Chapter 4
Understanding Entrepreneurship: Developing Indicators for International Comparisons and Assessments

Tim Davis

Abstract Everyone thinks entrepreneurship is important, including the OECD. There is a fairly extensive body of theoretical literature on entrepreneurship, its determinants and impacts but relatively little empirical work has been done by government policy analysts to analyse and compare entrepreneurship measures. In part this is due to the fact that limited data is available, especially international data.

Researchers argue about the link between entrepreneurship and growth, but everyone wants entrepreneurship even if the link to growth is not clear. There are myriad definitions that describe the notion of entrepreneurship in terms of high-level principles, but those definitions are not easily reflected through statistical measures. Some relatively straight-forward measures exist, but they do not necessarily reflect the entrepreneurship objectives that policy-makers want to pursue.

While virtually all countries are interested in entrepreneurship, the policy objectives that different countries pursue through entrepreneurship differ considerably. Some promote entrepreneurship for employment creation; others see it as a tool for improving productivity and international competitiveness. Nevertheless, most countries have shown a strong desire to understand entrepreneurship and to compare themselves to others so they can determine where it makes sense to copy successful policies, and where it does not.

The OECD has identified numerous government policy interests related to entrepreneurship and is proceeding to produce a periodic "Scoreboard" of internationally-comparable entrepreneurship indicators to assist evidence-based policy making. Data for the OECD Entrepreneurship Scoreboard will be drawn from both existing and new sources. A Manual for Measurement will be produced, to include definitions, methodologies and a framework of indicators.

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E. Congregado, *Measuring Entrepreneurship.*

4.1 Introduction

4.1.1 Background

For many years, economists and policymakers have identified "entrepreneurs" as important drivers for employment, innovation and economic growth. While it is generally accepted that entrepreneurship is "good", the links between entrepreneurship and various facets of economic growth are less well understood. The interest of both developed and developing countries in how government policies and other national "business environment" factors influence the rates and types of entrepreneurship has increased considerably in recent years.

While there is considerable interest in entrepreneurship throughout OECD countries, there is, as yet, neither an overall entrepreneurship statistical framework, including concepts and definitions, nor an agreed-to list of key indicators that are required to improve the collective understanding of entrepreneurship and its impacts. This situation has been due, in part, to financial constraints and also to differing statistical priorities among member countries. The OECD began to focus attention on entrepreneurship as part of its "Jobs Strategy" in the latter part of the 1990s and there have been some specific efforts to assemble information on entrepreneurship as part of Country Surveys and a number of targeted analytical pieces on entrepreneurship and/or growth. A brief summary of the OECD's work related to entrepreneurship is provided in the section "Highlights of Entrepreneurship Activities and Research at the OECD", below.

In addition to this analytical work, the OECD also maintains some SME- and entrepreneurship-related information in databases such as those on structural business statistics and labour force activities for member countries. Furthermore, data on R&D and innovation in databases maintained by Directorate for Science, Technology and Industry (DSTI) also might provide some useful insights into entrepreneurial behaviour in countries, though the inability to classify much of this information by firm size or age, or link it to an "entrepreneur", limits the utility of this data for entrepreneurship studies. Hence, in order to fully contribute to the policy debate and facilitate the development of specific evidence-based entrepreneurship policies there is a need for a more focussed and comprehensive programme of data on entrepreneurship.

In 2004, a number of developments conspired to give important impetus to the work on the development of new entrepreneurship statistics. An OECD Ministerial Meeting in Istanbul in 2004 called for countries to develop more robust statistics on entrepreneurship and SMEs to improve policy development and monitoring.[1] Also, a number of key OECD countries, led by Denmark, formed a small Consortium entitled the International Consortium for Dynamic Entrepreneurship Benchmarking.

[1] The Istanbul Ministerial also resulted in the creation of the Centre for Entrepreneurship, SMEs and Local Development at the OECD and this body, in turn, has been a strong voice for better international entrepreneurship data.

The countries all demonstrated their commitment to improving entrepreneurship data through financial contributions and the Consortium, in turn, provided some financial and research support to help the OECD advance its indicator work. Finally, the Kauffman Foundation of the United States, which has long supported practical research aimed at facilitating successful entrepreneurship, also offered financial resources.

An Expert Workshop, ***Understanding Entrepreneurship: Issues and Numbers*** was held in October 2005 and it provided considerable input from leading entrepreneurship researchers and policy analysts. Participants confirmed the importance of entrepreneurship and the need for comparable international indicators.

4.1.2 The Importance of Entrepreneurship

In recent years, entrepreneurship has been receiving a lot of attention from governments, academics, business support groups and others. Nurturing entrepreneurship is an explicit policy priority for many OECD countries, whether they already have significant levels of entrepreneurship or they are seen to be trailing the leaders in this domain.

Entrepreneurship programmes exist throughout the OECD. Ireland encourages expatriates to return to set up firms while Japan assists those in older age groups to be entrepreneurial. The European Community (EC) issued a Green Paper on entrepreneurship in 2003, detailing benefits and encouraging joint work on common practices. The EC followed with an Action Plan on entrepreneurship in 2004 and, subsequently, they regularly monitor progress on factors that affect entrepreneurship as well as on specific pro-entrepreneurship activities of member countries.[2] The UK has also repeatedly stressed the importance of entrepreneurship and has numerous support mechanisms in place. The Danish interest in, and attention to, entrepreneurship is well documented and they have taken the lead to engage other OECD countries in an International Consortium to support common understanding of issues and to tackle international measurement issues. In North America, Canada and the United States have public sector programs in place to support entrepreneurship, and many quasi-public or private bodies also support the development and growth of new and/or small businesses. Numerous countries use entrepreneurship as a component of regional development or assistance to depressed areas.

For many, the benefits of entrepreneurship are clear. Entrepreneurship is viewed as a critical activity to regenerate and sustain economic growth in strong economies and also as a means of boosting employment and productivity in depressed regions or in developing countries. The dynamic process of new firm creation introduces and disperses innovative products, processes and organisational structures throughout the economy. As firms enter and exit the market, theory suggests that the new arrivals will be more efficient than those they displace. Furthermore, existing firms

[2] Commission of the European Communities, 2003, 2004

that are not driven out are forced to innovate and become more productive to compete. Empirical support for this process of "creative destruction", first described by Schumpeter, has been provided by numerous studies by the OECD and others.[3] Entrepreneurship is a major force in economic dynamism.

At the OECD Expert Workshop in 2005, numerous aspects of the importance of entrepreneurship were identified by presenters, but two were underscored. The first relates to links between entrepreneurship and economic growth. The second concerns the role that entrepreneurship could play in improving the economic and social position of groups within society.

There is some debate about whether entrepreneurship causes economic growth or whether it is a facilitator or enabler of economic change. The link between entrepreneurship, productivity and economic growth was examined. The evidence appeared to be that both entry and exit played a very powerful role in enhancing productivity. If anything it appeared that if entrepreneurship led to the more rapid exit of low productivity firms, that this was particularly desirable when they were replaced by new firms that were more productive. Whilst that debate continues Workshop participants agreed that economic growth was assisted by a positive entrepreneurial climate.

It was recognised that entrepreneurship could also play an important social function. Some ethnic minorities, throughout history, have seen entrepreneurship as a way of escaping from disadvantage, particularly the case for recent immigrants. In other cases women have often not been able to be considered as equals in the male-controlled corporate structure and have seen entrepreneurship as an appropriate and desirable employment opportunity.

The U.S. record of high employment, high productivity and high economic growth is envied by many other countries. Many observers suggest that entrepreneurship and new firm creation (and turnover) are major factors behind the differences in economic performance. However, rates of firm exit and entry are not significantly different in the United States than, say, in Europe. What may be different, though, is the way the new firms grow in the U.S., and how they displace the former leaders. In this regard, it appears that the U.S. and Europe are moving apart. Eight out of the largest 25 firms in America in 1998 did not exist, or were very small, in 1960 while the largest 25 European firms in 1998 were already large in 1960. And this turnover at the top continues at a brisk pace in the American economy. It took 20 years to replace 1/3 of the Fortune 500 companies listed in 1960 yet only 4 years to replace 1/3 of those listed in 1998.[4]

Countries have not only shown interest in understanding entrepreneurship and its determinants within their borders, they have also expressed the desire to share and compare ideas and information concerning entrepreneurship. Nurturing entrepreneurship is non-competitive across countries. Successful entrepreneurial activity in one country does not reduce opportunities for entrepreneurship in another.

[3] Conway et al. (2005)

[4] Commission of the European Communities, 2003

"Entrepreneurship has always been important, but its role stands out in the present time of innovative change. Fostering a climate to help instil greater dynamism in the creation and expansion of firms is fundamental."[5]

4.1.3 Entrepreneurship and Job Creation

One of the questions that continue to arise concerns the role of small or new businesses in job creation. The fact that the issue is raised at all indicates significant changes in thinking over time. In North America, throughout the post-war years and well into the 1960s, governments and the public showed complete faith in the large corporation as the source of jobs and growth. Small firms were granted little attention and were considered as extras playing minor, bit parts in the economic theatre.

Now, a few decades later, many consider small and new businesses as the dominant force in the economy. This change in thinking began with the pioneering longitudinal studies of job creation in the U.S. by David Birch first released in 1979. His research, which showed that small firms created more jobs than large ones, was initially dismissed by many and his methods and sources were discredited. Canadian research in the early 1980s[6] showed results similar to those of Birch, and elicited similar reactions. Today, numerous studies have looked at job creation from many perspectives and the notion that SMEs create the majority of new jobs has become conventional wisdom for many—though not all. And even those who still favour the small-business-job-machine image realise that the net, national job creation figures are an oversimplification that hides the true nature of job creation and how dynamics change over time in response to various factors.

While debate about sources of jobs continues, it appears that differences are often due to concepts and measuring methods rather than any underlying differences in data. If a firm is categorised as small, upon entry, and then all subsequent employment growth is assigned to that original category, then virtually 100% of employment growth will be due to small firms. After all, virtually all firms were small at entry. But such a definition may not be helpful in a policy context. Approaches that will facilitate development of small firms will have little applicability to large corporations even though those corporations were once in the small category. Perhaps different measures of job creation are appropriate for different policy instruments.

While new firms are undoubtedly important, it is likely that established firms in most developed economies still generated the majority of gross new jobs. Evidence for Canada and the U.S. is illustrative in this regard.

One of the indisputable truths that has emerged from the job creation research is that slow changing total job figures, and even annual net job change figures, mask tremendous turbulence in job markets by geography and by sector as well as in the

[5] OECD 2001 new economy beyond the hype

[6] Canadian Federation of Independent Business

overall economy. Indeed, even within the firm, net job figures may hide the creation and destruction that takes place in different occupations.

Evidence confirms that the Schumpeterian process of creative destruction does indeed raise productivity and efficiency. Canadian studies shows that new firms are more productive and pay higher wages than exiting firms in a variety of industries. But new firm creation is not the sole contributor to productivity and employment growth. Existing firms also exhibit churn as some grow while others contract, without any entry or exit. Indeed, even within firms there is undoubtedly both expansion and contraction going on all the time, but very few measures would capture that internal churning since firm dynamics start with net figures at the firm level.

4.1.4 Highlights of Entrepreneurship Activities and Research at the OECD

The OECD has a long history of interest in entrepreneurship, but work has generally consisted of ad hoc, special studies or brief references to entrepreneurship in larger analytical works. Several papers by the DSTI and the Economics Department (ECO) have explored the relationship between new firm creation and economic performance. From time to time, data have also been assembled on particular aspects of entrepreneurship or on factors that may be related to levels or rates of entrepreneurship. For example, some SME data is maintained within the OECD business statistics data base and the Firm Level Data Project attempted to harmonise firm entry and exit data for ten OECD countries. A brief overview of some of the activities is provided below.

In 1992 the OECD Industry Committee requested compilation of statistics in support of more policy-oriented, empirical work on SMEs. The sustained high levels of unemployment across the OECD in the early nineties prompted analysts to focus attention on the relation between enterprise size and employment creation. Much of this work was presented at an OECD High-Level Workshop on SMEs: Employment, Innovation and Growth in 1995. An overview of the quantitative studies was presented in an OECD Working Paper in 1996 (Schreyer 1996).

Various analytical studies in recent years have also illustrated the OECD emphasis on entrepreneurship. Among them, Fostering Entrepreneurship: The OECD Jobs Strategy (1998), the Final Report of the OECD Growth Project, (2001), Firm Dynamics work by ECO, a study of Entrepreneurship and Local Development, by Alistair Nolan of the Local Economic and Employment Development Programme (LEED) (2003) and the work on Micro-Policies for Growth and Productivity (2005) are worth noting.

The OECD Jobs Strategy was a further initiative designed to find solutions to the high levels of unemployment that persisted in many OECD countries throughout the nineties. Entrepreneurship emerged as one of the promising ways of stimulating job creation without distorting market forces and the study Fostering Entrepreneurship (1998) was an effort to understand the factors that effect

entrepreneurship both in general and in specific country situations. While recognising that no accepted standard for measuring entrepreneurship had been established, the study nonetheless determined that levels or rates of entrepreneurship varied considerably across OECD countries. The five-country study (Australia, The Netherlands, Spain, Sweden and the US) concluded that none of the countries had a perfect environment for entrepreneurship and thus that all could learn from the experiences of others. Based on the analysis of these five countries, a series of broad policy guidelines were enunciated. While the broad guidelines establish an excellent framework for further empirical examination, the work was never extended across a larger number of countries, in part due to a lack of international data.

In 2002, an OECD study of firm dynamics[7] using a new firm-level database revealed some interesting features of firm dynamics across OECD countries. Perhaps not surprisingly, it was found that burdensome regulation and costly workforce adjustment diminished the entry of new, small firms. It was also noted that in the US, entrant firms were smaller, and initially less productive, than those in Europe. Surviving firms in the US, however, expanded more rapidly than those in Europe.

The objective of the OECD Growth Project was to investigate the causes of differences in growth performance in OECD countries. The final report identified and investigated areas of major impact and strongly endorsed the positive role of entrepreneurship. In particular, the study showed that start-up businesses in the field of ICT and new technology sectors contributed strongly to productivity growth. Among the five key policy recommendations was one calling for action to stimulate firm creation and a variety of factors affecting creation rates were examined. As a result, additional recommendations on improving access to finance, reducing administrative burdens, removing barriers to entry, reducing bankruptcy and insolvency costs, improving entrepreneurship education and management training and promoting entrepreneurship spirit, were all advised.

The LEED study analysed many contributions of entrepreneurship to local development but cautioned against naïve expectations that entrepreneurship programmes would provide for quick solutions to problems such as unemployment. Indeed, the study noted that employment creation through entrepreneurship was often modest and was rarely a solution to the social exclusion of large numbers of persons with marginal skills. Nevertheless, the study argued that other benefits of entrepreneurship promotion, including reductions in the duration of unemployment and increases in productivity and incomes, provided suitable rationale for cost-effective measures to foster entrepreneurship. In keeping with findings of other OECD studies, the author noted that the principal rational for entrepreneurship policies must be to address factors that impede the proper functioning of markets, rather than introduce measures to replace the role of markets.

In order to support solid evidenced-based policy and allow assessments and adjustments as required, the study noted that goals of entrepreneurship policy and

[7] Scarpetta et al. (2002)

strategy must be clear and explicit. This will not only enhance assessment of feasibility but also help to avoid duplicative or conflicting programmes. The enquiries suggested that policy decisions and assessments were often based on limited empirical evidence and the study noted the paucity of data for specifically examining local entrepreneurship issues. It was recommended that the OECD promote longitudinal studies, designed to include micro-enterprises that are missed in other official statistics, which are conducted at the local level, though using consistent methodologies across countries. By centralising the statistical development work, the study argued, costs for individual countries would be minimised but the value of the resulting policy-relevant data would be maximised, given the ability to make international comparisons.

The study on Micro-Policies for Growth and Productivity, sought to identify the critical and successful policy areas for each of the micro-drivers of growth—entrepreneurship, information and communications technology (ICT), innovation and human capital—through a quantitative benchmarking methodology. This work established some pioneering methodologies for better understanding entrepreneurship in particular and it also highlighted some weaknesses in currently-available indicators.

Finally, the OECD Bologna Process, which was launched with the first Ministerial Conference in 2000, is a very significant initiative by the Organisation to broadened the dialogue on SMEs and entrepreneurship and stimulate more meaningful interchange between analysts and policy makers. A second Ministerial Conference in Istanbul in 2004 stressed the need for evidence-based policy making and called for efforts to strengthen the statistical base for cross-country, comparative analysis. Specifically, it was recommended that "An internationally comparable set of indicators should be developed for monitoring the level of entrepreneurial activity and the entrepreneurial environment in each country."[8]

4.1.5 Entrepreneurship Policies

What are the questions facing policy-makers in OECD countries? Are they convinced of the value of entrepreneurship and are they now trying to find the right balance of policies to enhance entrepreneurial activity? Are there still unanswered questions about the importance of entrepreneurship?

Entrepreneurship appears to be of considerable interest to policy-makers everywhere, whether they are convinced that entrepreneurs are the dominant force in economic development or just significant contributors. But there are many different perspectives on entrepreneurship, often within the same country. For example, entrepreneurship is often linked to regional development programs. Stimulating the creation of new firms is seen as a tool to boost employment and output of depressed

[8] Fostering Entrepreneurship and Firm Creation as a Driver of Growth in a Global Economy, OECD, 2004

regions. In other examples, entrepreneurship is a key element of strategies designed to facilitate the participation of certain target groups, such as women or minorities, in the economy. Finally, programs aimed at boosting competitiveness often identify high-growth entrepreneurship as a key to innovation and productivity growth. In each of these cases, there is a different concept of who is an entrepreneur.

While many countries have embraced entrepreneurship as a means of reviving or sustaining economic growth, there remain many questions about the impact of entrepreneurship itself as well as about the best means to encourage entrepreneurial activities. Are there different types of entrepreneurship and, if so, are some entrepreneurial pursuits more beneficial for economic prosperity than others? Can the process of entrepreneurship itself be rendered more efficient and more productive?

For many, there is still need to better understand the role of the entrepreneur, who is commonly associated with new and/or small firms, in job creation and economic growth. Others are convinced of the direct link between entrepreneurship and job creation and they want to determine the best way to encourage entrepreneurship and move beyond firm creation to firm growth.

If increasing levels of entrepreneurship are sought in all countries, do countries have common goals? What are the policy goals of governments in the area of entrepreneurship? Is the goal simply to maximise the number of new entrants? Since evidence suggests that the churning effect of entry and exit is beneficial, should policy facilitate exit as well? Once established, is it better for a firm to prosper and grow for a long period of time or do new dynamic firms quickly become old less productive firms that should, in turn, exit to make way for another more dynamic entrant? Many definitions of entrepreneurship effectively assume that the entrepreneur's activities do not warrant further study after the firm is a few years old. Few measures try to capture the contributions of the serial entrepreneur, whether he is repeatedly starting brand new firms or launching new initiatives within an existing corporate structure.

If government policy interests relate to job and productivity growth, are established entrepreneurs as valuable as new ones? Isn't it likely that a dynamic entrepreneur will continue to hatch bright ideas and develop them into growing businesses? Or, isn't it likely that the entrepreneur will innovate and raise productivity both within an existing firm as well as through new firms?

The role of venture capital and other forms of financing, in stimulating entrepreneurship and firm growth also raises policy questions that warrant further study. Additional policy issues concern the relationships between government research labs and businesses that might commercialise such work. Views are often sharply divided on this point both across and within countries. Some feel that individuals should not benefit from knowledge creation funded by all taxpayers; others applaud such initiatives and point out the ongoing benefits to society of job growth, increased output and even greater tax payments.

Finally, a fundamental policy question relates to the very notion of a "government role" in entrepreneurship. For some, the answer is self-evident: "Governments

have no role. Entrepreneurship is about individuals taking actions on their own." But others argue that such an approach is unrealistic in a complex economic system that already has myriad regulations and programmes in place. Thus, for many, there is considerable room for governments to facilitate entrepreneurship in a non-interventionist way. A smooth-running market economy is the best way to encourage entrepreneurship, rather than direct support. For example, the "business-friendly" infrastructure in the U.S. is supported by competition law that discourage monopolies and unfair competition as well as by intellectual property rights that protect a firm's valuable, but often intangible, knowledge assets.

Some countries have established firm policy agendas concerning entrepreneurship. Others are still considering options and priorities. Policy makers in Europe, for example, have concluded that differences in levels, rates and perhaps even types of entrepreneurship between Europe and the U.S. are significant factors in the U.S.'s record of low unemployment, high productivity, high per capita income and high rates of growth. The European Union as a whole, and many of the member states on their own, have fixed on a clear policy agenda that embraces entrepreneurship as a means of addressing problems such as continuing high levels of unemployment and lagging productivity growth. Through its Green Paper on Entrepreneurship (2003) and its Action Plan the EC has identified five key policy areas that will help make Europe more entrepreneurial:

- Entrepreneurial mindsets or attitudes
- Encouraging more people to become entrepreneurs
- Gearing entrepreneurs for growth and competitiveness
- Improving finance
- Making administration and regulation more SME-friendly

The challenge now for analysts and policy makers in Europe and elsewhere is to find the key factors that will lead to improvements in each of these areas to determine how to influence those factors to operate in a way that is conducive to entrepreneurship without introducing market distortions.

Despite the abundance of entrepreneurship policies and the explosion of entrepreneurship research in recent years, there still seems to be a disconnect between research and policy. Perhaps the most comprehensive reviews of entrepreneurship policy have been done by Lundström and Stevenson and they have characterised SME Policy as an area where "a great deal of trail and error persists", and noted that it "lacks a theoretical base."[9] Indeed, many countries rely on case studies and best practices, rather than empirical evidence, to assess the impact of their entrepreneurship programmes. Myriad statistics are used to show a need to boost or at least maintain the level of entrepreneurship; but very few of these statistics are commonly defined or collected across countries to allow for international comparisons.

[9] Lundstrom and Stevenson (2002)

4.1.6 Entrepreneurship Concepts and Definitions

A Brief History of Entrepreneurship Definitions

Scholars have dedicated almost three centuries to the attempt to define the concept of entrepreneurship. The lack of consensus may, in part, be due to the fact that entrepreneurship isn't neatly contained within any single academic domain. Indeed, many disciplines have contributed their perspectives on the concept of entrepreneurship, including psychology (Shaver and Scott 1991), sociology (Reynolds 1991, Thorton 1999), economics (Cantillon 1730, Marshall 1890, Knight 1921, Schumpeter 1934, 1949) and management (Stevenson 1985).Given the heightened interest in entrepreneurship in recent years, it is unlikely this multi-disciplinary interest will diminish any time soon.

The French economist Richard Cantillon[10] is generally accredited with being the first to coin the term "entrepreneurship" in about 1730. Loosely, he defined entrepreneurship as self-employment of any sort, and entrepreneurs as risk-takers, in the sense that they purchased goods at certain prices in the present to sell at uncertain prices in the future.

Many eminent economists elaborated on Cantillon's contribution, adding leadership and recognizing entrepreneurship, through organization, as a fourth factor of production, but the key tenets of risk taking and profit were nearly always retained as important features of entrepreneurship. Early on, Adam Smith (1776) wrote about entrepreneurship when he observed that division of labour discouraged innovation because of repetition. Alfred Marshall (1890) identified entrepreneurship as a crucial factor of production alongside land, capital and labour. Say (1803) stressed the importance of management vs. ownership in an enterprise and identified the entrepreneur as the manager.

It was not until Joseph Schumpeter's definition of an entrepreneur in 1934 however, that the more modern interpretation, relating entrepreneurship, additionally, to innovation, entered the mainstream. Schumpeter defined entrepreneurs as innovators who implement entrepreneurial change within markets, where entrepreneurial change has 5 manifestations: 1) the introduction of a new (or improved) good; 2) the introduction of a new method of production; 3) the opening of a new market; 4) the exploitation of a new source of supply; and 5) the re-engineering/organization of business management processes. Schumpeter's definition therefore equates entrepreneurship with innovation in the business sense; that is identifying market opportunities and using innovative approaches to exploit them.

However although Schumpeter's definition embodies a characteristic of entrepreneurship that is widely recognized today, namely, innovation, it still retains some ambiguity that has meant the debate regarding a definition of entrepreneurs/hip continues; although, to some extent, this reflects the definition of innovation, in particular whether it relates to incremental or quantum changes. Indeed some (Drucker 1985) have argued that entrepreneurship reflects merely the creation of a

[10] The word *entrepreneur* itself derives from the French verb *entreprendre*, meaning 'to undertake'.

new organization and that any individual who starts a new business venture is an entrepreneur; even those that fail to make a profit. Although, it could be argued that this corresponds to Schumpeter's 'opening of a new market'.

The debate still continues but it is perhaps best summed up by the economist Peter Kilby[11] who in 1971 compared those who study entrepreneurship to characters in Winnie The Pooh hunting for the mysterious and elusive Heffalump. Like the economists and scholars, familiar with entrepreneurs and their contribution to economic growth, and who have attempted over the years to define an entrepreneur, the hunters in Winnie the Pooh all claimed to know about the Heffalump but none could agree on its characteristics.

Measuring Entrepreneurship

While the academic debate over the concept of entrepreneurship is interesting, the real focus of the entrepreneurship indicators work is measures that will inform the development of good policy. Even in cases where a fairly clear definition has been enunciated, it is difficult to find a measurement tool that matches the terminology that has been chosen. For example, the European Commission has defined entrepreneurship as "the mindset and process needed to create and develop economic activity by blending risk-taking, creativity and/or innovation with sound management, within a new or existing organisation". While conceptually appealing, it would be difficult to convey this notion on a questionnaire in a way that would invite consistent interpretation by all respondents.

The practical definition, or measure, of entrepreneurship that one chooses will ultimately depend on the nature of the policy objective. If policy makers are interested in employment creation, they may focus on a measure that seems most directly linked to jobs, such as self-employment or new firm creation, no matter what the size or growth rate of the firm. If the policy objective is competitiveness or productivity growth, however, a measure of entrepreneurship that distinguishes high growth or innovative firms may be preferred. In this case, the firm population of interest may exclude zero-employee firms (self employment), or even very small firms, from the population of young businesses in order to get a better count of the growth business population.

Relevant measures will also depend on the national context and structure of the business population. For many in the United States, new firm creation is paramount and efforts are made to ensure that only pure, new firm creations are measured. In France, however, while new firm creation is carefully measured, so too are "reprises" which involve the takeover of some or all of the factors of production of an existing firm. Since the growth and survival characteristics of the population of reprises are different, and often superior, to those of the pure-birth firms, tracking of both populations is worthwhile. Given that the demographic profile of today's business owners suggests that many existing firms may be closed or offered for sale, it is likely that

[11] Kilby (1971)

more countries will want to track take-overs, mergers, revivals and other forms of business continuity or resumption, as well as pure births.

Finally, there is a debate about whether studies of entrepreneurship should be limited to the activities of small and medium-sized firms. Understanding the determinants and characteristics of growth firms may be more important than focussing on a single concept of entrepreneurship.

Although a single definition of entrepreneurship across OECD countries may not be feasible, or even desirable, it is important to have consistent definitions of the individual measures that will be assembled to understand entrepreneurship and the factors that influence those measures. The OECD Programme will define concepts such as firm birth, self employment and high growth as well as specific concepts relating to firm financing. A particular goal of the Programme will be to ensure that terminology is distinct and clear and that definitions are applied consistently across countries.

4.1.7 Existing Entrepreneurship Data

While few, if any, meet all the requirements of analysts and policymakers for internationally-comparable data, there are numerous statistics relating to entrepreneurship already produced by governmental, quasi-governmental and private institutions. Many of these data sets are purely national and some focus only on special niche activities or a specific subset of the population. Other projects, though, have gathered data in numerous countries. Perhaps most well known is the GEM (Global Entrepreneurship Monitor) Project that has gathered information through both household surveys and specialist interviews since 1998.

In Europe, Eurostat has recently implemented the first "Factors of Business Success" (FoBS) survey, in a number of EU countries, and the European Commission's Eurobarometer has measured attitudes towards various aspects of entrepreneurship in both Europe and the USA. Other countries have also attempted to assess the entrepreneurial climate through similar attitudinal surveys.

Other programs measure important drivers or determinants of entrepreneurship such as access to finance or administrative and regulatory burden. Canada has a well established periodic survey that measures SMEs' access to finance through both supply-side and demand-side surveys. The US Federal Reserve carries out a periodic survey of small business finances (SSBF) and the University of Warwick recently conducted the first major study of SME finances in the UK.

An inventory of existing entrepreneurship data sources has been developed by the Entrepreneurship Indicators Project at the OECD and it will be included in a forthcoming Project Report. That inventory is not designed to be exhaustive but rather to identify model questions or best practices for extension of existing concepts and methods across a larger number of countries.

4.2 An OECD Programme for International Entrepreneurship Indicators

4.2.1 A Collaborative Approach to Assembling and Developing Data

The importance of entrepreneurship to both developed and developing countries is clear and numerous efforts are either underway or under development to produce data to measure entrepreneurship and to shed light on the factors that encourage both entry into entrepreneurship and firm growth. But these efforts are largely undertaken in isolation. There have been relatively few attempts to develop comparable international indicators and even at the national level the linkages between entrepreneurship policies and entrepreneurship data have not been clear. There is an active community of academic researchers who present theoretical and some empirical work relating to entrepreneurship but there have been few forums for discussions of comparable international entrepreneurship data by statistical offices and perhaps fewer still that bring government entrepreneurship policy people together with data producers. The OECD will work with countries and other international organisations to develop entrepreneurship indicators that will enhance the comparability of existing data and develop new data to fill gaps in a co-ordinated manner.

In summary, the OECD Programme comprises the following elements, which are elaborated further below:

- A regular Scoreboard or Compendium on Entrepreneurship;
- A Manual for entrepreneurship measurement;
- Compilation of standard, international data based on existing and new sources; and,
- An OECD Network for international entrepreneurship data development.

An International Scoreboard on Entrepreneurship

A planned compilation of internationally-comparable data will address current and emerging policy issues relevant to both OECD and non-OECD countries. The Scoreboard will present entrepreneurship-related data in three general areas: First measures of level or rates of entrepreneurship, such as the number of start-ups in a period, will be presented. Second, various determinants of entrepreneurship, reflecting capacities and characteristics of entrepreneurs and the entrepreneurial climate or conditions of the countries, will be portrayed. Such "determinant" measures will include rates of taxation, measures of regulatory burden or educational and employment characteristics of both entrepreneurs and of the population as a whole. Finally, measures of performance for both firms and the economy as a whole, such as employment or productivity growth, will be included.

The Scoreboard will benchmark relative performance according to various indicators but it is not intended to provide a single composite measure or overall ranking of countries. There are numerous complex factors relating to entrepreneurship,

competitiveness and overall economic performance and no single measure can guide policy-making decisions or determine "success". Furthermore, since policy objectives differ across countries the importance of high or low values of certain indicators may also differ across countries. It is not even clear that a high or low value on a given indicator will have the same implications in terms of performance in different countries. Some of the world's wealthiest countries, with high GDP growth rates and high per capita income display very low rates of entrepreneurship, at least by some current measures.

A Manual for Measurement of Entrepreneurship

There is an extensive body of academic research on entrepreneurship and its impact on economic growth and employment, particularly dating from the 1980s. In order to understand entrepreneurship and how it varies across economies, several theoretical models have postulated relationships between various factors that establish entrepreneurship opportunities, supply of entrepreneurial talent, and enabling framework conditions. The interaction of all these factors in turn determines levels and types of entrepreneurial activities in an economy, viewed from various perspectives including new firm creation, survival or growth. As discussed earlier, there have also been numerous efforts to define entrepreneurship in both theoretical and practical terms. For example, measurement of entrepreneurship, based on the number of people involved in starting new firms, has been undertaken in a consistent manner, for a large number of countries, over a number of survey cycles by the Global Entrepreneurship Monitor (GEM) program. Also, a number of national surveys exist that shed light on particular aspects of entrepreneurship or factors that may determine the amount and type of entrepreneurship that takes place in a country. Most of these initiatives have remained isolated, however, and few attempts have been made to compare experiences and develop agreement amongst National Statistics Offices on key definitions, survey methods and measurement priorities.

The OECD Measurement Manual will include lists of minimum to ideal entrepreneurship indicators for consistent, ongoing cross-country measurement, standard concepts and definitions, and model questionnaires. Since the goal is the production of harmonised data, relevant for policy use, the work will be based, wherever possible, on definitions and methodologies already tested within countries.

Concepts and Definitions

An essential step in the preparation of a Measurement Manual is development of the definitions and concepts of the various items to be measured. If, for example, one wishes to compute the number or rate of "new firms" in an economy, and compare results across countries, a clear definition of what a new firm is, and what goes into the numerator and denominator, are required. Other conceptual details relating to thresholds, time periods and coverage must also be considered. Key concepts such as the entrepreneur, firm birth, firm death, firm size categories and high growth firms will be required for even the most basic set of indicators. Moreover, concepts involved in counting new firms, such as registration thresholds, or in measuring the

self employed need to be established. Also of interest for international comparisons are the factors influencing entrepreneurship such as access to finance, regulatory and administrative burden or business education and advice. In many cases other OECD or international organisations have already considered and established definitions.

While firm births are important, for many countries the revival or resumption of a firm, through purchase or takeover of some or all the factors of production, is also important. Furthermore, interest in these "reprises", as they are called in French, will likely grow in the coming years since the demographic profile of today's business owners suggests that significant turnovers of firms will occur. Another priority for many countries is the consistent measurement of various aspects of financing of entrepreneurship and SMEs, including the very concept of a "financing gap".

It is not proposed, at this stage, that the OECD establish a single definition for entrepreneurship. As the earlier discussion on definitions concluded, the term entrepreneurship has been widely used and loosely defined, if at all. It is unlikely that countries will want to focus on a single notion of entrepreneurship as a policy objective; rather they will be interested, for example, in boosting firm start-up rates, increasing the proportion of high-growth firms, and increasing resumptions or revivals as a means of lowering firm closures. It is more important that they focus on quality measures for all these items than that they attempt to identify any one of them as the representative indicator for "entrepreneurship".

A number of proposed definitions have already been developed by the OECD Statistics Directorate as part of a Framework for Business Demography.[12]

A Multi-Source Approach to Collecting and Developing Entrepreneurship Data

Data will be assembled for the OECD Entrepreneurship Indicators Programme from a variety of existing and new sources.

Existing Data in OECD and Other Databases

An example of existing data is the labour force information collected and maintained by the OECD. While few analysts would agree that one can measure entrepreneurship simply by counting the number of self-employed, data on business ownership (or self-employment) paint at least a partial picture of the level or rate of entrepreneurial activity in a country or region. The OECD data on self-employment are not strictly comparable, given different definitions and measurement in countries, and additional harmonisation work is required.[13] The OECD also has structural business statistics by size class that will allow presentation of a profile of the SME sector in a country. Here too, while few would simply equate SMEs

[12] See chapter 7.

[13] The EIM Research Group in The Netherlands has already done considerable work to harmonise the OECD self employment data across countries and the approach utilised is sound.

and entrepreneurship, comparable data on the size and nature of the SMEs across countries does contribute to an understanding of the entrepreneurial nature of a country. Other examples of relevant, existing data include innovation, R&D and investment. Furthermore GDP growth rates, productivity measures and other macro statistics will be useful in monitoring the possible impacts of different rates of entrepreneurship.

Register-Based Data

As noted earlier, one approach to measurement of entrepreneurship favoured by many analysts is to determine the number or rate of new firms being created within an economy, sector or geographic region. As is the case with other measures, there is not universal agreement that new firm formation is the best measure of entrepreneurship but it is certainly widely used and oft-quoted, in one form or another. The GEM estimates of nascent entrepreneurship, discussed above, serve as a proxy for new firm creation as they measure new entrepreneurs rather than new firms. Virtually all OECD countries, however, maintain complete registers of all businesses that can be used to produce a wide variety of accurate measures on firm entry, exit and growth, by industry and region. Unfortunately, in the past, there has been little standardisation of the definitions, registration methods, or thresholds for business registration across countries so, while accurate measures were available for national measurement, no cross country comparisons of register-based data were possible. Furthermore, since the business registers are generally assembled to assist with the collection of survey data and were not intended to be used as sources of data themselves, demands for improvements to the registers to enable better data outputs are not treated with the highest priority. This situation has begun to change in recent years. In Europe, Eurostat has worked with a number of EU countries on a voluntary program to produce standard outputs on business demography. While there are still gaps in the data outputs, and not all EU member countries are participating, the work is very promising. The EU Regulation on statistical business registers, requiring all countries to comply with Eurostat standards for coverage and content, is also being revised. The version expected to be introduced in 2006 will widen coverage, introduce new variables, and require the recoding of overseas links. Given the recent expansion of the EU, this will be a major step towards increased harmonisation of register-based data in Europe. In addition, the OECD Statistics Directorate has undertaken a study of all the factors that reduce comparability of register based data on firm dynamics[14] and is developing a framework for business demography that will facilitate comparability across OECD, EU and non member economies.[15] This work is proceeding in parallel with the OECD's Entrepreneurship Indicators Project and the business demography programme will constitute an important source of entrepreneurship indicators.

[14] Vale (2006)

[15] Ahmad (2007)

New OECD-Led Entrepreneurship Surveys

While the collaborative activities discussed above will be instrumental in building a foundation for quality, comparable entrepreneurship data, it is already known that there are many topics of interest to policy makers for which no internationally-comparable data exists. Also, many countries are considering developing, or are already developing, additional national data on entrepreneurship. While these initiatives will be useful for understanding entrepreneurship within the national context, the value of the data will be much greater if it can be compared to measures for a number of other countries. However, there is currently no international forum where NSOs can meet to learn of entrepreneurship statistics activities underway in other countries and collaborate to benefit from each others experiences and to ensure that data is collected on a common basis and disseminated in a multi-country format. To help fill data gaps and to enhance the value of current or planned data collections, the OECD proposal includes a programme to co-ordinate international entrepreneurship surveys. The principal objective of this initiative would be to conduct a periodic, standard entrepreneurship survey in all participating countries.

While a number of useful variables concerning entrepreneurship attitudes and the level of entrepreneurial activity are collected through household surveys, the relatively small proportion of entrepreneurs in the total population yields a small sample for more in-depth analysis of entrepreneur and firm characteristics. Also, as discussed above, harmonised business registers are an important element of this overall for better entrepreneurship data. The registers show great promise as a source of firm data, especially on new firm birth and basic evolution, but they reveal little or nothing about the entrepreneur and they can't provide any details on things such as financing, innovation, networks, marketing and organisational structures. Ideally, a periodic firm survey would be conducted by the NSOs with samples drawn from the same official Business Registers that are used to provide the Business Demography data discussed above.

The target populations for co-ordinated international entrepreneurship surveys would vary depending on the specific topics of interest for each survey cycle. Nevertheless, even while an international survey might target different populations at different points in time, it would be very important to establish clear definitions of the populations of interest and to apply them consistently over countries and over time. Thus, for example, the survey might target high-growth firms, newly-created firms, young-but-established firms or even older firms but each of these would be clearly defined. Furthermore, when a specific sub-population is targeted, such as high-growth firms within a certain age or size category, it will also be important to collect data for the entire population of firms in that age or size category so that data for a control group is also available.

4.2.2 Advantages of OECD-led International Measurement

There are numerous advantages to assembling and/or collecting entrepreneurship data within an OECD-co-ordinated international indicators program, rather than

through national data activities alone. A co-ordinated effort has advantages for identification and prioritisation of policy-relevant statistical activities, for development and implementation of measurements themselves and for the presentation and distribution of results. The OECD is an ideal forum for bringing together the appropriate country representatives and other international experts to agree on the data required for entrepreneurship policy and on the approach to producing the required data on an internationally-comparable basis.

There are obvious benefits of international comparisons based on standardised concepts, definitions and measurement tools. Existing data show that there are significant differences in levels of entrepreneurship between countries. But, since little comparable data exists across a large number of countries on the underlying conditions and stimuli that generate entrepreneurship, it is difficult to undertake multi-country analysis and share best practices. By establishing definitions of entrepreneurship that are relevant to the policy interests of all participating countries, and measuring the factors that may encourage or discourage entrepreneurship using common questionnaires and other measurement tools, countries can determine how their practices, and outcomes differ. Policies will always differ, but sound international data can help countries determine the costs and benefits of different policies in terms of their impact on entrepreneurship.

A co-ordinated, joint effort can also yield economies of scale in the development of the tools and questions. Rather than each country grappling independently with issues of target population, survey frames, data collection methodology, questions and questionnaire design, work could be distributed among participating countries and common approaches adapted through pooling of expertise. In addition to cost savings such an approach will permit exploitation of synergies of expert collaboration.

The National Statistics Offices (NSOs) are important partners in the development of entrepreneurship indicators. They already collect data on various aspects of firm behaviour that will be useful for deriving some entrepreneurship-relevant data and their methodological expertise and practical experience will be invaluable in establishing any new entrepreneurship surveys. Furthermore, the NSOs normally maintain the statistical business registers that will be central to the development of improved business demography data that will contribute to the indicator programme. The OECD's direct links to NSOs will facilitate the development of entrepreneurship indicators.

4.2.3 Priority Topics for New Data Collection

While a systematic review of country data needs has not yet been completed, topics that are of highest priority for countries include high growth entrepreneurship, financing, innovation, use of ICTs and other technology, and entrepreneurship education. Also of interest is the impact of administrative and regulatory environment on both the creation and growth of firms. While many users are seeking coherent

international data, a number of analysts have noted the paucity of regional or local data as well. The notes below illustrate why topics such as the characteristics and determinants of high growth firms and the financing of entrepreneurship and SMEs are among the priority areas for improving entrepreneurship data.

High Growth Firms

There are still debates about the contribution of new firm entrants to net employment growth but there is little disagreement about the fact that a relatively small proportion of firms that are growing rapidly account for the majority of new jobs. The Canadian Growth Firms Project, for example, showed that 2.7% of firms met the criteria for "leading growth firms" and they accounted for 60% of job growth between 1997 and 2000.[16] Naturally, governments are particularly interested in this category of firms and want to understand determinants of and obstacles to, high growth. But while there are numerous examinations of high growth firms throughout OECD countries, there is no agreement whatsoever on just what high growth means. What are the appropriate metrics and thresholds to measure growth? Many studies focus solely on growth in employment, often because it is more readily available on business dynamics databases than other suggested measures such as payroll, sales, revenue, profit, or productivity.

To date, many studies have been limited to identifying the number of growth firms and their contributions to growth, measured in terms of employment or some other metric. Policy makers wish to go beyond this basic analysis to understand the characteristics of the firms, and perhaps the entrepreneurs, as well as the determinants of growth.

The United States is often viewed as the epitome of entrepreneurship with high rates of new firm creation and more young, large firms than other countries. But some comparisons show that the start-up rate is not all that different across countries, while growth performance after start-up is. The OECD (Scarpetta 2002) found that US firm entrants were smaller than their European counterparts but, once over the initial start-up phase, they expanded rapidly while European firms remained small. Figure 4.1 compares US start-up rates to those of a number of European countries, while Fig. 4.2 compares the distribution of SMEs by size class in the US and Europe. While the size classes presented are different in the two pie charts they nonetheless reveal that Europe has a much higher proportion of micro firms (under 9 or 10 employees, and a much smaller proportion in all size classes above that.

Since firm growth rates vary considerably across countries an international comparison of factors and results is very much of interest to those designing policies and programmes. It will be important, though, to ensure that any data collected on high growth firms and their entrepreneurs is matched with data on the non-high growth firms to permit meaningful analysis.

[16] Growth Firm Workshop Synopsis, Industry Canada, Sept 29, 2004

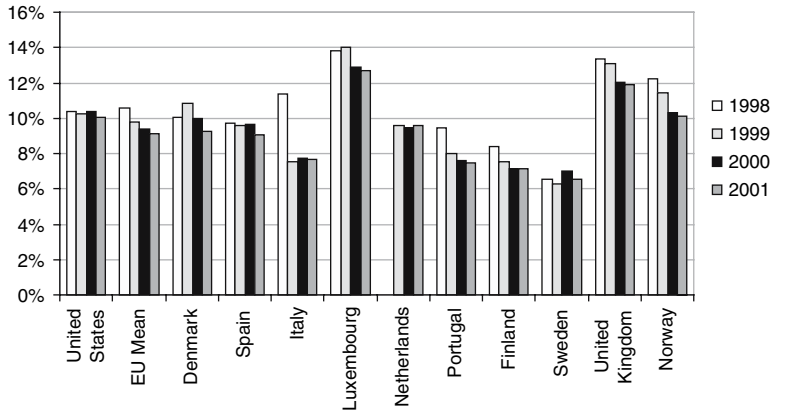

Fig. 4.1 A Comparison of US and European Business Start-Up Rates
Sources: United States—Firm Size Data—Small Business Administration. EU Mean—Mean start-up rate for the European countries shown. Other countries—Eurostat (The full Eurostat data set includes several other countries, but only those for which data are available for at least three of the above years are shown)

Financing of Entrepreneurship and SMEs

Since SMEs comprise 95% or more of all companies across OECD countries, it is not surprising that financing of entrepreneurship and SMEs continues to be a focus of attention of SME lobby groups, government policy analysts, academic researchers and other stakeholders. Yet, it appears to be an area conventional wisdom has been challenged in a number of cases. In Canada, concerns about bank financing of SMEs let to a major government effort involving statistical data collection and policy analysis. The "SME Financing Data Initiative" showed that 82% of SMEs obtained the financing they sought in 2000. That proportion dropped to 74% in 2001, a year of much slower economic growth. Only 23% of Canadian SMEs

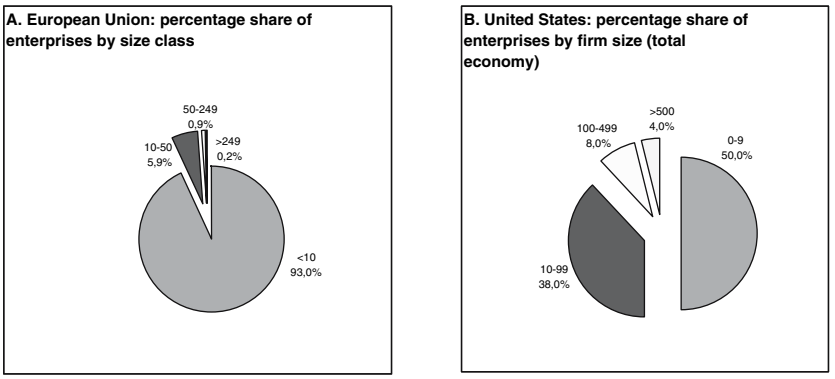

Fig. 4.2 Share of Business Firms by Size Class, United States and Europe
Sources: Joint OECD/Eurostat database on SME statistics

requested debt financing in 2000, though that proportion varied by size of firm with larger SMEs more likely to request debt.[17] Similar finding were evident from recent studies for the UK and for the EU as a whole, though in both cases questions were raised about differential rates of successful access to financing by gender and by ethnic group.[18]

Given the apparent success of entrepreneurs in obtaining debt financing, in at least some OECD countries, questions have turned from supply of debt financing to demand. Why is it that entrepreneurs and SMEs make little use of debt financing and would greater use of debt financing have an impact on the evolution and growth of entrepreneurial firms? What affects the capacity of firms to access and use debt financing?

A survey of both OECD and non-OECD countries, undertaken for the Global Conference on *Better Financing for Entrepreneurship and SME Growth* in Brazil in March 2006 demonstrated above all that data for analysis and international comparisons were largely unavailable. Indeed, the preparatory work done for that Global Conference underscored the dearth of international data on SME and entrepreneurship financing and the Conference AScction Statement called for the OECD to address the situation.

Since many OECD countries are particularly interested in boosting the number of high growth entrepreneurs, there is growing interest in equity financing and questions about why equity financing rates seem to vary across countries. The role of venture capital and other forms of financing, in stimulating entrepreneurship and firm growth has been of particular interest. Many countries feel that they must develop venture capital markets in order to rival American firm growth records. Studies have often noted that the lack of established venture capital markets is one reason why European countries sometimes show high rates of star-ups but lag behind the USA in firm growth. But, in the U.S., only 17% of venture capital goes into companies that are in the early stages of development; most venture capital goes into expansion phase or later stage firms. Also, most firms on the Inc. list of 500 fastest growing firms did not get venture capital.[19]

The Survey for the Global Conference also revealed a lack of comparable data on venture capital across countries. There is a need to establish standard concepts and definitions and collect data on a consistent basis to permit international comparisons and analysis.

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[17] Statistics Canada, "Financing of Small and Medium Enterprises", The Daily, January 15, 2002

[18] Eurobarometer, "SME Access to Finance; Executive Summary" European Commission, Directorate-General for Enterprise and Industry, October 2005; and Fraser, Stuart, "Finance for Small and Medium-Sized Enterprises; A Report on the 2004 UK Survey of SME Finances", Warwick Business School, 2005

[19] Carl Schramm, Foreign Affairs, Vol 83, No. 4

4.3 Summary

A number of countries have led the way with measures of entrepreneurship and its determinants but consultations and research have revealed a lack of detailed data for international comparisons and analysis. The OECD provides an ideal forum to bring together existing data and help develop new data in a consistent and comparable manner. The OECD proposes to collaborate with other organisations as well as with the national statistical organisations to develop an international program of entrepreneurship indicators.

Acknowledgments The views expressed in this paper are those of the author and do not necessarily reflect the views of the OECD or its member countries.

References

Acs Z, Arenius P, Hay M, Minniti M (2004) Global Entrepreneurship Monitor, 2004 Executive Report. Global Entrepreneurship Monitor Babson College and London Business School

Ahmad N (2006) A Proposed Framework For Business Demography Statistics. Internal Working Paper Statistics Directorate OECD March 2006

Audretsch DB, Santarelli E, Vivarelli M (1999) Start-Up Size And Industrial Dynamics: Some Evidence From Italian Manufacturing. International Journal of Industrial Organization 17(7): 965–983

Audretsch DB, Thurik R (2001a) Linking Entrepreneurship to Growth. STI Working papers 2001/2 OECD, Paris

Audretsch DB (2002) Entrepreneurship: A Survey of the Literature. Prepared for the European Commission Enterprise Directorate

Autio E (2005) Report on High-Expectation Entrepreneurship. Global Entrepreneurship Monitor Babson College and London Business School

Bartelsman EJ, Scarpetta S, Schivardi F (2003) Comparative Analysis of Firm Demo-graphics And Survival: Micro-Level Evidence For The OECD Countries. OECD Economics Dept Working Paper 2002

Birch D (1979) The Job Generation Process. Department Of Urban Studies And Planning MIT press, Cambridge, MA

Bygrave W (1989) The Entrepreneurship Paradigm (II): Chaos And Catastrophes Among Quantum Jumps. Entrepreneurship Theory And Practice 14 (2):2–30

Brusco S (1986) Small Firms And Industrial Districts: The Experience Of Italy. In: Keeble D, Wever E (eds) New Firms And Regional Development In Europe. Kroom Helm, London, pp 184–202

Casson M (1990) Entrepreneurship. International Library of Critical Writings in Economics, Edward Elgar, London

Casson M (2003) The Entrepreneur-An Economic Theory. Edward Elgar Press (first edition 1982)

Conway P (2005) Product Market Regulation And Productivity Growth. OECD Economics Department Working Papers Paris

Drucker P (1985) Innovation and Entrepreneurship. Butterworth-Heinemann, Oxford

European Commission (2003) Green Paper, Entrepreneurship in Europe. Brussels

European Commission (2003) The Summary Report, The Public Debate Following the Green Paper on Entrepreneurship in Europe. Brussels

European Commission (2004) Action Plan: The European Agenda for Entrepreneurship. Brussels

Eurostat (2004) Business Demography In Europe- Results For 10 Member States And Norway. European Commission, Luxembourg

Gartner W (1989) Who is an entrepreneur? Is the wrong question. Entrepreneurship Theory And Practice 13(4) 47–68
Hébert R, Link A (1989) In Search Of The Meaning Of Entrepreneurship. Small Business Economics 1:39–49
Iversen J, Jørgensen R, Malchow-Møller N, Schjerning B (2005) Defining And Measuring Entrepreneurship. Discussion Paper 2005–17 CEBR- Center for Economic and Business Research
Karlsson C, Friis C, Paulsson T (2004) Relating Entrepreneurship To Economic Growth. In: Johansson B, Karlsson C, Stough RR (eds) The Emerging Digital Economy: Entrepreneurship Clusters and Policy. Springer-Verlag, Berlin
Kauffman Foundation (2004) State Entrepreneurship Policies and Programmes. Ewing Marion Kauffman Foundation
Knight F (1971) Risk, Uncertainty And Profit. University of Chicago, Chicago (1st edition 1921)
Knight K (1967) A Descriptive Model Of The Intra-Firm Innovation Process. Journal of Business of the University of Chicago Vol 40
Langlois R (1991) Schumpeter And The Obsolescence Of The Entrepreneur Working Paper 91–1503 University of Connecticut 13.
Lundström A, Stevenson L (2001) Entrepreneurship Policy For The Future. Swedish Foundation for Small Business Research, Stockholm
Lundström A, Stevenson L (2002) On The Road To Entrepreneurship Policy. Swedish Foundation for Small Business Research, Stockholm
Lundström A, Stevenson L (2005) Entrepreneurship Policy: Theory and Practice. International Studies in Entrepreneurship, Springer
Marshall A (1890) Principles of Economics. Prometheus (reprinted in 1997), UK
Mata J (1994) Firm Growth During Infancy. Small Business Economics 6(1):27–40
Michelsen VN, Hoffman A (2005) A General Policy Framework for Entrepreneurship. Ministry of Economic and Business Affairs-Division for Research and Analysis (FORA)
Nolan A (2003) Entrepreneurship and Local Economic Development. OECD, Paris
OECD (1997) Globalisation and SMEs. Vol 1&2, Paris.
OECD (1998) Fostering Entrepreneurship and Women Entrepreneurs. In SMEs. Paris
OECD (2001b) Business Views On Red Tape: Administrative and Regulatory Burdens on SMEs. Paris
OECD (2001a) Drivers Of Growth. Paris
OECD (2005) SME & Entrepreneurship Outlook. CFE, Paris
OECD (2005) Micro-Policies for Growth and Productivity. Paris
Pilat D (2002) Factors of Success and Entrepreneurship. Strategies for Statistical Development. Paper for SWIC OECD, Paris
Reynolds P (1991) Sociology and Entrepreneurship: Concepts and Contributions. Entrepreneurship Theory and Practice 16(2):47–70
Reynolds P (1999) Creative Destruction: Source of Symptom of Economic Growth? In: Acs Z, Carlsson B, Karlsson C (eds.) Entrepreneurship, small and medium-sized enterprises and the macro economy. Cambridge University press, Cambridge, pp 97–136
Reynolds P, Bygrave W, Autio E et al (2003) Global Entrepreneurship Monitor, 2003 Executive Report. Global Entrepreneurship Monitor, Babson College and London Business School
Reynolds P, Bosma NS, Autio E (2005) Global Entrepreneurship Monitor-data collection design and implementation 1998–2003. Small Business Economics 24(3):205–231
Say JB (1803) A Treatise On Political Economy. Transaction Publishers (reprinted in 2001)
Scarpetta S, Hemmings P, Tressel T, Woo J (2002) The Role of Policy and Institutions for Productivity and Firm Dynamics: Evidence from Micro and Industry Data. OECD Economics Department Working Paper No. 329 2002
Schreyer P (1996) SMEs and Employment Creation: Overview of Selected Quantitative Studies in OECD Member Countries. STI Working Papers 1996/4 OECD, Paris
Storey DJ (1994) Understanding the Small Business Sector. Rutledge, London

Storey DJ (2003) Entrepreneurship, Small and Medium Sized Enterprises and Public Policies. In: Acs ZJ, Audretsch DB (eds) Handbook of Entrepreneurship Research. Kluwer Academic Publishers, London, pp 473–511

Thurik R (1996) Small Firms, Entrepreneurship and Economic Growth. In: Admiraal P (ed) Small Business in the Modern Economy. De Vries Lectures in Economics, Blackwell Publishers, Oxford

Van Stel A, Stunnenberg V (2004) Linking Business Ownership And Perceived Administrative Complexity- An Empirical Analysis Of 18 OECD Countries. Max Planck Institute of Economics Group for Entrepreneurship Growth and Public Policy No. 3504

Vale S (2006) International Comparison of Start-up Rates. Internal Working Paper Statistics Directorate OECD January 2006

Wennekers S, Thurik R (1999) Linking Entrepreneurship and Economic Growth. Small Business Economics 13:27–55

Wennekers S (2005) Determinants and Effects Of New Business Creation Using Global Entrepreneurship Monitor Data. Small Business Economics 24(3):193–203