espoused values of Vietnam’s organization were also congruent with Vietnamese traditional cultural values such as the emphasis on “fostering harmony” at Vingroup, and “solidarity and teamwork” at FPT.

Tangible artifacts were paid attention to transcend organizational values. The offices of Vietinbank, a commercial bank in Vietnam, are always decorated with the major colors in its logos and structured in a way that minimizes the walking distance of customers, embodying its values of “customer first.” Having a company yearbook is a common practice in sustaining organizational culture. The yearbooks from a state-owned company such as Songda Corporation to private enterprises such as FPT Corporation, all depict the organizational histories from the lens and memoirs of its own employees. It serves to sustain organizational history, to get new employees acquainted with organizational culture. A manager at Songda Corporation said to us: “Every time he was faced with a tough decision, he recalled stories and the development of the corporation described in the book ‘Âm vang Sông Đà’ (The Sound of Song Da), to make decisions that align with the organizational spirit and collective interests of his team.”

Teambuilding events in organizations in Vietnam have been implemented on a significantly different scale than those in many other countries. Events include not only workshops, monthly meetings, and annual meetings but also annual festivals, sport tournaments, and company anniversaries. Not only are the teambuilding activities more diverse, they are often organized in more relaxed settings than those in western countries. Employee family members are mostly welcomed. This practice is possibly due to the traditionally blurred boundary between work and family in Vietnam. Many people work at the same organization for their entire career. The close relationship with colleagues outside of work is common. Besides, the inclusion of employees’ family members is a visible manifestation of the slogan of organization as an extended family for its employees.

Organizations in the country, however, have focused on building their cultures without a considerable emphasis on assessing their cultures for

⁸Vingroup’s website: <https://vingroup.net/vi/gioi-thieu/tam-nhin-su-menh-va-gia-tri-cot-loi>.

strategic alignment. Even at a company that is widely perceived as the most successful case in building organizational culture, as far as we concern, there was no effort on evaluating its culture or use it as a strategic force. It might be due to the insufficient focus of strategy in Vietnamese organizations. Managers in Vietnam tend to pay attention to short-term gains to the detriment of long-term development (World Bank/WB & Ministry of Planning and Investment/MPI of Vietnam, 2016).

The brief discussion of emerging MIs in Vietnam yields a bright picture of management practices in the country. First, Vietnam's organizations are closing the innovation gaps with their counterparts in developed countries. MIs implemented in Vietnam are among the best practices in management trends (Rigby & Bilodeau, 2017). The management practices in Vietnam were found more sophisticated than its regional counter parts (World Bank & MPI, 2016). Second, although there are some differences in the adoption paces of MIs among organizations depending on their ownership structure, all organizations seem to be aware of MI's importance and have attempted to catch up with the best practices. Third, while the adoptive MI is popular in Vietnam, the generative MI has also emerged with creative applications and unique ways to manage people and organizations. Companies in Vietnam have devised different business philosophies which signify its unique cultures. However, the pace of implementing MI in Vietnam remains slow.

3.3 Challenges of Implementing Management Innovation in Vietnam

The implementation of MI often takes much longer time than other types of innovation. In Vietnam, it is even much slower compared to other countries. For example, the adoption of an ISO standard at a foreign company takes roughly five months, while it took more than one year for a Vietnamese company with 30 employees (Ratnasingam & Ioras, 2014). The implementation of MIs has encountered mounting barriers mainly stemming from organizational leadership, lack of both

human and non-human resources, and the incompatible organizational cultures.

In terms of leadership, several studies pointed out that the lack of leadership support and commitment to MI was the main reason for the unusually lengthy implementation of a MI; [Phuong Anh & Alan, 2015](#)). In our interviews with several management consultants in Vietnam, they also expressed that most organizational leaders continue to see these MIs as fashions rather than innovative and sustainable management tools. This negative perception inflamed discursive tensions during the implementation of MI ([Nguyen, 2018](#)).

The lack of resources is often cited as an important barrier that organizations have to overcome in order to implement MI. In Vietnam, most organizations invest resources in market development and improving short-term performance rather than paying attention to MI or long-term performance ([Ratnasingam & Ioras, 2014](#); [World Bank & MPI, 2016](#)). In addition to financial resources, the lack of competent human resources has made the implementation of MI, creating many technical problems and conflicts. Incompetent people in top management positions are also among major reasons for failure to implement MI. Managers in Vietnamese enterprises are strong on controlling but weak on setting long-term targets, introducing new technologies, and reforming human resource practices ([Phuong Anh & Alan, 2015](#); [World Bank & MPI, 2016](#)). These competencies are critical for aligning MIs with organizational strategy and sustaining them ([Appelbaum et al., 2017](#); [Burke, 2017](#)). [Nguyen \(2018\)](#) also showed that in the context of Vietnam, heightened tension in MI implementation was due to a lack of trust in the competence of project management team ([Nguyen, 2018](#)). The middle managers often do not believe in the potential positive impacts of MI either, which creates a lack of buy-in and obstacles for implementation. For many managers, MI resembles a change rather an innovation that brings positive organizational outcomes ([Nguyen, 2018](#); [Nguyen & Teo, 2018](#)).

The major challenge for MI in Vietnam is also the result of differences between organizational values and the underlying values brought about

by MI. As mentioned, MI tends to create radical change, transforming management philosophies and minds. Most MI pushes for a data-driven way of managing, while intuition and experience remain foundations for decision-making in Vietnamese organizations. Management philosophy in Vietnam continues to emphasize monitoring while many MIs are built upon the assumptions of employee empowerment and inclusion such as learning organizations, management by objectives, and strategic human resource management. The differences in management philosophies and the underlying values of MI make it harder to implement and sustain management innovation. Even at a company whose culture is considered as change-embracing as FPT, the implementation of a balanced scorecard took more than three years without noticeable results. The incompatibility between the data-driven approach of BSC and the lack of data-driven mindsets in FPT explain the lengthy implementation (Nguyen, 2018).

In addition, Dang (2020) also pointed out that organizations in Vietnam had yet focused on building their culture, thus making it harder to mobilize support for any change implementation, including MI. All the cases that we have cited have some noticeable organizational culture (Nguyen Huu et al., 2014) that gives them an advantage in creating stronger momentum for change. With the recent resurgence of cultural building efforts, the implementation of MI is likely to be more successful.

In summary, over the past decades organizations in Vietnam have learned and applied many MIs, contributing to changes in management practices in Vietnam. However, the pace of implementation remains slow with many obstacles. Nevertheless, MI continues to become a higher priority on the agenda of Vietnamese businesspeople. More attention must be paid to developing leadership and managerial competencies for business leaders in tandem with introducing best practices in management.

4 Implications and Conclusion

Our overview of MI Vietnam yields several potential implications for both further research and practical applications.

4.1 Implications for Research

Like many other topics in HRD, there are not many studies on MI in Vietnam, suggesting a fertile ground for research on the topic. Furthermore, the review of MI in Vietnam suggests a lack of diverse perspectives in MI studies in Vietnam. Most have been drawn from positivistic business management literature while post-positivistic paradigms may be beneficial to help us understand the indigenous MIs in the country. An organization development perspective or organizational learning perspective would also be beneficial (Birkinshaw et al., 2008; Poole & Van De Ven, 2004). There is also a lack of studies using action research, a prominent approach to organization development, in MI. The utilization of action research and a more interpretivist approach might give us more insights into the implementation of MI in Vietnam.

Many collected anecdotes indicate other topics worth exploring, such as the impacts of MI on organizational performance in Vietnam, the perspectives of managers towards MI, the dynamics of organizational culture and MI, and the role of leadership during MI. While the impact of MI on organizational performance has been explored in many other countries, the MIs implemented in Vietnam with its slow implementation might not yield the similar results. Managers in Vietnam are likely to hold a skeptical view toward MI. The uniqueness of MIs in Vietnam is also an interesting topic to investigate. The insights may help to deepen our understanding of MI in Vietnam, its effectiveness, and how to implement it more successfully.

4.2 Implications for Practice

In terms of practice, our review suggests several lessons that organizational leaders and practitioners in Vietnam might find helpful. *First,*

MI is an important concept for organizational leaders to embrace. It is one type of innovation that has helped organizations overcome their performance threshold in the last century (Hamel, 2006). There are many emerging MIs in Vietnam. An implementation of new management tools and practices might be framed as MI, which is often viewed more favorably than a change.

Second, the implementation of MI often requires a stronger and more sustainable leadership commitment than those of other types of innovation because it requires the managers and leaders themselves to change. Organizational leaders and managers, therefore, have to be not only change advocates but also change agents, undergoing their own transformations.

Third, to implement MI successfully, organizations also need to manage the transformation from the management ideas to fully incorporated organizational practices. The process is itself a cultural transformation. Hence, communication tools and cultural activities are essential to promote the transformation. Managing cultural artifacts is critical for a successful implementation of MI, especially when there are some incompatible values between values inherited in many MIs and those in Vietnam's organization cultures.

Fourth, the importance of MI in Vietnam calls for more specialization in change management and organization development in organizational practices. Subject matter experts specialized in organizational change and development could be a valuable asset to organizations not only in implementing MI but also in managing other changes in this era of volatile, uncertain, complex, and ambiguous (VUCA) environment.

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11

Importance of Human Resources in Building Sustainable Enterprises: Cases of Small and Medium Enterprises in Vietnam

Thang Quyet Nguyen and Hien Tan Thu Nguyen

1 Introduction

Small and medium enterprises (SMEs) in Vietnam are playing important roles in the national economy in terms of contributing to the GDP, creating jobs, and contributing to social stability (The Voice of Vietnam, 2017). During the globalization process, Vietnamese SMEs are facing challenges in order to maintain and develop their human resources so that they can survive and develop in an increasing competitive environment.

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In recent years, despite a rapid growth as well as support from the Vietnamese government, the majority of Vietnamese SMEs still have many weaknesses such as small scales, poor management, and obsolete technology. In particular, a low quality workforce in terms of knowledge, working skills, and labor productivity has negatively affected sustainable development of enterprises (Vietnam Chamber of Commerce and Industry [VCCI], 2018). Therefore, considering the importance of human resources in building SMEs sustainability is critical in order to develop policies and solutions for sustainable development of this type of enterprise.

According to the Vietnam Chamber of Commerce and Industry (VCCI, 2018), Vietnam's small and medium enterprises now account for 98% of the total number of operating enterprises nationwide, of which the number of medium enterprises is only 2%, small businesses are 29.6%, and the remaining 68.2% are micro-enterprises.

The pivotal role of SMEs in the national economic development and job creation has been acknowledged. In particular, SMEs increase income for laborers and help to mobilize other social resources for development investment and poverty alleviation. Annually, SMEs employ nearly 50% of the labor force, offer over one million new jobs, and contribute more than 40% to the national GDP (Vietnam Chamber of Commerce and Industry, 2018).

The important role of SMEs development in the economy has been acknowledged because they contribute to 40% of the GDP and 30% of the state budget and create a great number of jobs (The Voice of Vietnam, 2017). Many supporting government policies have been created to promote the development of these businesses. In the context of Vietnam's integration with the world's economies, SMEs in Vietnam are facing great difficulties and challenges. With a small scale, obsolete technology, lack of advanced management procedures, incomplete institutional arrangements for SMEs, especially the limited capacity of human resources in these enterprises, and low labor productivity (VCCI, 2018), the efficiency of the enterprise has been reduced which, in turn affects their competitive capacity and the sustainable development. At present, the number of SMEs in Vietnam is increasing rapidly. (The average growth rate of SMEs for the period 2012–2017 increased 8.8%

per year.) However, besides the number of newly established enterprises, the number of enterprises leaving the market is also very high. In particular, there were 138,140 new SMEs and 89,282 SMEs withdrawing the market in 2019 (Business Registration Management Agency, 2020).

The crucial role of human resources in fostering sustainable enterprises has been acknowledged (Garavan & McGuire, 2010; Royce, 2007; Wirtenberg, Harmon, Russell, & Fairfield, 2007). However, research on this issue in the context of Vietnamese small and medium enterprises (SMEs) remains scant. The reality shows that the quality of human resources in Vietnamese SMEs is still unsubstantial to meet the development demands of businesses (Vietnam Report, 2017). Thus, enhancing human resources to build sustainable SMEs in Vietnam is crucial.

This chapter has three main objectives: firstly, to review dimensions regarding the importance of HR in building sustainable SMEs in Vietnam; secondly, to discuss factors that influence the development of HR in building sustainable SMEs in Vietnam; and finally, to propose implications for the development of this resource in building sustainable SMEs in Vietnam.

2 Background

2.1 Definitions of Sustainable Development and Sustainable Enterprises

“Sustainable Development,” as a term and concept, entered the mainstream global agenda after a report published by the World Commission on Environment and Development in 1987 (Lele, 1991). Sustainable development is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland Commission, 1987; UNGA, 1987, p 43). In essence, the Brundtland Report calls for a coordinated approach of all nations to achieve a balance between the development and conservation of global resources. This concept is acknowledged and supported by many organizations, companies, and governments worldwide whereby this concept has been widely accepted as balancing social, environmental,

and economic factors for short- and long-term performance (Leiserowitz, Kates, & Parris, 2005; McCollum et al., 2018).

From a business perspective, sustainability has been defined as “the ability of the company to achieve business goals and increase long-term shareholder value by integrating economic, environmental and social opportunities” (World Business Council for Sustainable Development, 2005). In order to achieve organizational sustainability, organizations need to consider the alignment of their processes, policies, organizational goals, with strategies to tackle environmental issues (Elkington, 1999).

The perception of sustainability in business has been consolidated over the past two decades. In a world where resources are limited, ecosystems are degraded and climate change is now related to human activity, organizations need to go beyond their traditional role (making profit) to achieve sustainable development (ILO, 2007). Thus, corporate social responsibility (CSR) has been encouraged as an approach for organizations to achieve sustainable development (Nguyen, Long, & Nguyen, 2018). As a result, multiplicity of enterprises have embedded CSR programs since they have acknowledged that sustainable development is an essential component of their corporate strategy (Kiron, Kruschwitz, Haanaes, & von Streng Velken, 2012; Xia, Olanipekun, Chen, Xie, & Liu, 2018). In other words, to achieve business sustainability, organizations need to pay attention to operational efficiency in all three aspects of the triple bottom line including economy, society, and environment based on the theory “Triple Bottom Line” (Elkington, 1999). This is commonly referred to as “profits, people and planet” or “3Ps” approach (Abdulrazak & Ahmad, 2014).

In conclusion, there are many definitions of sustainability, as a strategy, a goal, or a concept. The sustainable development of an enterprise can be understood as the ability to create the long-term value of an enterprise by seizing opportunities and maintaining economic development in relation to the protection of the environment, business ethics, and social balance.

2.2 Importance of Human Resources in Building Sustainable Enterprises

In an organization, human resources refer to the efforts, skills, or abilities of all employees working within that organization (Manmohan, 2013). The human resources of an organization are all individuals, with their abilities, who have different roles and are linked to each other by certain objectives of the organization (Nguyen, 2016) whereby productivity is affected by the quality of human resources (Guthrie, 2001; Singh, Burgess, & Heap, 2016). According to Manmohan (2013), employees will do their jobs well for the benefit of the organization as well as their own interests if they are managed effectively. To achieve the goals of the organization, each employee must be involved in delivering solutions and dedicating themselves achieving them. This approach highlights the “quality” element of the “human resources” assessment. The term “human resource management” (HRM) is often used in businesses to refer to the management of people who work for organizations (Boxall & Purcell, 2008; Kramar, 2014; Schuler & Jackson, 2005).

A number of studies have revealed the importance of human resources in sustainable development of the whole company by translating corporate values, visions, and missions into HR policies and practices (Garavan & McGuire, 2010; Royce, 2007; Wirtenberg et al., 2007). Few studies demonstrate that human resources directly affect the business performance in terms of these financial outcomes (Macky & Boxall, 2008; Richard & Johnson, 2001). In the market economy and in the context of intensive competition, to survive and develop, enterprises must grasp and meet the psychological and other needs of consumers for products. Products must be of high quality with low price and attractive models (Dung, 2015; Nguyen, 2015). To do this, enterprises must possess a skilled workforce to keep pace with advanced technology and apply that to the production process to increase productivity and reduce costs.

Human resources also play an important role in the competitive capacity of any organization (Wendling, 2010). Workers who are highly skilled, reliable, and qualified are more likely recruited by organizations (Hensvik & Skans, 2016; Inzelt, 2008). They need to possess knowledge of new technologies and are able to use them properly especially

in the field of information technology, and be adaptable to the rapid change of the organizations (Thornhill, 2006). The connection between creating and using knowledge and the effective management of human resources needs to be tested, which makes training play an important role in creating the breadth and depth of the organization's knowledge (Narasimha, 2000).

Additionally, human resources are important social capitals to help organizations accomplish competitive advantages. Human Resource Management (HRM) can reinforce product management strategies in practice by stimulating employees to generate values for products and services (Almada & Borges, 2018), which enables organizations to create a greener environment and achieve sustainable competitive advantages (Chen, 2008; Chiou, Chan, Lettice, & Chung, 2011). This is because these processes support sustainable change strategies by changing the attitude of employees toward sustainability with a creation of perspectives on environmental sustainability (Almada & Borges, 2018; Dumont, Shen, & Deng, 2017). Furthermore, sustainable competitive advantages can be achieved by stimulating and fostering a collective sense of social performance within employees of the organizations (Hart & Dowell, 2011; Jušćius & Snieška, 2008).

Human resources also contribute to build a sustainable enterprise by generating the conditions for dialogue so that all employees within the organization understand and agree on the meaning of sustainable development and on what capacity they aim to work toward sustainable development for the whole organization (Colbert & Kurucz, 2007; Rimanoczy & Pearson, 2010). This will contribute to the building of organizational culture. According to Parkes and Borland (2012), important organizational aspects including leadership skills, values, corporate culture, change adaptation, communication, and organizational development are the focus of human resource management.

3 Importance of Human Resources in Building Sustainable Small and Medium Enterprises (SMEs) in Vietnam

3.1 Small and Medium Enterprises (SMEs) in Vietnam

Small and medium enterprises (SMEs) are classified based on the size of their workforce or capital. In Vietnam, micro-enterprises, small and medium enterprises are categorized in terms of capital, labor or turnover (Vietnam Government, 2009). SMEs are defined in accordance with Circular No. 16/2013/TT-BTC of the Ministry of Finance of Vietnam in 2013 and Decree 56/2009/ND-CP of the Government in 2009. These regulations include details about the criteria for micro, small, and medium enterprises in Vietnam as shown in Table 1.

According to the Economic Census of the General Statistics Office of Vietnam (2019), the structure of capital and labor of SMEs in Vietnam is as shown in Table 2.

In practice, SMEs are able to handle local jobs, exploit local resources, contribute significantly to balance the development of labor allocation, especially idle labor, and move forms of industrial production to various residential areas (Ministry of Industry and Trade, 2016).

Table 1 Criteria for small and medium enterprises in Vietnam

Area	Micro enterprises	Small enterprises		Medium enterprises	
	Number of employees (people)	Capital (billion VND)	Number of employees (people)	Capital (billion VND)	Number of employees (people)
A	<10	<20	10–200	20–100	200–300
B	<10	<20	10–200	20–100	200–300
C	<10	<20	10–50	10–50	50–100

Note A: Agriculture, forestry, and fisheries; B: Industry and construction; C: Trade and services

1 USD = 22,000 VND

Source Decree 56/2009/ND-CP of the Government dated 30/06/2009

Table 2 Number and percentage of enterprises by 2018 by labor size and capital amount

Item	Small and medium enterprises			
	As per labor size		As per capital amount	
	Number (people)	Rate (%)	Number (billion VND)	Rate (%)
1. Agriculture, forestry, and fisheries	93,4640	11.2	249,992	
2. Industry and construction	4,723,270	56.6	4,697,220	35.7
3. Services	2,687,090	32.2	8,210,268	62.4
Total	8,345,000		13,157,480	100

Source GSO (2019)

According to many experts, it has been challenging for SMEs in Vietnam, to invest efficiently in upgrading, renovating machinery, or acquiring modern equipment due to the small capital amount. In addition, SMEs have dealt with many difficulties in finding and penetrating markets, as well as distributing and selling products because of market information constraint and poor marketing strategies (VCCI, 2016).

Understanding that small and medium enterprises play an important role in building and developing Vietnam's economy, especially in the context of globalization (Ministry of Industry and Trade, 2016), the Government of Vietnam has made great efforts to promote the development of SMEs in Vietnam. It has issued a number of policies to create a fair and friendly business environment, encourage investment, ensure law enforcement, facilitate businesses to access loans, and support human resource development. In particular, the Vietnam National Assembly has approved the Law on Support for SMEs, which has been valid since January 1, 2018. This is expected to provide incentives for small and medium enterprises to grow rapidly in the coming years. Accordingly, Vietnamese SMEs would be supported by the government in terms of business information, tax and accounting, technologies, accessing credits, market expansion, and human resource development.

3.2 Importance of Human Resources in Building Sustainable Small and Medium Enterprises (SMEs) in Vietnam

3.2.1 Enhancing Business Performance and Competitive Advantage

According to a report by the General Statistics Office in 2015, Vietnam's current labor productivity is \$3660, just 4.4% of Singapore; 17.4% of Malaysia; 35.2% of Thailand; 48.5% of the Philippines, and 48.8% of Indonesia, mainly due to the weak skills of employees (Thao, 2017). Most businesses have to train new employees. Some businesses are not afraid to spend large sums on recruiting talented people who have skills and abilities to work (Cuc, 2016; Vietnam Report, 2017). It is because businesses are aware of improving the quality of human resources to improve the business efficiency and competitiveness of enterprises. A survey of the top 500 enterprises, including many good SMEs in Vietnam Report (2018) showed that nearly 70% of enterprises paid attention to human resources with good results.

The companies have good staff who are professional, communicative, receptive, dynamic, sensitive, and approachable to work. This means that the efficiency and productivity of the work will be higher; thereby increasing sales and profits, and enhancing the reputation of the business. In this case, if enterprises have the qualified human resources, the cost for training will be low (Nguyen, 2016). Therefore, the development of human resources in SMEs in Vietnam not only gives the enterprise a competitive advantage but also is one of the key factors for success or failure of the business.

Case Study 1: Human Resources, Business Performance, and Competitive Advantage

Areca Riverside Hotel was established in early 2015 with 14 employees and a capacity of 40 rooms. The hotel is managed by Nguyen Hoang Quoc Viet, a young director who graduated with a degree in finance from RMIT (Australia).

Compared to the average room capacity of small and medium-sized hotels in the ASEAN region with 40%–60% in 2017 (Danang Department of Tourism, 2018), Areca Riverside Hotel has been considered an effective hotel with the average room capacity of over 65% in 2017. Total revenue in 2017 reached VND3.3 billion.

The booming tourism and accommodation sector in Danang has recently created significant human resource challenges for small and medium-sized tourism enterprises including a major shortage of workers and the fluctuation of skilled workers due to the movement of the workforce between tourism enterprises (Danang Department of Tourism, 2017). However, according to our research (2018), most of staff at Areca Riverside Hotel are very loyal. 11/14 interviewees (staff) asserted that they were extremely satisfied with the organization (78.6%). 3/14 employees were moderately satisfied (22.4%). In terms of training programs, 12/14 employees rated the organization “good,” while 2/14 employees gave it a “moderate” rating.

According to our survey, Areca Riverside Hotel has focused on improving service quality by improving human resources quality. The hotel has recruited employees who have been trained at tourism colleges in Danang City. It regularly encourages staff to join the training courses organized by the Vietnam Tourism Association and Danang Department of Tourism. 12/14 employees have attended these training courses. The hotel also organizes short training courses for its staff. In addition, skills mentoring and experience sharing by old staff for new staff have become standard practice.

The slogan “Professionalism-Conscientiousness-Thoroughness” has been used to remind the hotel’s staff daily of their responsibilities. Our survey of 98 guests from December 2018 to January 2019 revealed an extraordinary result of customer satisfaction. Most of the guests gave high rating for staff professionalism and excellent service. This helps to enhance the business performance and competitive advantage of the hotel.

3.2.2 Promoting the Development of Services and Products

One of the factors that SMEs in Vietnam now face is the improvement and development of products in order to create competitive advantages and promote sustainable development (VCCI, 2018). A qualified workforce can help to improve the work process, as well as reduce faulty products and designs (Aryee, Walumbwa, Seidu, & Otaye, 2016).

Most Vietnamese companies, especially SMEs, are facing a serious shortage of practical counseling skills and human resources that can help improve business performance and improve labor productivity (Le, 2018). Therefore, in addition to recruiting, the training to enhance human resources is producing positive outcomes for SMEs in Vietnam. The following is a good example of improving quality and productivity through improving HR with the support of the WISE (Workplace Improvement and Satisfaction of Employees) project.

Case Study 2: Improving productivity through WISE project

Quang Quan Ltd. Company, one of the first plastic box manufacturing companies in Vietnam, was established in 1997. The aim of the company in joining the WISE project was to improve the working environment in order to enhance employee satisfaction and productivity.

The WISE project focuses on training and developing consultants to increase organizational productivity through improving activities. People who join the project include leaders and managers in charge of productivity and human resources improvement. The project has organized many training courses on production planning, 5S, Kaizen, and work safety through real case studies and teamwork.

The feedback shows that the training courses from the project have brought significant results, including cleaner and more orderly an end-product storages (5S) and easier working flow to help the employees have more break time.

According to Mr. Nguyen Van Tuan, the CEO of Binh Minh Limited Company, after joining the WISE project, the quality of the company's staff improved significantly, which led to an increase of 10% in both the company's total revenue and productivity (Le, 2018).

WISE (Workplace Improvement and Satisfaction of Employees) is a collaboration project between the Japanese Center of Productivity and the Vietnamese Center of Productivity with funding from the Japanese International Collaboration Department. This project aims at building a background for sustainable SMEs through improving working environment and employee satisfaction. The project was conducted from June 2016 to February 2018.

3.2.3 Enhancing the Application of Advanced Technology

Applying new technology to SMEs in Vietnam is very important in improving the competitiveness of enterprises (Vietnam Report, 2017). However, to do this SMEs in Vietnam are required to have qualified, knowledgeable, and well-trained human resources to be able to learn the technology and incorporate it into the production process. According to the General Statistics Office (2014) for processing and manufacturing enterprises, only 11% of enterprises have developed new types of technology. The reason is primarily because of weak human resources and a lack of investment in research and development (General Statistics Office, 2014). All businesses are aware of the essential role of HR with the advanced application of science and technology. A survey of 56 managers from 12 rubber and plastics companies in the year 2015 showed that the demand for training of technicians focused on the operation of new machinery, mold design, and packaging for plastic industry (Nguyen, 2016). Therefore, HR development in SMEs plays an important role in enhancing the application of new technologies and techniques.

3.2.4 Enhancing Corporate Social Responsibility (CSR)

It has been acknowledged that CSR in the current context is a kind of guarantee asset, a commitment to product quality for consumers (Vietnam Report, 2018). A research by Nguyen et al. (2018) has shown

that CRS affects the competitive capacity of tourism enterprises, mainly SMEs in Ben Tre Province. The study also indicates that CRS implementation is also important because of the perception of business leaders, employees, and stakeholders (Nguyen et al., 2018). CSR should not consist of only promotional and charitable activities, but must also be driven by a sense of environmental protection, worker safety, and compliance with the law. In order to implement CRS well, the role of HR in the enterprise is very important, because they not only realize their benefits when implementing CSR, but also recognize the benefits of enterprises' prestige, concern for the environment and society and legal compliance. Thus, improving the quality of human resources will contribute to improved CSR activities.

Case Study 3: Enhancing technology and Corporate Social Responsibility

Sieu Nhat Thanh (SNT) Limited Company was established in March 2008, trading electronic and communication products and services. The company's commitment to its customer is satisfying all needs and technological requirements from customers to help customers improve working effectiveness. Currently, the company has a network in more than 30 cities and provinces. Total revenue in 2018 was VND89 billion (approximately USD4 million). Annual growth rate during the period 2014–2018 reached 13.2%. It has a total of 39 employees.

There are a number of factors that contribute to the company's success. However, according to Tran Thanh Linh, CEO, the key factor is human resources quality. Mr. Linh asserted that company's staff are moderately young; however, they are very qualified, professional, dynamic, and committed to the development of the company. Many technology ideas and solutions have been developed by employees such as energy saving or advertising solutions.

In addition to business success, SNT has been acknowledged for its CSR activities to help poor people and protect the environment. The most popular CSR activity is blood donation. Since 2009, the company has organized this activity twice a year. Results from interviews with company's employees on CSR disclosure demonstrate that CSR activities attempt from employee's high awareness of their responsibility toward society.

We are all highly aware of our responsibility to help the society. CSR activities are not only helpful for the society, but are also a driver for an increasing solidarity and loyalty among employees. (Employee)

3.2.5 Building Organizational Culture

Human resources are crucial in building enterprise culture. A study by Vu Xuan Nam (2016) showed the influence of HR on the construction of enterprise culture by the culture of an enterprise created by the workers themselves. In contrast, enterprise culture also directly influences the management of knowledge sharing, promoting the learning of organization (Nam, 2016, 2018). At the same time, enterprise culture also has a great impact on attracting and maintaining high-quality human resources for enterprises. It also helps employees obey the law, as well as ensure fairness and social responsibility.

Case Study 4: Organizational Culture and Sustainable SMEs

Established in October 2006, Viet Trung International Limited Company is an SME trading carbon black, RPO, stabilizer, synthetic rubber, tyre, and tube.

In the current competitive climate, a great number of companies have had to leave the market (Ho Chi Minh Department of Industry and Trade, 2017). However, Viet Trung Company still survives and develops. Currently, the company has more than 70 sizable trading partners. Total revenue in 2017 reached VND43 billion (approximately \$2 million), and the growth rate during the period 2007–2017 was 16% per annum. According to Bui Duy Thinh, CEO, the success of the company is the result of the cooperation, esprit de corps, and effort of all the employees. Staff's enthusiasm and thoughtfulness have created customer loyalty. When the company received special orders, staff are always willing to work overtime. Mr. Nguyen Hoang Hai (Hai Viet Rubber Company) stated: "What impresses me about Viet Trung International Company is that the company always fulfil our orders whenever we request. This is impossible for our previous partners. Viet Trung Company staff are extremely enthusiastic with customers. They have shown a culture of professionalism."

To achieve this, Mr. Think has built a corporate culture that can be a driver for the company's growth. The motto "Cooperation and Growth" not only focuses on partners and customers, but also focuses on staff. He regularly reminds employees about codes of behavior among staff and between staff and customers. The company has paid considerable attention to the social welfare of its employees. Additionally, team-building trips and tours have been organized regularly. These activities have increased employee loyalty. Our survey revealed that 12/12 employees want to work for the company for the long term. They asserted that they considered the development of the company as their responsibility.

4 Conclusion

4.1 Implications for Practice

SMEs need to be aware of the important role of HR in the development of enterprises. In addition to contributing to the improvement of HR quality, SMEs in Vietnam must build and develop HR toward some value such as building organizational culture, recognizing the benefits of CRS for society, and protecting the working environment. Therefore, the development of new HR helps to improve the prestige of enterprises and enhance their competitive advantage.

When operating in a context with resource constraints such as capital, facilities and other conditions for training and development of human resources, SMEs need to be proactive, to advantage of support from the state and other stakeholders in a combination with considering the internal resources to improve the quality of human resources.

4.2 Recommendations for Policy Makers

Firstly, the Government of Vietnam should step up its support for SMEs in HR training, especially the training of managers and technical staff in enterprises. It is necessary to adopt policies to encourage

non-governmental organizations and social organizations to support enterprises in this matter.

Secondly, the Government should set policies and encourage linkages between SMEs and training institutions. In addition, the Government should direct the state management agencies to develop a network of human resource for SMEs.

Thirdly, the Government should have policies to support the training of enterprises in SMEs such as training programs, inviting the trainers, and specialists for the business.

Finally, the government and state management agencies should develop stronger policies to promote the implementation of CRS for SMEs, such as binding sanctions on environmental protection and improving the benefits for staff. In addition, they should have the support of SMEs in the creation of corporate culture such as organizing classes to guide and share experiences.

4.3 Recommendations for Future Research

The scope of this chapter is small and medium enterprises. However, we did not focus on any specific sector. Thus, future studies should expand to different industries taking into account industry characteristics to discover similarities and differences in the roles of human resources in building up a sustainable enterprise. In addition, comparative studies across firm sizes, or firm ownerships could be a fruitful topic for future research.

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12

Knowledge Management: Perspectives and Implications for HR Practices in Vietnam

Tri Nguyen-Khac

1 Introduction

Continuous economic growth and sociopolitical stability have made Vietnam a new start-up hub in the region (Rowan, 2019) and a hotspot for foreign investment. According to the report from Ministry of Planning and Investment, the Foreign Direct Investment (FDI) in Vietnam in 2019 reached US\$38.2 billion, a 7.2% increase over the same period in 2018.

Although there are remaining challenges such as institutional uncertainty and a legal system that lacks the necessary means to protect innovation (Nguyen, Le, & Bryant, 2013; Nguyen & Rose, 2009), the government is actively addressing these issues with new legislation supporting business and innovation.

Vietnam provides an interesting context of an active economy with many business activities moving toward modern international standards.

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This requires not only transformations of existing business functions, but also the adoption of contemporary management practices such as Knowledge Management (KM) and Human Resource Development (HRD).

In Vietnam, there is growing interest in the research of KM because it has been linked to performance improvement and innovation (e.g., Molnar, Nguyen, Homolka, & Macdonald, 2011; Nguyen, Phan, & Nguyen, 2016; Nguyen, Umemoto, Kohda, & Blake, 2015; Pham & Nguyen, 2017; Tran, 2015). In 2015, the International Organization for Standardization (ISO) implemented new requirements for managing organizations' knowledge in the ISO9001:2015 Quality Management Systems. It aimed to raise awareness of management about the importance of knowledge and how it is linked to business activities. Clearly, demands for KM programs will increase as more Vietnamese firms are trying to reach a global standard. Yet, how to manage knowledge remains a challenging task in practice, given its complex nature.

Many authors believe that KM highlights the role of HR in organizations due to its emphasis on the human role and social interactions (e.g., Gloet, 2006; Thite, 2004; Watkins & Marsick, 1992). KM objectives are closely aligned with the core purposes of Human Resource Development (HRD), which aims to improve individual potential, group, and organizational effectiveness through various HR practices with a strong emphasis on learning, developing knowledge, skills, and competencies through activities such as training, career development, coaching, mentoring, etc. (Hamlin & Stewart, 2011; Harrison & Kessels, 2004).

There is growing interest in the field of HRD because of its important contributions to the HR research landscape in Vietnam, which is largely dominated by HRM studies (e.g., Le, Vu, Duong & Kalargiros, 2018; Nguyen & Bryant, 2004; Thang & Quang, 2005a, b; Vu, Nguyen, Hoang & Nguyen, 2020). This chapter aims to support a greater alignment between KM and HRD because it would be beneficial not only to the adoption of KM, but also the development of HRD, especially in Vietnam. KM perspectives could guide the formulation of HRD practices while HRD practices help organizations achieve KM's objectives, thereby fostering innovation and improving organizational performance.

2 Knowledge Management

The most compelling reason to adopt KM is its positive link to organizational performance and innovation. To that end, multiple KM studies in Vietnam have illustrated such links with empirical evidence (e.g., Nguyen et al. 2016; Pham & Nguyen, 2017). For instance, Nguyen et al.'s (2016) study of 529 Vietnamese firms showed that a KM process such as knowledge creation has a significant impact on product innovation, organizational innovation, and marketing innovation.

In another large-scale empirical study of 103 Vietnamese SMEs, Pham and Nguyen (2017) used qualitative and quantitative methods to examine the links between KM practices and business success. Their results indicate positive correlations between business success and three KM practices that include practices of policy, organizational culture, and knowledge acquisition, but found no correlation with the practice of training. They also revealed differences in how managers understand and practice KM across firm size. They concluded that awareness and understanding of the subject of knowledge and its importance are the most challenging issues of KM in Vietnamese SMEs.

Knowledge is complex in nature as it often invokes philosophical debates (Barley, Treem, & Kuhn, 2017). Implementation of KM warrants a discussion of how knowledge is thought of in the KM literature; how organizational knowledge is conceived; and what are the implications when formulating a KM process and objectives.

2.1 A Brief Historical Development of KM

Since the 1990s, it has been argued that knowledge is the strategic asset of firms and the source of competitive advantage (Winter, 1987). In its early development, the idea of KM was simple: modern information technology could be used to facilitate the acquisition, sharing, storage, retrieval, and utilization of knowledge, thereby realising its strategic value (Easterby-Smith & Lyles, 2011). During the 1990s, disciplines such as computer science and business contributed significantly to the KM literature (Ponzi & Koenig, 2002). In practice, KM was largely driven by

IT departments, IT consultancy companies, and practitioners aiming to capitalize on the potential of this concept (Grint & Case, 1998; Hammer & Champy, 1993). Consequently, KM solutions are usually packages of managerial tools and processes facilitated by information technology and promoted as Knowledge Management Systems (KMS) (Alavi & Denford, 2011; Alavi & Leidner, 2001).

Early KMS and KM programs attracted a fair share of criticism due to their overemphasis on technology. KMS is preoccupied with technologies and IT tools yet ignores the human factor and social dynamics (Easterby-Smith & Lyles, 2011). In a well-known survey report on management tools and techniques, Bain & Company noted that KM “*not only had relatively low utilization but also very low satisfaction scores relative to the average*” (Rigby, 2001, p. 145). Dissatisfaction had led to questions about whether KM is just another management fad (Ponzi & Koenig, 2002; Scarborough, Swan, & Preston, 1999).

Later, after the iconic article of Nonaka (1994), *A Dynamic Theory of Organizational Knowledge Creation* was published in *Organization Science*, KM research has adopted a more sociocentric approach toward KM. Authors proposed various strategies for managing knowledge in order to improve organizational performance and innovation (e.g., Alavi & Leidner, 2001; Boisot, 1998; Brown & Duguid, 1991; Nonaka & Takeuchi, 1995; Teece, 1998). These implications had been empirically tested and received supporting evidence (e.g., Bierly & Chakrabarti, 1996; Choi & Lee, 2002; DeCarolis & Deeds, 1999; Poppo & Zenger, 1998).

Given the high level of interest from both practitioner and academic communities, the concept of Knowledge Management (KM) has developed rapidly into a major field of management (Easterby-Smith & Lyles, 2011). Different schools of thought provide different ways to understand and conceptualize knowledge. Consequently, there are various definitions of knowledge and organizational knowledge, and how to manage them in organizations (Chiva & Alegre, 2005).

2.2 Conceptualizations of Knowledge and Organizational Knowledge

Nonaka, von Krogh and Voepel (2006, p. 1180) emphasize that: “*Epistemology matters!*”. The discourse of knowledge in KM literature largely involves questions regarding the nature of knowledge, e.g., What is knowledge? Can it be made explicit? Where to find it? (Barley et al., 2017). The following discussion provides an overview of four approaches in defining knowledge and their implications for KM, namely, knowledge as possession, as process, as knowing, and learning as acquiring knowledge.

2.2.1 Knowledge as Possession

Scholars of cognitive psychology and computer science traditions follow an information processing approach to defining knowledge. Knowledge is objective and independent of any human being. The world is a given entity and the objective of a cognitive model is to generate the most accurate representation of this world (von Krogh, 1998). As we interact with the real world, we gather data (i.e., facts and figures) and information (i.e., structured data) to build cognitive models that represent reality, thereby acquiring knowledge.

Essentially, knowledge belongs to the continuum of data—information—knowledge—wisdom. For information to become knowledge, a conscious entity (i.e., a human) is required to process information. Therefore, explicit knowledge that is codified can be used interchangeably with information for practical purposes such as storing in- or retrieving from organizations’ knowledge repositories. This approach to KM is termed “cognitive—possession” approach, and organizational knowledge is regarded as something that organizations possess and can be managed, similar to information (Chiva & Alegre, 2005; von Krogh, 1998).

2.2.2 Knowledge as Process

The social constructionists resist the notion of a given reality (von Krogh, 1998). Knowledge is subjective and the reality is socially constructed. By defining knowledge as justified true belief (Nonaka, 1994), they extend the definition of knowledge from mere representations of reality to constructing reality, which is essential to explain how new knowledge comes about (von Krogh, 1998). New knowledge is created when individuals start believing in the truthfulness of their interactions with the real world. They act upon such belief and establish stronger justification for the new knowledge by reflecting feedback from their actions. Knowledge is the capacity to act and actions support knowledge creation (Nonaka & von Krogh, 2009).

In work settings, individuals do not work in isolation. They interact with others while being exposed to common tools and systems. As individuals vary in their viewpoints, belief systems and personal experience, newly created knowledge is uniquely tied to each individual. New knowledge is fragile and its truthfulness status is subjected to scrutiny. Through cognitive and social interactions, ideas and concepts are articulated, shared, and publicly justified by organizational members to become organizational knowledge (Nonaka, 1994).

This conception of knowledge recognizes that some forms of knowledge can be made explicit, yet others cannot. Knowledge has both “explicit” and “tacit” components that can be converted from each other (Nonaka & von Krogh, 2009). Explicit knowledge is knowledge that has been articulated, codified, and captured in writing, books, and paintings, among other cultural products (Nonaka & Takeuchi, 1995). Knowledge in these forms can be widely disseminated and made readily available.

Tacit knowledge is highly personal and difficult to articulate because it is deeply rooted in action and tied to specific context in which the action took place. However, explicit knowledge is not useful on its own, it must be enacted by a human knower to create value (Nonaka & von Krogh, 2009). Tacit knowledge, which arguably offers more value in term of competitive advantages (Brown & Duguid, 2001), is also more difficult to handle, e.g., share, transfer, and might not respond well to formal managerial methods.

2.2.3 Knowledge as Knowing

Advocates of the social school hold a unique view of knowledge (Brown & Duguid, 1991, 2001; Cook & Brown, 1999). They often criticize the overemphasis on cognition in the mainstream research. At the same time, arguing against the link between *cognition* and *action*, as the cognitivists and constructionists often expound (e.g., Crossan, Lane, & White, 1999; Nonaka & Takeuchi, 1995; Vera, Crossan, & Apaydin, 2011). A person's capability to act hinges on his/her know-how (tacit knowledge) regardless of know-what (explicit knowledge) as in the cases of learning to swim or ride a bike (Cook & Brown, 1999).

Explicit and tacit knowledge are two distinct forms of knowledge. This conceptualization rejects the notion of knowledge conversion as the mechanism of knowledge creation. New knowledge does not come from converting tacit to explicit knowledge or vice versa, but from creative actions taken in new contexts (Tsoukas, 2005). New knowledge is created when we use established knowledge as a tool in creative ways when interacting with the social world (Cook & Brown, 1999, p. 388). Tacit knowledge makes transferring explicit knowledge possible. Scholars of the social school assert that sharing *practice* is the key mechanism for creating organizational knowledge (Brown & Duguid, 1991, 2001; Cook & Brown, 1999).

Practice means “*undertaking or engaging fully in a task, job, or profession*” (Brown & Duguid, 2001, p. 203). What we practice is always influenced by the social contexts in which the practice takes place, including formal and informal relationships with colleagues, a firm's policies, or a profession's code (e.g., doctor's code of ethics and conduct) (Cook & Brown, 1999). Thus, by sharing practice individuals share and contribute to a larger a body of knowledge that is collectively held by communities of practice (Brown & Duguid, 2001). This body of knowledge exists independently of any individuals and could be understood as organizational knowledge in organizational settings.

2.2.4 Learning as Acquiring Knowledge

Pragmatists are usually agnostic about the nature of knowledge and adopt a practical view of organizational knowledge in their research. Knowledge can be found in individuals, in social interactions, or embedded in organizational artifacts such as products, routines, structure, etc. (Crossan et al. 1999). Their studies recognize the importance of the human aspect but are not concerned about whether tacit knowledge can be converted into explicit knowledge. What really matters is to realize the strategic benefits of knowledge by utilizing existing knowledge (Grant, 1996). Grant (1996) views firms as knowledge-integrating institutions that exist to create conditions for knowledge integration and application. Managers' primary tasks are to facilitate "*coordination*" conditions under which people can integrate their specialized knowledge.

The behavioral theorists are also pragmatists who seek to optimize the use of knowledge by improving the organization's ability to learn (Easterby-Smith & Lyles, 2011). They place emphasis on the learning process rather than knowledge. Like two sides of the same coin, learning means acquiring new knowledge. The use of knowledge and organizational knowledge is often invoked as a substitute to study *organizational learning* (OL) (e.g., March, 1991; Argote & Miron-Spektor, 2011). Many scholars seem to prefer alternative terms such as *embedded learning*, *new learning* or *what has been learned* when it comes to addressing knowledge (Crossan et al., 1999; Easterby-Smith & Prieto, 2008).

2.3 Implications for Knowledge Management

The purpose of this study necessitates a working definition of KM and its related knowledge processes. Despite voluminous KM studies, there is still no consensus on the definition of KM. OECD's working definition of KM could serve as a starting point: "*KM involves any activity related to the capture, use, and sharing of knowledge by the organisation*" (via Edler, 2003, p. 208). The wording of the OECD definition is sufficiently broad to encompass the essence of KM while avoiding assignment of specific knowledge processes to KM.

This is important because the way in which KM processes are named and proposed reflects the underlying assumptions about the nature of knowledge. Therefore, it is critical to understand the implications of the discussed knowledge perspectives on how knowledge processes are formulated. *Capture*, *use*, and *sharing* can be used as references to formulate knowledge processes that fit this study's purpose.

More specifically, KM associated with object-oriented approach aims to facilitate effective knowledge reuse in order to create more value. It usually involves knowledge processes such as capture, codification, storage, and dissemination. These processes treat knowledge as assets or commodities that are explicit and manageable (Darroch, 2003). Thus, they are designed to extract and codify knowledge from the knower so that knowledge can be stored and retrieved for reuse purposes (Alavi & Leidner, 2001; Hansen, Nohria, & Tierney, 1999).

The object-oriented KM tends to favor the use of technology and information systems to facilitate these processes. For instance, experts can write reports and analyzes that others can use; people's activities are carefully documented. Documents are usually stored, shared, and widely distributed using information systems (Alavi & Leidner, 2001).

KM programs that follow the social constructionist's perspective (e.g., Nonaka and Takeuchi, 1995) are usually oriented toward people and their social interactions (López-Nicolás & Meroño-Cerdán, 2011). They aim to facilitate knowledge sharing (Krogh, 2003), knowledge transfer (Bresman, Birkinshaw, & Nobel, 1999), and ultimately knowledge creation (Nonaka & von Krogh, 2009). Managerial efforts are spent on facilitating networks of people and conditions such as shared context, physical or virtual interactions that enable these knowledge processes in order to create organizational knowledge. These conditions are referred to as "*Ba*," which can be roughly translated as "space" (Nonaka, Toyama, & Konno, 2000).

Social theorists are advocates of a human-oriented approach to KM. They recognize the importance role of tacit knowledge and the shared understanding (Brown & Duguid, 2001). KM strategy focuses on the process of knowledge transfer by the mean of "practice" because people with similar practice are likely to develop similar similarity of conditions. Organizations provide supportive conditions to facilitate a community of

practices (COPs) where practitioners share and apply new practices, and subsequently improve organizational performance.

The importance of shared understanding is also recognized by pragmatists. Given the view that knowledge is a product of learning, pragmatists are interested in examining the dynamic processes of human interactions and factors that could influence the development of shared understanding at various levels of analysis, such as politics and power (Lawrence, Mauws, Dyck, & Kleysen, 2005), communication and coordination (Brown & Duguid, 2001), culture (Cook & Yanow, 2016), organizational structure (Levinthal & March, 1993), leadership (Jansen, Vera, & Crossan, 2009; Vera & Crossan, 2004), etc. Knowledge acquisition, retention, transfer, and utilization are considered subprocesses of OL (Argote & Miron-Spektor, 2011; Grant, 1996).

In general, the KM literature comes to a similar conclusion that it is inadequate to simply equate knowledge with information and separate knowledge from the human knower (Fahey & Prusak, 1998; Nonaka & Takeuchi, 1995; Nonaka & von Krogh, 2009). Organizations could pursue KM by adopting a suitable KM strategy. However, the dimensions of *cognition—action* and *individual—social* must be considered when formulating the KM strategy and its processes.

From the above discussion, this chapter proposes a working definition of KM as follows: *KM involves any activity related to the acquisition, transfer, utilization and creation of knowledge by the organisation.* Knowledge acquisition focuses on bringing external knowledge to the organization. Knowledge transfer aims for sharing tacit knowledge and making relevant knowledge available to individuals, groups, and organizations as soon as possible. Knowledge utilization is about using knowledge in various context to solve real-world problem. Finally, knowledge creation focuses on developing new knowledge.

3 Human Resource Development from Knowledge Management

There has been a growing body of research on the broad nature of the patterns and trends in HR practices in Vietnamese firms (Le, Vu, Nhung, Kalargiros, 2019). While many public-owned organizations remain largely administrative-focused, private firms have adopted a range of contemporary approaches to management HR (Bartram, Stanton, & Thomas, 2009; Cox, 2013), especially SMEs (Le et al., 2019). Studies of SMEs are dominant within the HRM/D community due to their important role in the Vietnamese economy (Pham & Nguyen, 2017; Le et al., 2019). SMEs account for 98% of all enterprises in Vietnam and contribute approximately 40% of the GDP (Pham & Nguyen, 2017).

New studies increasingly suggest a continual shift of HR practice in Vietnamese firms as more firms adopt contemporary measures from the West (Dang, Dung, Phuong, & Vinh, 2018). Although HRM are more popular among HR practitioners, HRD practices could gain momentum as Vietnamese firms increasingly recognize the role of knowledge in fostering innovation and improving organizational performance.

3.1 Human Resource Development

Human resource is an organizational function that utilizes policies, practices, and other programs to manage individual employees, teams or firms' entire workforce (Alagaraja, 2013). While both HRD and HRM recognize the significant role of HR functions, both perspectives offer different approaches to carrying out the HR functions. The HRM philosophy places greater emphasis on assessing the impact of HR practices, policies, and systems on the financial success of the organization (Alagaraja, 2013). In contrast, the HRD research stream reflects a more humanistic, holistic, and systemic approach with a strong emphasis on learning activities to improve individual, group, and organizational effectiveness (Hamlin & Stewart, 2011).

Analyzing the similarities and differences of 24 HRD definitions, Hamlin and Stewart (2011, p. 210) identified four core purposes of

HRD, including (1) improving individual or group effectiveness and performance; (2) improving organizational effectiveness and performance; (3) developing knowledge, skills, and competencies; and (4) enhancing human potential and personal growth. The attention toward knowledge and the human role in organizations surely support an alignment between HRD practices and KM objectives.

It is also in line with the “contingency” view of HRM, which argues that HR practices should be consistent with other aspects of the organization guided by company strategy (Le et al., 2019). From this perspective, HRD can be viewed as the central intersection where strategy, structure, culture, and HRM overlap (Mankin, 2001). HRD provides the means to achieve knowledge objectives set by KM strategy through learning-focused practices. At the same time, HRD practices are influenced by social and organizational culture (Fig. 1).

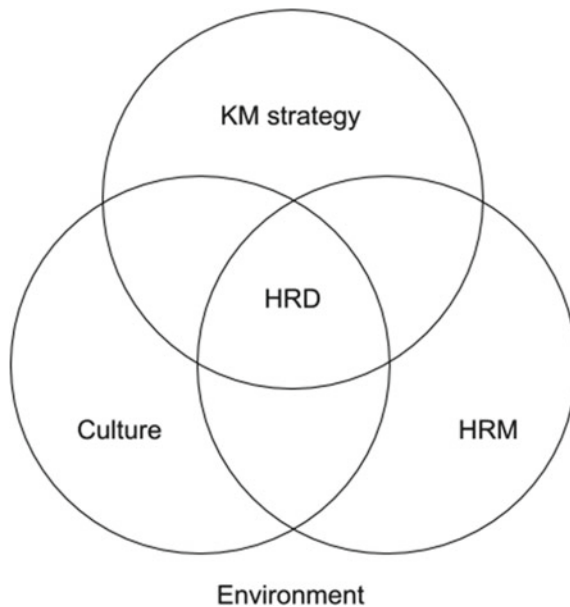


Fig. 1 The HRD model adapted from Mankin (2001) (Source The author of the chapter, adapting from Mankin [2001])

In practice, HRM covers most HR activities while HRD focuses on learning and development-oriented set of practices, e.g., skills training and retraining, mentoring programs, career development, and leadership development training. As the degree of overlap increases with greater alignment between KM strategy and HRM, HRD principles need to expand beyond their learning-focus activities to a wider range of HR practices, including recruitment and selection, performance appraisal, reward, and recognition. Formulation of HRD practices must also take into consideration the effect of culture and other organizational factors.

3.2 KM and HRD Practices

3.2.1 Knowledge Acquisition: Recruitment and Selection, Professional Development Policies

With economic development, the Vietnamese labor market has shown a significant shift toward job mobility. According to the VietnamWorks annual report, job applications in the first half of 2019 increased 20% in comparison to the same period in 2018. This has been a consistent trend since 2014. Most active applicants are experienced candidates or managers. Talented people are more interested in better job opportunities rather than just stability, which is why job mobility is increasing.

On the demand side, most companies stated they lack human resources due to a shortage of applicants. The report highlights the fact that firms face (1) fierce competition in hiring new talent, and (2) the potential of losing experienced employees who are not afraid to change jobs more frequently. New circumstances create the need for an alternative approach to recruiting and managing workforces.

In the most direct sense, knowledge acquisition is about recruiting and selecting staff who can directly contribute new knowledge to the organizations. Traditionally, the HR recruitment and selection process largely operates on the basis of fit by evaluating whether new employees meet the job requirements. However, as job complexity increases, it becomes more

difficult to specify the knowledge and skills to do the job. Even if a position could be described, adequate assessment of new staff is extremely challenging for HR personnel.

From a knowledge-based perspective, an alternative solution could be based on an employee's growth potential instead of best fit or best practice by assessing their ability to learn. The process of recruitment and selection could adopt new criteria to evaluate knowledge-oriented capabilities of candidates such as critical thinking, emotional intelligence, etc. These criteria have been identified as good predictors of employee learnability (Rosenberg, Heimler, & Morote, 2012; Clarke, 2010).

Knowledge acquisition is more than just recruiting and selecting talent; it is also about having policies that enable knowledge to flow in and out of the organizations. For instance, professional development policies support and reward employees as they participate in communities of practice that are beyond organizational boundaries. The boundary spanners are encouraged to develop professional skills and expertise by applying new knowledge to their work. By doing so, organizations can create new channels that let external knowledge flow in, thereby acquiring new knowledge (Wenger & Snyder, 2000).

Simultaneously, HR professionals must be aware of knowledge leaks that could negatively affect an organization's competitive advantage. Channels that let external knowledge in could also leak internal knowledge to the environment. Yet, any attempts to inhibit or regulate the knowledge flow could have unwanted effects on innovation and organizational learning (Brown & Duguid, 2000).

3.2.2 Knowledge Transfer: ICTs and Training

Knowledge that is brought into the organizations or created internally must be transferred, shared, and further disseminated. Each form of knowledge requires different strategies. For explicit knowledge, the important role of Information Communication Technologies (ICTs) systems has been widely recognized. They help organizations overcome geographical and temporal difficulties to capture, store, and distribute information and explicit knowledge. Applications such as online forums,

video conferencing, and knowledge-based expert systems create a cyberspace that makes online interactions possible.

One might argue that the transfer of explicit knowledge is the sole domain of information management. However, Tran (2015) pointed out that the applications of KMS have little impact on the success of KM programs; it is the human factor that plays an important role. Tran's (2015) study of critical success factors of KMS in 92 Vietnamese firms have found four critical success factors of KM, including awareness about the role of KM and its applications, motivation and commitment of employees, learning culture, and stability and effectiveness of KM. Three out of four are human-related factors.

Similarly, Nguyen and Burgess's (2014) study of knowledge transfer via ICTs in Vietnamese SMEs found explicit knowledge being transferred via a combination of both ICTs and non-ICT methods, while tacit knowledge was primarily exchanged via non-ICT methods. This could be due to the fact that the tacit form is difficult to articulate (e.g., rule of thumb, intuition) and thus, transference depends on some level of personal interaction and trust (Conner and Prahalad, 1996; Grant, 1996). HR practices with attention to the nuances of human interactions could potentially produce better results of knowledge transfer, especially in the case of tacit knowledge. Programs such as mentoring, coaching, apprenticeship, and on-the-job training can support tacit knowledge transfer (Nonaka et al., 2006; Brown & Duiguid, 2000). These programs are important to KM because sharing tacit knowledge underlies the ability to circulate explicit knowledge (Brown & Duiguid, 2000).

Among HR practices, investment in training has a significant impact on knowledge creation (Vu et al., 2020). In a longitudinal large-scale study to examine the links between HRM practices and innovation of SMEs in Vietnam (1604 firms across Vietnam in 2011, 2013 and 2015), Vu et al. (2020) found that training, unions, wages, and job rotation promote innovation, including product and process innovation. Practice had the most significant positive impact on innovation. Therefore, it is essential for Vietnamese firms to provide adequate training programs for their employees, which enables employees to acquire different types of knowledge from both internal and external training sources.

3.2.3 Knowledge Utilization: Performance Appraisal, Incentive Compensation and Team Development

To Grant (1996), what really matters is to realize the benefits of knowledge by utilising knowledge. Knowledge utilization is about managing human resources through proper leadership, division of tasks and responsibilities, compensation systems, and performance development (Svetlik & Stavrou-Costea, 2007). HRD tasks are to facilitate conditions under which people can integrate their specialized knowledge.

Applying new knowledge is challenging because exploring new possibilities could have an unwanted impact on performance (March, 1991). The context in which acquired knowledge was created may or may not be compatible with the organizational context. Therefore, knowledge utilization requires a period of learning and experimentation to become fully externalized. This learning period consists of error detection and error correction processes (Argyris, 2004).

Empirical studies show that a psychologically safe and error-tolerant environment arises from the ways in which organizations handle errors (Edmondson, 2002). If organizational members are afraid to make mistakes, they will not share insights and try out new ideas. At the same time, managers need to encourage the behavior of offering constructive criticism. Many cultures, including Vietnam, value face-saving (Quang & Thang, 2004), thus making it difficult for team members to discuss other people's mistakes directly without disrupting harmony. For this reason, facilitation of a supportive learning environment must also be an objective of team development practice.

Given the issues related to applying new knowledge, performance appraisal (PA) systems need to take the element of learning into consideration. PA should be carefully designed to tolerate mistakes during the period of learning and experimentation while ensuring that good performance is appropriately rewarded and recognized for compensation, promotion, and career development. It is particularly important to many Vietnamese SMEs that are adopting HR practices based on high-performance work system (HPWS) (Le et al., 2019).

3.2.4 Knowledge Creation: Culture, Leadership Development

KM programs are not only about performance improvement but also about innovation and knowledge creation. Knowledge creation involves practices that could facilitate a supportive environment, a culture of knowledge sharing in order to promote conversion between tacit and explicit knowledge. People do not share knowledge because they have to, they share it because they want to. Knowledge sharing is voluntary (von Krogh, 2006). People are more likely to share ideas and insights in a supportive learning environment (Garvin, Edmondson, & Gino, 2008). There are four key characteristics of a supportive learning environment: psychological safety, appreciation of differences, openness to new ideas, and time for reflection (Garvin et al., 2008). This construct is widely recognized and often employed to explain a knowledge-sharing culture (Song, Kolb, Hee Lee, & Kyoung Kim, 2012).

Facilitating a supportive environment requires attention to influential factors that could affect the knowledge conversion processes such as culture and leadership. Leaders and managers are the curators of shared meanings. Leaders ensure that individual interpretations are in alignment with those of the organization so that the team can act in unity and produce effective organizational results. Strategic leaders take supportive roles to provide resources and support, while middle managers have the power to justify new knowledge at the group level by supporting or rejecting new ideas (Kanter, 2004).

Individuals usually rely on their direct manager for clarification of meaning and feedback to verify their new ideas and knowledge. Managers are responsible for ensuring that the learning goals and their contexts are accurately interpreted. By promoting meanings, ideas, and actions that are compatible with the organizational goals, managers actively shape the learning experience of their individual members. Similarly, top-level leaders are often responsible for articulating common visions and framing learning contexts within which individual learning occurs (Berson, Nemanich, Waldman, Galvin, & Keller, 2006).

Leadership is one of many critical factors of knowledge creation (Vera & Crossan, 2004). Here the concept of leadership should be viewed from

the followers' perceptions of leaders' actions and the context in which the actions take place (Meindl, 1995). This is because whether the environment can be considered "supportive" depends on the employee's perspective not that of the manager or leader. Gloet (2006) suggests that HRM can support the development of leadership capacities in several ways, including articulating visions, becoming role models to support learning, demonstrating purpose-driven leadership, and leaders' ability to provide strategic leadership.

4 Conclusion

4.1 Contribution and Practical Implication

Through the discussion of the theoretical and philosophical underpinnings of knowledge, how organizational knowledge is perceived, and how the underlying assumptions of knowledge affect the formulation of KM processes, this chapter contributes to the development of KM by proposing a working definition of KM that recognizes the cognition—action and individual—social dimensions of knowledge.

For KM, HRD practices provide the means to carry out the KM processes and to achieve its organizational objectives. In practice, organizations may adopt both human-oriented and technological-driven solutions such as KMS to realize their KM objectives. However, HRD must play the central role in any KM program, given the importance of humans in defining knowledge.

This chapter contributes to the development of HRD in Vietnam by arguing for a greater alignment between KM and HRD, given their understanding of the importance of knowledge and the central role of humans in organizations. Adoption of KM at the strategic level leverages HRD beyond its current focus on learning and development. Knowledge objectives inform HR functions' new purposes, which requires a rethink of HR activities. In this setting, HRD principles need to be applied to a wider range of HR practices in organizations such as recruitment and selection, and professional development policies, team development. In

addition, a greater alignment of KM and HRD supports further adoption and development of HRD principles and practices in organization, thereby advancing research of HRD in the Vietnamese HR research community.

There are also practical implications for Vietnamese SMEs who are willing to adopt advanced systems of HR practices (Le et al., 2019). Implementation of KM and HRD is less likely to add more pressure to SMEs' financial planning as they do not require large investments in technological solutions. This allows SMEs to invest more in the immediate tasks of survival and growth but still have good systems that sustain organizational development and innovation in the long term.

4.2 Recommendation for Future Research

In Vietnam, the social constructionist's view of knowledge (e.g. Nonaka & Takeuchi, 1995) has significantly influenced KM research. Yet, little attention has been paid to other prominent perspectives and the factors that affect the links between KM, innovation, and performance. This is an area worth considering for future research in the context of Vietnam as a developing country with a unique set of characteristics.

Most modern HR theories originated from large-sized firms in developed Western countries with little evidence supporting their effectiveness in other contexts like Vietnam (Dang et al., 2018). HRD focuses not only on improving individual performance through learning activities, but also paying attention to the development of group and organizational effectiveness. Further investigation into the effectiveness of HRD practices toward KM objectives and how factors such as culture affect the HRD and KM linkage could be promising.

Through this chapter, the author hopes to provide some insights from KM and its implications for HRD practices in Vietnam, thereby generating more interest in the study of KM in general and research that strengthens the connections between two fields in particular. The author also believes that the KM perspective is a fruitful direction for future research that aims to examine the role of HRD in organizational development and innovation.

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Part IV

A Vision for the Future



13

“To Reach the Unreachable Star” (*The Man of La Mancha*) by Making Vietnam’s HRD Impossible Dream Possible

Gary N. McLean

Since I was a young boy, facing many challenges (I am legally blind, I was the shortest kid in my class, I came from an upper-lower class family in Canada), I have been an optimist. One of my favorite stories as a child, *The Little Engine that Could* (Piper, 1930, though credit has been given to many other authors) was about the smallest train engine in the yard that was able to take a long train over the mountain when bigger engines could not succeed. It kept saying, “I think I can, I think I can,” turning into, “I knew I could, I knew I could.”

As a high school student, I discovered the poem, *Andrea del Sarto*, by Robert Browning, in which Browning said, “A man’s [person’s] reach should exceed his [her] grasp, or what’s a heaven for?” The point is that one achieves more when higher goals are set than if easy-to-reach goals are set, and then no more effort is put into the task of accomplishment. This point was reinforced for me when I saw *The Man of La Mancha*

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(Leigh & Darion, 1965) on Broadway in New York City in the late 1960s with its message of “dream[ing] the impossible dream.” Even if a dream feels impossible, more is accomplished by dreaming big. More is accomplished through optimism than through pessimism.

While these stories may have led to my becoming a workaholic, they also led to my successes. The message of combined optimism and hard work in each story leading to greater success can also be applied at other levels, including teams, organizations, communities, nations, regions, and, ultimately, all of humanity—all beneficiaries fitting the definition of human resource development (HRD) suggested by McLean and McLean (2001) and reinforced by the examples in this book.

Primitive Vietnamese history started from the Stone Age to the gathering of ethnic groups into an initial state, Van Lang in the Hung King period (see Chapter 1). Vietnam was then under Chinese dynastic rule in 179 BCE (Before the Current Era) until 938 CE (Current Era). Periodically, it had to drive out the Mongols, Chinese, and French who colonized Vietnam from 1858 CE to 1954 CE, interrupted by Japanese occupation during World War II. As the French were driven out, a group of countries, led by the USA, supported South Vietnam against North Vietnam in the second Indochina War. Vietnam was eventually reunited in 1975 with the Democratic Republic of Vietnam being declared in 1976, for a united Vietnam once again.

As shared in this book (see Chapter 3), Vietnam has made significant growth on many economic measures. But, for many reasons, it has not been prepared to capitalize on the many opportunities presented to it as many businesses have moved out of China (Lee, 2020) (and other countries) to search for other locations in which to position their businesses. Vietnam’s problems have included an inadequate public education system (at all levels in some places) (see Part II), insufficient levels of skilled employees, insufficient opportunities for workforce development, government policies that create challenges and opportunities for new businesses, inadequate technology support, and many other issues. In this chapter, I bring together suggested solutions, as well as adding my own HRD perspectives, of what might help Vietnam to realize its economic dream.



Fig. 1 Vietnamese flag

Consider the Vietnamese flag and its symbolic meaning in Vietnam's economic revolution in preparation for becoming a modern industrial country (see Fig. 1).

How does the symbolism of the Vietnamese flag fit the challenge confronting Vietnam today and into the future? First, there is uncertainty, though suggestions have been made, about the origin of the current version of the Vietnamese flag. It went through a number of modifications, though slight, just as the country itself has gone through numerous changes, many of them significant (National flag, 2012; Roth, 2018). The symbolism reflected in the design of the flag was described by Roth (2018):

The red background is a symbol of bloodshed, struggle and the success of revolution. The golden star represents the people. Each point, symbolizing one of five specific classes—businessmen [sic.], farmers, workers, intellectuals and military. (para. 6) (Grammatical errors were in the original)

The flag, then, is a symbol of what the country must go through as it seeks to become economically sound; it will require the commitment of all people in system-wide changes to the nation, but, as described below, it will require thinking about "intellectuals" as including students, and "businessmen" as referring to all business people, including, especially,

women. And, while it will not require the sacrifices of physical revolution, it will require a revolution of the way of thinking and doing education, business, agriculture, and government.

The chapter authors in this book have done an excellent job of providing an overview of the status of many important components of NHRD in Vietnam, and all include implications for practice and recommendations for future research. This is a great resource for both practitioners and researchers, who can explore any component of HRD of interest to them. As a result, it is not my intent in this chapter to summarize what has been previously presented in this book. Rather, I will offer my insights on many of the components, either because I have a different perspective from the authors or because it is an idea that I think will enhance the component being discussed.

1 Recommendations for Government Consideration

Among the many interventions needed for change that would help move Vietnam toward its dream of economic improvement is the development of NHRD. The following specific recommendations could fit under the category of NHRD interventions.

1.1 Define HRD for Vietnam

As is clear from the content of this book, there is no common, consistent definition of HRD. In fact, several authors have included performance management, recruitment, selection, and other functions typically found in HRM rather than HRD. Does that mean that Vietnam does not have an HRD function that is separate from HRM, or are they the same, included in one field? Getting a well-accepted definition will be critical as Vietnam establishes HRD policies and creates academic programs across universities.

To create such a common, standard definition will require considerable research to determine, across practice and academia, what approach to a

definition will work best in HRD. Without such a definition, there will be confusion in funding, accreditation of academic programs, continued confusion in responsibilities across government agencies and funding, and creating collaboration across many fields in academia and across many functions in organizations. Defining HRD, from the perspectives of both status quo and aspiration, should be a top priority for university researchers, for organizational practitioners, and for government policymakers. Such efforts have been made by the authors of Chapter 2.

1.2 Expand the National Council for Education and HRD

Vietnam's National Council for Education and HRD (the Council) was established in 2016. The Council, consisting of 28 members and six working groups, are in charge of (1) assisting the Prime Minister direct, review, and evaluate innovation in education and HRD. The Council directs the completion and implementation of the Law on Education, Law on Vocational Training, National Qualification Framework, Human Resource Development Strategy 2011–2020, and HRD Master Plan 2011–2020; (2) researching, consulting, and assisting the PM in directing, administering, and deciding important policies and measures to develop education, training, and vocational training, and HRD (Quy'ết địn [Decision Number] 337/QĐ-TTg, 2017). In the context of NHRD, as defined in Chapter 2 of this book, this is a very narrow mission. Chapter 2 includes a proposal for a definition of Vietnam's NHRD pertaining to the current development stage of Vietnam, reflected in the Socio-Economic Development Strategy 2011–2020 and Human Resource Development Strategy 2011–2020 (Van & Phuong, 2021):

Vietnam's human resource development for the 2011–2020 period is a strategy at the national level (Vietnam's NHRD 2011–2020) to develop human resources, on the basis of meeting the HR needs of different sectors and localities in an appropriate manner. Vietnam's NHRD focuses on improving employment-oriented competencies and

developing and managing the workforce, especially high-quality and talented people, through higher education and vocational training. Vietnam's NHRD 2011–2020 contributes strategically to realizing Vietnam's overall goal of a modern industrial country. (pp. 51–52)

One of the problems that occurs in many countries, perhaps even in Vietnam, is that NHRD, in whatever form, when it is extended to be comprehensive, in line with its definition, is that there may be little cooperation across ministries. Therefore, there can be conflict of priorities across the various ministries. Having a separate Ministry of Education and NHRD, as was done initially in South Korea (Cho & McLean, 2017), has the potential of the use of power or influence that may create jealousies among the ministries. The potential lack of trust can defeat the purpose of collaboration reflected in NHRD, as was the case, again, in South Korea (Roh, Ryu, & McLean, 2020). (South Korea is the country on which the greatest number of research studies have been carried out on NHRD). Thus, the success of a separate Council of Education and HRD is not certain unless there is a high level of commitment to doing collaborative work, which might be the case in a collectivist culture such as found in Vietnam (a very low score on individualism of 20) (Country Comparison, 2020; Hofstede, 2011; Hofstede, Hofstede, & Minlov, 2010). The Council, as it becomes more comprehensive, moving toward being NHRD, can be made up of representatives from each ministry. It can be formed for the necessary decision making in moving NHRD forward.

The primary tasks of the expanded Council would be to make decisions related to reviewing existing policies and creating new policies to ensure that there is no overlap and greater efficiencies in running the country. This is a broad responsibility that would include actions necessary to create an environment in which NHRD can be managed collaboratively and for the economic well-being of the country.

1.3 Implement Changes

I am too far outside of the system to make recommendations for implementation. At a simplistic level, here are some of the steps that I would

make to move forward. First, I would replace the Prime Minister as leader of the Council, thus reducing the potential conflict of interest between the roles of the Council and the Prime Minister. Second, I would create a rotating chair so no one ministry would have power. Third, I would create an independent third-party evaluation team to assess whether the Committee is achieving its goals and identifying the gaps between goals and achievement. Fourth, I would conduct annual quantitative and qualitative studies to determine how well the Committee is meeting the needs of each ministry through its NHRD practices. Fifth, I would have public participation to review what the Council is doing and, through a focus group, to provide the Council with feedback.

1.4 Plan for the Future

As with many countries, Vietnam uses a five-year plan process, but also uses yearly, 6-month, and even 1-month plans depending on administrative level. The problem with such plans is that no one can see even one year into the future, let alone five years. A good plan will require resiliency, with weekly or even daily updates to respond quickly to unpredictable events. Consider, for example, how quickly the world changed with the onset of the Covid-19 virus. With the onset of Covid-19, Vietnamese government agencies and localities met daily online. The social networks and government online portals are always active these days.

But such resiliency needs to go beyond Covid-19. The environment changes, technology changes, competition from other countries changes, trade agreements that were unimagined when the plans were created come into place, and, as we have discovered, the health situation can change quickly and dramatically. If the only thing that the country can fall back on is the five-year plans that are no longer relevant, then the country is in danger. The first thing that the National Council for Education and HRD must do is modify the five-year or one-year plans in all aspects of NHRD into *flexible* plans. As is currently happening as the government pursues an e-government approach is to publish all plans online. Except for emergencies, the Council should then meet *weekly* to

review the plans and modify them based on what has newly happened in the past week.

Perhaps more effectively the Council should adopt *scenario* planning. Vietnam has a low score (30) on uncertainty avoidance (Country Comparison, 2020; Hofstede, 2011; Hofstede, Hofstede, & Minlov, 2010). As a society, they are comfortable with uncertainty about the future. This has made it possible to live in a country that has a centralized government while having a market economy. Such a society is likely to match the demands of newly emerging environments; scenario planning fits into this need nicely (Chermack, 2011; McLean & Egan, 2008). Everyone involved needs to understand that the purpose of scenario planning is not to set plans for various future scenarios, but, rather, to help senior managers/policymakers understand the importance of quickly making new plans to fit new environments as they occur. This does not mean the end of five-year plans. Rather, it means a different way of administering and working with the five-year plans.

1.5 Support Innovation

It is clear that every country will come out of the current economic challenge from the Covid-19 virus with the desire to create or return to an upward trajectory in economics. They will do this more quickly and efficiently through innovation, both in products or services and processes. Whether focusing on STEM (Science, Technology, Engineering, and Mathematics) occupations or occupations in manufacturing, service, agriculture, forestry, fishing, tourism, business and technical support, or any other occupation, the country will benefit from innovation. While it is impossible to predict the future and the occupations that will be most in demand, I share the conviction of many authors that such growth will require skills in robotics and artificial intelligence (Lombardi, 2017), and the world of work, subsequently, will change dramatically.

Vietnam's society reflects ambiguity. As with most of Asia, Vietnam has a high score on power distance (70) with a low score on uncertainty avoidance (30) (Country Comparison, 2020; Hofstede, 2011; Hofstede, Hofstede, & Minlov, 2010). As a result, they experience inequality in

the workplace, while being comfortable with a lack of specific direction. The issue that this ambiguity causes for Vietnam's employees is that they may feel that they must listen to and follow their supervisors, while, at the same time, feeling freedom from not having specific rules and making decisions on their own. Innovation requires autonomy on the job. Employees must feel free to speak up about improvements or innovations that they think will improve their performance (Hung, Lien, Fang, & McLean, 2010). A supervisor who is frequently looking over the employees' shoulders should not expect to have an innovative workforce.

The challenge, of course, is making a significant change in the culture of a nation to allow innovation in the workplace, according to Hofstede's cultural assessment. What needs to be done to encourage rather than inhibit innovation? Certainly, coaching and training can be used to encourage changes in supervisory behavior. Performance management, with immediate feedback from those being supervised, can be useful—assuming that employees can become comfortable in the high power-distance culture to provide such feedback to their supervisors.

But, making this change in culture will be very difficult and time consuming. Yet, such a change is essential for innovation to prevail. So long as questioning superiors remains difficult, if not impossible, innovation and progress will not come easily.

1.6 Develop the Workforce by Expanding and Using the Qualifications Framework

A major factor inhibiting Vietnam's economic development is the quality of its workforce (World Bank & Ministry of Planning and Investment of Vietnam, 2016). With the extent of the business coming out of China because of trade battles and then the coronavirus, Vietnam has had an excellent opportunity to expand its business considerably. However, because of an insufficiently trained workforce and its lower productivity, it has not been able to take full advantage of the opportunities presented.

A well-run NHRD will allow Vietnam to target occupations that go beyond service-level incomes of manual workers, that is, occupations that receive low levels of income to provide incomes that go well beyond

poverty levels. There has been a lot of interest in Vietnam in education leading to STEM occupations, as reported in earlier chapters of this book. The problem, however, is that every country appears to be targeting STEM occupations. Will Vietnam be able to compete against every other country adopting STEM occupations as their targets? There are many other occupations that Vietnam could target to create a niche that other countries are not targeting. These should be identified by the NHRD Ministry or Committee to be developed, in conjunction with educational programs in STEM.

Why is the Vietnamese workforce deficient, especially given its high level of literacy, with a 2016 adult (aged 15–35) literacy rate of 98.1%, and an estimated 2020 rate of 99% (Total literacy rate..., n.d.)? And 53.8% of Vietnamese speak English, behind only Singapore (61.1%) and Malaysia (60.3%) in the region. Other common foreign languages, after English, include Japanese, Chinese, Korean, and French. These languages are often a reflection of business interests, education, and family connections.

What is needed to bring the Vietnamese workforce up to the standard required to meet the demands of a global workforce? A notable standard that NHRD can help Vietnam meet can be found in the ASEAN (Association of South-East Asian Nations) Qualifications Reference Framework through which Vietnam has established its own Qualifications Framework (VQF) (Quy'ết định [Decision Number] 1982/QĐ-TTg, 2016). The objectives of the VQF are:

- a. Classify and standardize the capacity and minimum academic load and qualifications suitable for specific levels in vocational education and undergraduate education of Vietnam, contributing in the increase of quality of education of human resources;
- b. Formulate an effective mechanism for the connection between employer's requirements for quality of human resources and the system of education level via the education and quality measurement, assessment and evaluation;
- c. Set out a basis to formulate planning for educational institutions and learning outcomes of the training program of different levels of

- study and formulate policies to ensure the quality and increase the effect of the training of human resources;
- d. Formulate a relation with national qualifications framework of other countries via the regional qualifications reference framework and international qualifications reference framework as the basis for mutual recognition in terms of qualifications to increase the quality and the competitive capacity of human resources;
 - dd. Formulate transition mechanism between education levels, formulate lifelong-study society. (Section 2).

What it is going to take moving forward is for the Ministry of Education and Training (to whom such responsibility is assigned in the law) or the Ministry of Labor, Invalids and Social Affairs, or the Council rapidly and completely to implement the framework. And, as will be obvious from reading the law setting up the VQF, changing in dramatic ways how public education at all levels and HRD through corporate and public training are delivered. As the workforce and potential workforce receive such education and training, much more sophisticated curricula and more highly qualified instructors will be needed.

1.7 Emphasize Technical and Vocational Education and Training (TVET; VET in Vietnam) and Teacher Education

Many countries, including Vietnam, that are in a hurry to develop a highly qualified workforce will focus primarily on the higher levels of qualification, specifically focused on university education with those occupations that require such education. Unfortunately, this does not allow them to fill a unique niche. Vietnam will need a workforce that is designed to meet local, regional, and global competition, focused primarily on agriculture, manufacturing, the country's infrastructure, and tourism. Because of a heavy reliance on equipment and machinery (with high investment costs) and a shortage of highly qualified teacher educators in these fields, Vietnam is heavily reliant on cross-country cooperation from many countries or agencies.

In spite of a renewed interest in VET in Vietnam, there remain reforms that are needed to respond to the remaining challenges faced by VET, as suggested by Caggiano (2018):

Current reforms are focused on the implementation of the Law and Vocational Education and Training, and include:

- reforming the testing and examination procedures;
- developing policy reforms to improve the quality of teachers and trainers;
- establishing a network of VET institutions and enterprises;
- increasing the autonomy of VET institutions.

There are five main challenges to the TVET system identified in Vietnam:

- adapting the VET system to technological developments;
- poor ratio of skilled workers working in the sector;
- skills mismatch affecting productivity;
- increasing autonomy among VET institutions;
- outdated technology of small- and medium-sized enterprises (SMEs) cannot provide proper employment. (paras. 7–8)

Across south-east Asia, including Vietnam, there is a lot of room to grow in providing leadership in developing TVET programs accompanied by TVET teacher education, without reliance on countries with better developed programs. NHRD can go a long way in rectifying this situation. In particular, through collaboration, NHRD can bring together the Ministry of Education and Training, private enterprises, and both public and private VET institutions. A well-developed collaboration between enterprises and such institutions is likely to be essential given the need for rapid adjustments to industrial change and the high costs of the equipment and machinery that accompany TVET instruction. Further, TVET teacher educators are faced with significant challenges in keeping up to date when they are no longer employed at the enterprise level. Enterprises will need to offer teacher educators internships for their own faculty development.

1.8 Develop Faculty

Not only do TVET and VET teacher educators face a challenge with faculty development. This is true for K-12 educators and college/university faculty. Vietnam does not have a strong history of encouraging or requiring higher education faculty to self-develop in their teaching skills, to produce high-quality research to keep them current, and to create innovation in their teaching and research (Phuong, Duong, & McLean, 2015). It is possible that the government will not have the interest in developing higher education faculty to become research scholars. However, if Vietnam is interested in competing with more developed countries, they must take the necessary steps to develop.

The Council can be very helpful in this regard. First, faculty must be required to take their sabbatical leaves on a regular basis, with a plan for self-development in both teaching and research skills. This plan can be based on a competency model developed for faculty under the auspices of the NHRD Ministry. Second, each university or technical institute must establish a system for faculty review to determine the gap between the competencies needed and individual performance. Third, a faculty development specialist, also determined within the competency model, should help each faculty member to create a plan, such as an individual development plan, to close the gaps. All of these steps require the input of the Committee of NHRD.

The Council will also require input into the country's budget in order to carry out the steps in the previous paragraph. Study abroad, language development, competency model development, self-assessment and peer assessment, development offered by faculty development, specialists' development, research publication development, and any other costs required to develop faculty must be included in the budget.

1.9 Develop Women

As with much of Asia, a major factor holding back workforce development is the bias that exists against women in the workforce, especially at upper echelons of professions. Fortunately, Vietnam reflects near gender equality at lower occupational levels. However, the glass ceiling exerts itself as women move up the career ladder and reach higher levels in their occupations. In spite of this, however, Vu (2018) reported on *Financial Times*'s findings from a 2017 survey of 5000 respondents from five countries in south-east Asia. The survey found that 30% of women reported that their pay was lower than men colleagues, and almost that same number reported that they had fewer opportunities on the job.

From the *Financial Times*'s 2017 survey findings, the ratio between men and women in upper management in Vietnam, at 8:1, is the lowest among the top five economies in south-east Asia, followed by 5.6:1 in Malaysia, 2.8:1 in the Philippines, and 2.2:1 in Thailand, but Indonesia had an almost equal ratio with 1.2:1 (Vu, 2018). Vu also reported on a Boston Consulting Group study that found that, in 2017, women held 25% of the CEO or board lead positions in Vietnam, higher than any other country in the region. Details related to this phenomenon are found in the chapter on Vietnamese women leaders in this book (Chapter 9).

As for the future of women in contributing in leadership roles in Vietnam, these data suggest a mixed prediction. The Council can make a significant contribution in supporting research to determine why so few women are in leadership positions, while, at the same time, a significant number of women are in lead positions. In-depth qualitative research can help to determine the attitudes of those who make promotion decisions to determine the source of the gender biases and what it will take to change the situation. While I am hesitant to suggest the mandatory quota system, as used in a number of Asian countries, it may be required, depending on the findings of the proposed research.

Political representation of women in leadership roles is low in Vietnam. Dr Luong Thu Hien, Executive Director of GeLead, concluded: "Despite the great efforts of the Party and the State of Vietnam to improve political participation of women over the past

decades, women's leadership in Vietnam still lags far behind the targets that it's striving towards" (Dunlevy & Thu, 2018, para. 6).

Dunlevy and Thu (2018) summarized the situation of women in political leadership in Vietnam:

The number of women members in Vietnam's National Assembly fell steadily between 2007 and 2016 and slightly increased in the election for the term XIV (2016 – 2021), but still did not meet the target of 35 to 40 per cent. In the Inter-Parliamentary Union international ranking, Vietnam fell from 9th position to 64th. (para. 3)

In the Central Committee of the Communist Party of Vietnam, women are also under-represented, making up 10 per cent of its membership. In [the] cabinet, there is one woman among the 27 cabinet members. (para. 4)

If politics cannot model gender equality, how can there be an expectation that gender distribution in businesses will be equal? If the government is really interested in gender equality, it must set goals that reflect equality, not in a ratio of 1:2. Given the one-party system that exists in Vietnam, it should be relatively easy to achieve gender equality in both government and business. This will require developmental activities for women who show signs of potential leadership and for those who will be in selection roles. Women need to become confident in their abilities to serve in a political leadership role. And those who select leaders need to understand their own biases and the importance of making leadership decisions independent of gender.

Similar developmental activities can be offered to other organizations that are looking to maximize their leadership while moving to create gender equality. By recognizing the value of both genders in leadership positions, Vietnam will maximize its abilities to lead the country into an improved position to take advantage of the opportunities that are being presented for economic development.

1.10 Improve the Education System

Overall, Vietnam has done well in its education system, especially in comparison with other countries in the region. Universal education exists in primary schools, though children at the very bottom of the economic strata may not be able to attend school because they cannot afford the school uniform, shoes, notebooks and writing utensils, and so on, as required by the school system. Vietnam has almost achieved gender parity in education, with low student/teacher ratios. Other challenges remain for children in remote areas and those from minority populations. Reed (2018) reported that these positive outcomes can be attributed to “the work ethic prized under Confucianism and the need to rebuild the country after the war” (para. 7).

As in many countries where the emphasis in education is preparation for exams, and where graduation from prestigious universities determines employment, Vietnam has this strong paper-based, exam-based education. This means that things like creative thinking, career development, self-awareness, relationship development, team building, emotional intelligence, and even problem solving, all of which are critical for success in employment and, indeed, life, are neglected. This is not to suggest that cognitive accomplishment, especially in the STEM areas, is not important. Rather, it calls on all education systems to find a balance.

Another educational factor that impedes the development of Vietnam’s workforce is its quality of language development. At a minimum, it is critical that Vietnamese children become fully competent in a foreign language that is widely used, especially in business and tourism contexts. English is especially important, with options in Chinese (already spoken widely by those Vietnamese with a Chinese legacy), Japanese, and Korean, because of the potential for trade and tourism from these countries. It is almost hypocritical for me to suggest this, as the U.S. is not a bilingual country among the majority population, but minority members of the country have been forced to learn English (in addition to Spanish and hundreds of other native languages). Having received my education up to graduate education in Canada, I was bilingual in English and French, but the quality of that education was deficient in oral language

skills. Nevertheless, being a country that desires to move up within the middle-income country category, having bilingual skills becomes critical in Vietnam.

Then, if the country is going to put a strong emphasis on STEM occupations to develop the economy, students of both genders must be well-prepared by having a strong emphasis on STEM in their educational experience. As suggested in this book's sections on Education, there are many needs in higher education in Vietnam in order to improve occupational qualifications and be prepared to work in occupational areas that will be necessary to become a country that can succeed in building the vision of the economy that Vietnam desires.

The need for professionals in HRD will grow under a NHRD approach. All aspects of HRD will be needed in a society and economy that rely on HRD: training and development, organization development, and career development. For this to occur, HRD degree programs in universities, which currently do not exist in Vietnam, must be established. These might be standalone programs or they might be developed under the auspices of human resource management (HRM) programs. In any case, for HRD to be successful, it must operate in cooperation with HRM. This will require that universities modify their curricula to include HRD programs at undergraduate, master's, and doctoral programs. Not only will this require the development of the curricula, but it will also require the recruitment of knowledgeable scholars and scholar-practitioners who can staff such programs. This will be a daunting task, given that there is no feeder program currently in Vietnam.

1.11 Incorporate HRD in Organizations

Training is currently included in organizations in Vietnam, as described in Chapter 8 for corporations and Chapter 11 for SMEs. The incorporation of HRD degree programs in universities offers a possibility for more and better HRD offerings. The primary focus of HRD in corporations is training, including both internal and external offerings. There is

little evidence, however, of organization development and career development. And SMEs rely almost solely on external resources because of their smaller sizes.

Because of the high reliance on external training sources, the National Council for Education and HRD could, at the lowest level, establish criteria or a checklist that any organization can use to evaluate the quality of the external (or even internal) training source. At the next level, NHRD can encourage on a voluntary level for providers to seek an international certification for quality in training, such as the ISO (International Standards Organization) series on training. Another approach, if the existing international standards are deemed not to be appropriate, an accreditation program could be put in place on a voluntary basis. This is common in academic programs, and there is no reason to think that this process could not be equally effective in practice. All of these approaches would be beneficial to all types of organizations, including NGOs, SMEs, and larger corporations.

Another aspect of HRD that could use the coordination and development from the National Council for Education and HRD is organization development (OD). OD is one of the major aspects of HRD. It has been defined in many ways; McLean (2006) defined OD as

Organization development is any process or activity, based on the behavioral sciences, that, either initially or over the long term, has the potential to develop in an organizational setting enhanced knowledge, expertise, productivity, satisfaction, income, interpersonal relationships, and other desired outcomes, whether for personal or group/team gain, or for the benefit of an organization, community, nation, region, or, ultimately, the whole of humanity. (p. 9)

While OD exists from international, external providers, it is hardly known within Vietnam. Thus, there is a great need to develop the concepts of OD within the cultural context of Vietnam. This indigenous view of OD should be included in university programs for HRD. The same processes as developed to determine the quality of training also need to be applied to OD practice.

1.12 Improve the Infrastructure to Support eLearning

Covid-19 has underscored the need to have a strong infrastructure to support e-learning, as students at all education levels have been forced to pursue their education online. Further, employees are also increasingly seeking their development opportunities online, especially within SMEs. For these things to occur, there must be a strong infrastructure. It makes little sense for this to occur from school to school or from location to location. A strong, centralized system will be both more effective and efficient. The Ministry or Committee of NHRD can facilitate such development.

1.13 Improve Healthcare

Healthcare is a core and critical component of NHRD, along with the concept of Safety, thus warranting the inclusion of this concept in this book. Until recently, except for minor healthcare needs, most expats in Vietnam and wealthier Vietnamese traveled to nearby Bangkok, Kuala Lumpur, or Singapore for their healthcare. At the same time, those living in small towns and in rural areas had minimal access to any form of healthcare; they needed to find some way to get into the major cities in the country (Healthcare in Vietnam, 2020).

In the past few years, however, this situation has changed dramatically. New hospitals have been built in many of the small cities and towns. Two general hospitals, one each in Hanoi and Ho Chi Minh City, have been internationally accredited, as has the Cao Thang Eye Hospital in Ho Chi Minh City (Healthcare in Vietnam, 2020). Dental work is also widely available and of a high standard. The consequence of the health situation in Vietnam is reflected in life expectancy. In 2017, life expectancy for women was 79.37 and for men, 71.12 (Plecher, 2020); these compare with 81.1 and 76.1, respectively, for the same year in the United States (Arias & Xu, 2019).

Another factor supporting healthcare in Vietnam is its cost. The public hospitals are almost free, while private hospitals are more expensive, but

still relatively inexpensive. Hospitals accept insurance, and some hospitals have their own health plans. As a result, they are relatively accessible. There is little inability to go to the hospital or dental clinics, keeping the population relatively healthy. As a result of the combination of quality and cost, Vietnam has become a medical tourist destination, especially from Australia, the United States, and Europe (Healthcare in Vietnam, 2020).

As in almost every country, the coronavirus-19 has affected Vietnam. Unlike these other countries, however, Vietnam's response to the virus has been almost the best in the world. As soon as the first two cases were identified when an affected Chinese father from Wuhan arrived in Vietnam to visit his son who was working there, flights to and from Wuhan were canceled, followed a week later by cancellation of all flights into mainland China, along with the closure of China's land border. According to Tatarski (2020), Vietnam has had among the most successful global responses to the virus. "The government created the National Steering Committee on COVID-19 Prevention and Control, headed by Deputy Prime Minister Vu Duc Dam, to coordinate the national response" (para. 4). Because of the rapid interventions, as of May 30, 2020, Vietnam had seen only 328 Covid-19 infections with no deaths, because of its quick application of NHRD concepts related to healthcare.

Among the interventions included were mandatory wearing of a mask and social distancing, shutting down of non-essential businesses, extensive use of posters, stay-at-home policies but not a complete lockdown, and immediate quarantining and health service. These interventions may not be dramatically different from those used in other countries, but the positive responses of the Vietnamese in a totalitarian society may have contributed to the positive outcomes. As a result of these interventions, Vietnam's medical response has been outstanding. However, Vietnam's economy has been affected because of a loss of tourism income, a major industry in Vietnam, but also in manufacturing and trade because of the reliance of Vietnam's economy on other countries that are much more seriously impacted than the economy of Vietnam. Moving forward, Vietnam is likely to have a GDP growth for 2020, while most countries will be experiencing a decrease in GDP, to experience between 2–5%

growth. The lesson for Vietnam and other countries is the importance of diversifying industries and not relying heavily on business in other countries.

However, Vietnam (and the rest of the world) cannot sit back and assume that their actions have stopped the virus. According to Michael Osterholm, the director of the Center for Infectious Disease Research and Policy at the University of Minnesota (reported by Kapner, 2020), the world is still a long way from having conquered this disease. According to Osterholm, we will not get ahead of this disease until 60–70% of the population has had the disease, gaining either hard immunity (from having had the disease) or vaccine-induced immunity. This suggests that the major planning confronting Vietnam is to determine in advance how it can get the vaccine and how to distribute it among its population. Further, Osterholm has concluded that the wearing of masks is of virtually no use in stopping the spread of the virus. How one handles this long-term impact (to last about two years) on mental health, economics, society, physical health, and so on, will be a huge challenge to every country. This challenge will truly take a united, collaborative approach for Vietnam's society to survive.

1.14 Improve the Environment

According to the USAID (2020), Vietnam is one of the countries most vulnerable to climate change because of its extensive coastline. During the lockdown associated with the pandemic, Vietnam, along with most other countries, has experienced a marked improvement in the quality of air with the reduction in traffic and reduced smokestack emissions. With the need for masks, there is also increased need for recyclable materials. The challenge for Vietnam and the world is to find ways to continue and add to programs to improve the environment and contribute to saving the climate. For Vietnam, NHRD's role in improving the environment is urgent; it is, in fact, a matter of life or death for Vietnam.

1.15 Address Other Social Issues

The NHRD Ministry or Committee will be kept very busy in fulfilling the mission assigned to it. In addition to everything that has already been described above, there are numerous issues that need addressing for the welfare of the Vietnamese society. While each could be described in great detail, because of the shortage of space, they will be presented only briefly below.

Labor Mobility in ASEAN. As the policies permitting labor mobility in ASEAN become fully implemented, Vietnam will face two problems—outward migration of trained talent and inward migration of labor from across the region, many of whom will not be well-prepared for employment. Policies and practices will be needed to address both issues.

Visas. Visas serve two major purposes for a country: control who enters the country and provide revenue for the country. How these two purposes interact is not always clear.

NGOs. Most of the emphasis on HRD for organizations has been on SMEs or large corporations. Certainly, HRD can also be used for governmental agencies or organizations. But NGOs, non-governmental organizations, are often ignored, in spite of how extensive they are. Such organizations in Vietnam support women's development, education, health, poverty, children, and many more. These organizations generally fill the gap between what is needed and what the government provides.

In the early 2000's, a long-time friend and OD consultant, Jerri Hirsch, approached me to sponsor her trip to Vietnam where she was planning on doing volunteer teaching in a Catholic school in Ho Chi Minh City, Anh Linh elementary and secondary schools. I suggested to her that contributions would go further if she worked as a volunteer for a non-profit organization. Bridges to Learning came into being in 2005 with this mission: "Bridges to Learning is a volunteer non-profit [] corporation dedicated to supporting education, health and social development initiatives for under-resourced students in Vietnam" (2020). I subsequently served as board member and chair of the board. I am so

proud of the difference we have made in the lives of 100s of under-resourced Vietnamese children who have received an education through secondary school and even through college through scholarships that our organization has provided.

2 Conclusion

I titled this chapter with a line from a memorable song from *Man of La Mancha* and explained why I believe that dreaming the impossible dream will accomplish much more than having little hope for the future or having a sense of malaise about the future. Another line from that song includes, "To reach the unreachable star." I remember vividly when Apollo 11 landed on the moon on July 20, 1969. Very few people believed that this was a task that could actually be accomplished. I was running the data on my doctoral dissertation, and in those days the data were recorded on punch cards—in my case, six boxes full. I was using canonical correlations as my analysis. I started at 5 p.m. on Friday (July 11) and finished on Monday morning. I was using the school's computer because the analysis took so much time (65 hours; today it would take less than a minute). I was also feeling that this was an "unreachable star." But both tasks *were* accomplished. I completed my degree and Apollo 11 landed on the moon, and its crew returned safely to earth.

This song represents what Vietnam has been facing, what it has accomplished, and what it is likely to accomplish in the future. I am old enough to have lived through the times of French and USA involvement in Vietnam. Who would have thought that Vietnam would have come through all of this in such an amazing way? Who would have thought that friends from Vietnam and the United States would be such friends? This is even more amazing to me after touring the War Museums in Ho Chi Minh City and Hanoi, and having viewed the artwork of the soldiers in the Museum of Modern Art in Hanoi. Yet, here I am, as a U.S. citizen, working in partnership with Vietnamese students, faculty members, and mentees in writing this book that lays out the hope of Vietnamese scholars and businesspeople for the future

of Vietnam through the application of HRD. May all of our dreams be fulfilled and exceeded!

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