

SOCIETAL ENTREPRENEURSHIP AND COMPETITIVENESS

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Contents

List of Figures	vii
List of Tables	ix
List of Contributors	xi
Chapter 1 Societal Entrepreneurship and Competitiveness <i>Vanessa Ratten and Leo-Paul Dana</i>	 1
Chapter 2 The Role of Public Entrepreneurship Programs in Fostering Technology-based Entrepreneurship: A Turkish Case Study <i>Dilek Demirhan, Serdal Temel and Susanne Durst</i>	 5
Chapter 3 Internationalization of Firms and Entrepreneur's Motivations: A Review and Research Agenda <i>Hai T. T. Ngo and Paul Agu Igwe</i>	 29
Chapter 4 Managerial Role as a Resource for Social Innovation <i>Sumayya Rashid</i>	 47
Chapter 5 Key Drivers of Student Entrepreneurship: Experiences from an Australian University <i>Andrew O'Loughlin</i>	 77
Chapter 6 Entrepreneurship from a Business Incubator of a Public University Supported by a Psychological Program <i>Oscar Javier Montiel-Méndez and Lorena del Carmen Álvarez-Castañón</i>	 93
Chapter 7 Knowledge Creation in Client–Consultant Interaction <i>Wendy Dubbeld and Robert J. Blomme</i>	 109

Chapter 8 Internationalization of Social Business: Toward a Comprehensive Conceptual Understanding	
<i>S. M. Misbauddin and Md. Noor Un Nabi</i>	117
Chapter 9 Shadow Economy Index – Lessons from Hungary	
<i>Mónika Galambosné Tiszberger</i>	137
Chapter 10 Microfinance and Necessity Entrepreneurship: The Ghanaian Experience	
<i>Victor Yawo Atiase and Dennis Yao Dzansi</i>	155
Chapter 11 The Impact of Outsourcing on Knowledge and Learning in Organizations	
<i>Ingi Runar Edvardsson and Susanne Durst</i>	171
Chapter 12 Entrepreneurs' Responses to an Economic Crisis: Evidence from a Transitional Economy	
<i>Abetare Domi and Besnik Krasniqi</i>	185
Chapter 13 SROI in Social Enterprises: A Systematic Literature Review of Recent Trends and Future Agenda	
<i>Muhammad Ali, Muhammad Imran Qureshi and Ishamuddin Mustapha</i>	203
Chapter 14 “Making a Difference ... on My Own Terms”: Motivational Factors of Youth Involvement in Social Entrepreneurship in Malaysia	
<i>Seyedali Ahrari, Steven Eric Krauss, Zaifunizam Ariffin and Lee Kwan Meng</i>	227
Index	247

List of Figures

Chapter 4

Figure 1.	Different Levels of Social Innovation.	49
Figure 2.	Perspectives of Social Innovation.	51
Figure 3.	Entrepreneurial Process.	52
Figure 4.	Conceptual/Theoretical Framework.	56
Figure 5.	Data Structure.. . . .	62
Figure 6.	Alignment of Research Questions with Data Structure.	67
Figure 7.	Decisional Interventional Framework.	69
Figure 8.	Proposed Research Framework.	73

Chapter 5

Figure 1.	Research Design.. . . .	82
Figure 2.	Student Business Frameworks.	87

Chapter 6

Figure 1.	The Process of PSP.	97
-----------	-----------------------------	----

Chapter 7

Figure 1.	Conceptual Model.. . . .	113
-----------	--------------------------	-----

Chapter 8

Figure 1.	Schematic Description of the Enablers, Inhibitors, and the Process of Internationalization of Social Businesses.	126
-----------	--	-----

Chapter 9

Figure 1.	Relative Size of European Shadow Economies in 2016 (Percent of GDP).	145
Figure 2.	The Size of the Hungarian Shadow Economy, 2003–2016 (as a Proportion of the Official GDP).	146
Figure 3.	Eurostat Tabular Approach to Exhaustiveness.. . . .	147

Chapter 10

Figure 1.	Access to Savings Facilities in the Greater Accra Region of Ghana.	163
-----------	--	-----

Chapter 13

Figure 1.	Basic SROI Application Model.	207
Figure 2.	Second-level SROI Application Model.	207
Figure 3.	Tertiary-level SROI Application Model.	208
Figure 4.	SROI Literature Clusters in Databases.	209
Figure 5.	“SROI” and “Social Enterprise” Trend of Publications across Databases.	210
Figure 6.	SROI Thematic Clusters with Frequency.	215

List of Tables

Chapter 2

Table 1.	Overview of Public Entrepreneur Support Programs in Turkey.	9
Table 2.	Overview Technopark Statistics (2001–2018).	12
Table 3.	The Number of Participants in the Entrepreneurship Training Program (2010–2017).	14
Table 4.	Share of High Tech Products in Total Exports (2008–2017)..	14
Table 5.	General Information on Interviewed Technology-based Start-ups..	21
Table 6.	Themes.	22

Chapter 3

Table 1.	Industry Globalization Drivers.	31
Table 2.	Findings of Review of Literature on Internationalization of Firms.	32
Table 3.	Findings of Review of Literature on Internationalization of Firms (Continued)..	34
Table 4.	Findings of Review of Literature on Internationalization of Firms (Continued)..	36

Chapter 4

Table 1.	Decisional Role of Mintzberg’s Role Theory.	50
Table 2.	Disturbance Handler (<i>SQ1</i>).	59
Table 3.	Resources Allocator (<i>SQ2</i>).	60
Table 4.	Negotiator (<i>SQ3</i>).	60
Table 5.	Entrepreneur/Intrapreneur (<i>SQ4</i>).	61

Chapter 5

Table 1.	Summary of Key Findings..	85
----------	-----------------------------------	----

Chapter 6

Table 1.	Theoretical Support of ICE.	96
Table 2.	Entrepreneurial Project by Members and Gender.	97
Table 3.	Competences Addressed in the Sessions.	98

Table 4.	Qualities Entrepreneurial Spirit.	100
Table 5.	Tools Obtained by the Entrepreneurs at the End of PSP.	101
Table 6.	Co-occurrences Codes of Impact of the PSP.	102
Table 7.	Entrepreneurs' Profile.	103

Chapter 8

Table 1.	Summary of the Literature Exploration.	119
----------	--	-----

Chapter 9

Table 1.	Number of Newly Founded Corporations and Unincorporated Enterprises by Employee Headcount.	143
Table 2.	Employee Headcount Distribution: Sampled Companies.	144
Table 3.	Responses on the Perceived Direction of Changes Relevant to Shadow Economy, Firm-level Granularity.	144
Table 4.	Citizens on Institutions and Democracy.	149

Chapter 10

Table 1.	Loan Utilization by MSEs.	161
Table 2.	Loan Amounts Accessed by Microfinance Clients.	162
Table 3.	Microfinance and Poverty Reduction.	164

Chapter 12

Table 1.	Company Profiles.	193
Table 2.	Examples of Data Coding.	197

Chapter 13

Table 1.	SROI Articles (Citation-wise).	211
Table 2.	Thematic Classification of Selected Research Articles.	214

Chapter 14

Table 1.	Overview of Study Sample and Affiliated Social Enterprise.	232
Table 2.	Resulting Themes and Sub-Themes.	233

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xii *List of Contributors*

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Chapter 1

Societal Entrepreneurship and Competitiveness

Vanessa Ratten and Leo-Paul Dana

Introduction

There has been a growth in investment by businesses and governments in societal entrepreneurship, which is defined as innovation and proactive business activity that has societal implications (Ratten & Welp, 2011). The difference between societal and other forms of entrepreneurship is the deployment of resources around an issue that affects society at large. Entrepreneurship not only is seen as a way to drive economic growth but also changes the society (Ferreira & Ratten, 2017). In most countries, entrepreneurship has been brought to the forefront of economic and policy discussions. As part of this emphasis on entrepreneurship, businesses have increasingly supported public–private partnerships that benefit larger sectors of society. In addition, more entrepreneurs are focusing on how their activities influence other parts of society and the mechanisms that add social value.

There have been more calls for entrepreneurship research that embeds a process and contextual approach. This is due to studies of entrepreneurship needing to recognize how environmental factors affect decision-making. Societal factors are sometimes assumed in entrepreneurship research and not specifically studied in detail. The relevance of society needs to be examined in terms of entrepreneurship.

Entrepreneurship and competitiveness are sometimes assumed to be related due to the positive connotations of entrepreneurial behaviors (Ratten, 2017). Policy-makers use competitiveness reasons for arguing about issues related to entrepreneurship. This book contributes to the debate around entrepreneurship by taking a societal perspective and highlighting the role of competitiveness. The meaning of competitiveness depends on the situation and can vary depending on the circumstances. A general meaning of competitiveness is the expected level of output based on what peers are doing (Delgado, Ketels, Porter, & Stern, 2012). Ketels (2013) classifies competitiveness based on social infrastructure, political

institutions, monetary policy, and micro-economic conditions. Each of these dimensions of competitiveness focuses on economic growth and prosperity.

Aligning with the theme of this book, each chapter addresses practice in the area of societal entrepreneurship. The chapters have different approaches to societal entrepreneurship and try to explain the topic in a myriad of ways. This is crucial as we are seeing a discussion about the evolving typologies of competitiveness. Thus, research on societal entrepreneurship needs to discuss more on the nature of competitiveness. The chapters address societal entrepreneurship at different stages of its development enabling a more holistic understanding of the topic. This enables a more in-depth analysis of the way competitiveness changes over time. As society changes, a longer-term view about the effects of entrepreneurship is needed. Therefore, instead of having a snapshot view of competitiveness, a longer-term approach can be taken. Consequently, each of the chapters of this book identifies different processes and outcomes of competitiveness.

The chapters in this book embed a societal entrepreneurship approach by examining different issues related to the topic. This enables an inter-disciplinary approach to societal entrepreneurship to develop that acknowledges the magnitude of its effect on the global economy. The range of studies in this book documents the reality of societal entrepreneurship and the recent initiatives around the topic. This introduction chapter to the book presents the key research area of societal entrepreneurship and competitiveness. The relevance of societal entrepreneurship is discussed and suggestions about how to design better entrepreneurial strategies stated. Throughout the book, the term societal entrepreneurship is used in a practical way in order to foster a more relevant approach to this research field. The book sets out to clarify what societal entrepreneurship is and how it can be operationalized in different contexts.

Overview of Chapters

This book comprises twelve chapters looking at different aspects of societal entrepreneurship and its influence on competitiveness. The first chapter titled “Societal Entrepreneurship and Competitiveness” by Vanessa Ratten and Leo-Paul Dana discusses the reasons why a societal perspective on entrepreneurship is important in today’s global economy. The chapter addresses the role competitiveness plays in society with an emphasis on entrepreneurial behavior. The second chapter titled “The Role of Public Entrepreneurship Programmes in Fostering Technology-Based Entrepreneurship: A Turkish Case Study” by Dilek Demirhan, Serdal Temel, and Susanne Durst focuses on how education is an important part of entrepreneurship and provides a driver to social cohesion. The third chapter titled “Internationalization of Firms and Entrepreneur’s Motivations: A Review and Research Agenda” by Hai T. T. Ngo and Paul Agu Igwe highlight how societal factors are internationalizing and influencing entrepreneur’s behaviors. The fourth chapter titled “Managerial Role as a Resource for Social Innovation” by Sumayya Rashid examines the role public institutions play in societal entrepreneurship. The fifth chapter titled “Key Drivers of Student Entrepreneurship:

Experiences from an Australian University” by Andrew O’Loughlin highlights the importance of education in society in terms of its influence on development. The sixth chapter titled “Entrepreneurship from a Business Incubator of a Mexican Public University Supported by a Psychological Program” by Oscar Javier Montiel-Méndez and Lorena del Carmen Álvarez-Castañón focuses on the interplay between societal entrepreneurship and public administration from an education perspective. The seventh chapter titled “Knowledge Creation in Client–Consultant Interaction” by Wendy Dubbeld and Robert J. Blomme stress the role of the knowledge economy in societal development. The eighth chapter titled “Internationalization of Social Business: Toward a Comprehensive Conceptual Understanding” by S. M. Misbauddin and Md. Noor Un Nabi highlights the evolving nature of societal entrepreneurship in terms of social business. The ninth chapter titled “Shadow Economy Index – Lessons from Hungary” by Mónika Galambosné Tiszberger discusses how informal entrepreneurship, which is an important component of societal change. The tenth chapter titled “Microfinance and Necessity Entrepreneurship: The Ghanaian Experience” by Victor Yawo Atiase and Dennis Yao Dzansi focuses on the role of small- and medium-sized businesses in driving societal change through entrepreneurship. The eleventh chapter titled “The Impact of Outsourcing on Knowledge and Learning in Organizations” by Ingi Runar Edvardsson and Susanne Durst addresses the role learning and co-creation play in societal entrepreneurship. The twelfth chapter titled “Entrepreneurs’ Responses to an Economic Crisis: Evidence from a Transitional Economy” by Abetare Domi and Besnik Krasniqi discusses the role societal entrepreneurship has in emerging economies. The thirteenth chapter titled “SROI in Social Enterprises: A Systematic Literature Review of Recent Trends and Future Agenda” by Muhammad Ali, Muhammad Imran Qureshi, and Ishamuddin Mustapha focuses on the literature done on social return on investments. The fourteenth chapter titled “Making a Difference ... on My Own Terms”: Motivational Factors of Youth Involvement in Social Entrepreneurship in Malaysia by Seyedali Ahrari, Steven Eric Krauss, Zaifunizam Ariffin and Lee Kwan Meng focuses on the role of non-profit and altruistic activities in young people.

Concluding Remarks

This book pioneers the use of societal entrepreneurship to explain competitiveness in a range of situations but clearly there is much ground still to cover. New insights on the role of societal entrepreneurship to regional economies and internationalization are needed. This can enable entrepreneurs to improve their performance based on what other high achieving entrepreneurs are doing. Whether the literature on societal entrepreneurship increases like other types such as social entrepreneurship remains to be seen. However, as evident in the chapters of this book, the field of societal entrepreneurship seems to be converging with the literature on sustainable and transformational entrepreneurship. There are a number of areas of societal entrepreneurship that need to be prioritized in

research. This includes how societal entrepreneurship drives competitiveness to enable higher performance.

In an increasingly global economy entrepreneurship provides a way for firms, individuals, and regions to compete better. The way to achieve better competitiveness is engaging with local entrepreneurs and communities in the creation of entrepreneurial ecosystems. This enables not only a better collaboration but also efficiency in terms of information-sharing and dissemination. Competitiveness can originate from within firms but also in regions so both perspectives are needed. The relationship between societal entrepreneurship and competitiveness is complex and requires an in-depth understanding of the phenomenon. We contribute to the literature by (1) showing the impact of entrepreneurship on society and the competitiveness of regions and (2) by justifying the inclusion of a societal perspective on entrepreneurship studies.

References

- Delgado, M., Ketels, C., Porter, M., & Stern, S. (2012). *The determinants of national competitiveness*, NBER Working Paper No 18249. NBER, Cambridge, MA.
- Ferreira, J. J., & Ratten, V. (2017). Competitiveness of locations: The effects of regional innovation and entrepreneurial practices. *Competitiveness Review*, 28(1), 2–5.
- Ketels, C. (2013). Recent research on competitiveness and clusters: What are the implications for regional policy? *Cambridge Journal of Regions, Economy and Society*, 6, 269–284.
- Ratten, V. (2017). Eco-innovation and competitiveness in the Barossa valley wine region. *Competitiveness Review*, 28(3), 318–331.
- Ratten, V., & Welpe, I. (2011). Community-based, social and societal entrepreneurship. *Entrepreneurship & Regional Development*, 23(5–6), 283–286.

Chapter 2

The Role of Public Entrepreneurship Programs in Fostering Technology-based Entrepreneurship: *A Turkish Case Study*

Dilek Demirhan, Serdal Temel and Susanne Durst

Introduction

A vast majority of new businesses fail within the first three to five years of operation, often because of a lack of management skills or adequate financial resources (Peters, Rice, & Sundararajan, 2004). Thus, providing support for new businesses has become an important element of entrepreneurship policy for most countries. A country's entrepreneurship policy should create an economic environment that encourages productive entrepreneurial activity (Minniti, 2008). While creating this environment, entrepreneurship policy is expected to focus on qualitative aspects rather than quantitative ones. Fostering regular low value-added start-ups has a limited effect on productivity, but supporting the establishment of high value-added businesses may have a greater impact. Empirical studies have shown that economies that support high-impact entrepreneurs, which are innovation-driven, high-growth firms, are superior to those that give importance only to the number of entrepreneurs or SMEs (Henrekson & Sanandaji, 2014; Henrekson & Stenkula, 2009; Mason & Brown, 2013). In fact, Shane (2009) argues that enhanced economic growth cannot be achieved by only encouraging more and more people to start businesses. Thus, governments should stop subsidizing the formation of traditional start-ups and focus on those start-ups with growth potential. If the countries desire to grow economically and create jobs, Shane recommends encouraging high-quality and fast-growing companies (Shane, 2009). Technology-based entrepreneurship is said to be among the most desired entrepreneurial activities. Technology-based entrepreneurship is considered an important factor contributing to the economic development of countries because it produces more competitive products and more value-added products compared to others. Finally, it creates jobs for well-educated people (Curth, Chatzichristou, Devaux, & Allinson, 2015; Malerba, 2010). Thus, many

countries have developed dedicated support mechanisms in order to have potential entrepreneurs focus on technology and high value-added goods and services.

Although technology-based entrepreneurs do not represent uniform features as a group, they seem to have unique characteristics that distinguish them from other entrepreneurs. First of all, commercial knowledge alone is not enough for them to become successful, but in-depth technical knowledge plays a vital role in their success (Hsu, 2008). Compared to other start-ups, technology-based start-ups show faster growth rates, generally have well-educated owners or founders, act on new markets that are hard to access, and have intangible assets and complex products (Norrmann, 2008).

Against this background, the aim of this chapter is to present and analyze public policy programs to enhance technology-based entrepreneurial activities and their initial results in Turkey. The chapter is structured as follows: first, general information about entrepreneurship in Turkey is given and then the public programs and schemes implemented in Turkey in the last decade are presented. This is followed by interview findings from Turkish entrepreneurs who benefited from those programs. The chapter terminates with the proposal of some policy recommendations to increase the efficiency of current entrepreneurial support programs. It also highlights some ideas for new programs.

Entrepreneurship in Turkey

Entrepreneurial activities in Turkey are not as advanced as those of the developed countries. Furthermore, early-stage entrepreneurial activities are much lower than those of the developing countries; however, established business entrepreneurship activities are relatively more developed than those in most of the other developing countries (Karadeniz & Ozdemir, 2009). According to the Global Entrepreneurship Index (GEI), Turkey's rank is 37 among 137 countries. GEI is a composite indicator that measures both the quality of entrepreneurship and the extent and depth of the supporting entrepreneurial ecosystem by measuring the 14 components that are believed to be important for the health of entrepreneurial ecosystems. According to the profile of Turkey in the GEI report, the strongest area of entrepreneurship in Turkey is product innovation and the weakest area is risk acceptance. Surprisingly, start-up skills, high growth, and risk capital are also strong areas (Ács, Szerb, & Lloyd, 2018).

Despite the fact that there are important areas to be improved, entrepreneurship in Turkey is no longer in its infant stage. Especially after the 1990s, through the help of increasing support of public and private institutions, the quantity and quality of entrepreneurial activities have started to increase. Each year 58,000 companies were established and 14,400 companies were liquidated on average, during the last 10 years (TOBB, 2018). However, the most important thing is the number of companies that develop value-added products and services instead of low value-added ones. Nevertheless, there are no data available to show the percentage of those enterprise shares in total.

In Turkey, 99.8 percent of enterprises are categorized as small- and medium-sized enterprises or SMEs (Turkish Statistical Institute, 2018). It indicates the importance of SMEs for the Turkish economy. Based on this fact, governments have been placing special importance on developing SMEs and individual entrepreneurs since the mid-1990s. Government's emphasis on this issue can be observed from the public policy documents including state development plans and related strategies and action plans. Moreover, since the beginning of the 2000s, research and development (R&D) activities have started to be a significant strategic focus area for the state. R&D support mechanisms by the public were put into force and entrepreneurship supports have also started to give a particular importance to technology-based business ideas. Together with these developments, R&D expenditures and the ratio of gross R&D expenditures to GDP have increased tremendously during the 2000s and 2010s. This ratio was 0.53 percent in 2001; but in 2017 it increased to 0.96 percent.

Public Supports Programs for Entrepreneurship in Turkey

Support mechanisms for entrepreneurs in Turkey are provided by public and private institutions – programs that include both financial and non-financial supports. Entrepreneurs in general need financial support to diversify or spread the risk of the start-up, to accumulate start-up capital and to finance growth and expansion. But financial support is not enough to create successful entrepreneurship. Non-financial supports are also important, and, sometimes, more important than the financial ones (Gnyawali & Fogel, 1994). In many countries such as Turkey, entrepreneurial supports first cover financial support and later on incubation (office) support. However, after the year 2000, new support schemes have been introduced in Turkey due to the lack of impact of previous programs.

Public entrepreneurship support mechanisms in Turkey started later than most of the other developed countries. At the beginning of the 1990s, several institutions were established by the government to support entrepreneurship, and with the help of those institutions, the number of support programs started to increase during the 1990s. However, those support programs did not focus especially on technology-based entrepreneurship, and therefore, all entrepreneurs, no matter what their focus was, were able to get benefit from these programs.

The first direct and focused public support program oriented to technology-based entrepreneurship was the *Techno-entrepreneurship (Teknogirism)* program, which was started in 2009. Before this program, there were different indirect support mechanisms provided by KOSGEB, which is the public organization that supports small- and medium-size companies, and the Ministry of Industry and Technology, which supported all types of entrepreneurs.

KOSGEB is the abbreviation for the Small and Medium Enterprises Development Organization of Turkey, which was established in 1990 with the mission of increasing the share of SMEs and entrepreneurs in economic and social development by providing support and other services to improve their competitive power. KOSGEB mainly helps small- and medium-sized companies

stay competitive with the help of new technological developments. The support of technology-based start-ups has not become the core activity of this organization, even if there are a few technology-based businesses benefiting from KOSGEB support programs.

TUBITAK is the Scientific and Technological Research Council of Turkey, which is an autonomous institution established in 1963 and governed by a Scientific Board whose members are selected from scholars from Turkish universities, industry, and research institutions. It plays an important role in supporting innovation and R&D research in universities and other public and private institutions. A particular support of technology-based start-ups has only started in 2012. TUBITAK, similar to KOSGEB, supports established companies to help them to conduct their R&D projects.

The mission of the Ministry of Industry and Technology (MIandT) in Turkey is to develop a highly competitive and sustainable production infrastructure based on high-technology and smart production systems with the help of science, technology, and industrial policies. Based on this mission, one of the objectives that MIandT focuses on is to initiate the digital transformation of companies to increase their capacities for innovation and design (MI&T, 2017). To achieve this objective, both direct and indirect support mechanisms were developed by the Ministry especially to enhance technology-based entrepreneurship in Turkey.

An overview of the entrepreneurship-related public support programs and their content are provided in Table 1. In total, there are 15 entrepreneurial support programs that support the creation of new and, hopefully, successful businesses. The specific foci of these programs can be grouped into incubation and office support, training programs, and financial support.

In the following section, we introduce and discuss the public support programs that provide incubation and office support.

Incubation and Office Support Programs for Entrepreneurs

Technology Development Centers (TEKMER) Program

In Turkey, entrepreneurial support programs started at the beginning of 1990s with the introduction of Technology Development Centers (TEKMER). The main aims behind the establishment of these centers were to support technology-oriented small and new businesses, to foster university–industry collaboration and to create technology-based academic start-ups. KOSGEB established these centers in cooperation with universities and regional chambers of commerce and industry. TEKMERs are physical buildings that provide tax exemptions, free incubation, and easy access to government financial supports for technology-focused entrepreneurs. The selection is made on the basis of the entrepreneurs'/firms' project focus on technological orientation and innovativeness. Thus, the majority of the tenants are entrepreneurs that specialize in industries including electric and electronics, communication, IT, and advanced machine technologies (Akcomak, 2009).