
Sustainable Business Development
Managing Change in an International Context
Arie Hans Verkuil Editor
Start-up Cultures in Times of Global Crises
Sustainable and Innovative Approaches
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Sustainable Business Development

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This open access book series focuses on the key success factors for sustainable business transformation, including the efficient use of resources, the systematic consideration of relevant aspects and technologies of digitalization, and the involvement of all relevant stakeholders. Furthermore, it identifies risks and opportunities for businesses arising from the climate crisis and digitalization and explores solutions to prevent or minimize negative effects. The series takes a multi-faceted, multi-disciplinary approach by integrating economic, sustainable, and technological perspectives. It welcomes monographs and contributed volumes from senior and promising young scholars.

Arie Hans Verkuil
Editor

Start-up Cultures in Times of Global Crises

Sustainable and Innovative Approaches

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ISSN 3004-9644 ISSN 3004-9652 (electronic)
Sustainable Business Development
ISBN 978-3-031-53941-1 ISBN 978-3-031-53942-8 (eBook)
https://doi.org/10.1007/978-3-031-53942-8

This Springer imprint is published by the registered company Springer Nature Switzerland AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Contents

Chapter 1
Introductory Chapter: Prospects for Sustainable Business Development

Arie Hans Verkuil, Andreas Hinz, Uta Milow, and Mahmoud Al-Kilani

Abstract In the introductory chapter the editors describe the dimensions of sustainable business development from a fundamental and international perspective and encompass aspects of environmental efficiency, social equity, and economic profitability. In addition, they give a short overview of all chapters and the authors.

Keywords Sustainable business development · Managing change · Start-up cultures

Sustainable Business Development

With this first volume, we are launching a new book series on sustainable business development. This book series aims to analyze the state of the art of sustainability and entrepreneurship in an international, comparative context and to illustrate it with examples of good practice. In doing so, we address both a scientific and a practice-oriented audience seeking recommendations for building sustainable business development and stimulating further scientific discussion.

Annual reports, business plans, and mission statements often contain the claim of a particular company to operate sustainably. On closer inspection, however, it becomes clear that many companies, especially small and medium-sized ones, are overburdened with the task of developing a sustainable approach. The question also arises on a societal level. Are we going to switch the economy of post-industrial societies to CO_2 emission-free production and services in the foreseeable future, or are we going to remain stuck in sustainable rhetoric?

The editors of this book series have a vision. They want to be the intellectual link between the socially postulated demands of sustainable development and the

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A. H. Verkuil (ed.), *Start-up Cultures in Times of Global Crises*, Sustainable Business Development, https://doi.org/10.1007/978-3-031-53942-8_1

optimum of what is achievable in everyday business. For us, sustainable business development is a strategic approach in which companies align their business models, operational processes, and decision-making to achieve long-term economic success while minimizing negative environmental impacts, assuming social responsibility, and achieving positive impacts on society and nature at the same time. It is about integrating environmental responsibility, social equality, and economic profitability into a company's core business.

In political and scientific discussions, we hear time and again that, mathematically and climatically speaking, small advances are of little use as long as total emissions of harmful greenhouse gases continue to increase because the most emitting nations are too sluggish in switching to a sustainable economy. We believe this attitude is dangerous because, after all, substantial changes can only be prepared and implemented in detailed steps. We believe in the law of critical mass.

The law of critical mass, the tipping point theory, can also be applied to the field of sustainability from a sociological perspective. It describes the point at which a certain number of individuals take actions and make changes that lead to broad, systemic change. In the field of sustainability, this means that many small changes over time can lead to a broad, consensus-based change process with lasting impact (Ritchie et al., 2021).

The following parameters have a catalytic effect:

- The rule of diffusion of innovations: Developed as early as the 1960s, the concept of diffusion of innovations states that new ideas and practices spread through a population or community. If many people make small sustainable changes and share their experiences, these practices can gradually be adopted by others. This process can eventually lead to a consensus and help sustainable practices become the norm. This diffusion is valid for many settings and cuts across sectors (Brown & Cox, 1971; Kaminski, 2011; Oldenburg & Glanz, 2008; Robertson, 1967).
- The impact of social movements and activation mechanisms: Social movements that address an issue or a social calamity can gain a critical mass of supporters to effect change at the political, social, or economic level. Collective action, whether in the form of demonstrations, petitions, or campaigns, raises awareness of sustainable issues and forces society to look. When a sufficient number of people are mobilized, this has a significant impact on policy makers and the business community through dissemination in media and social networks (Amenta & Polletta, 2019; Lopes, 2014; Zald et al., 2005). Social movements create new social norms over time because they change collective behaviors. Broad social change through norm-building, morality, and social pressure: At the same time, social pressure for political action is increasing (Gunningham, 2017; Stern et al., 1999).
- The increased responsibility of educational institutions: Elementary schools, secondary schools, as well as higher education institutions play a critical role in shaping a sustainable society. By integrating sustainability into institutional practices, policies, and decisions, many small changes can help sustainable

approaches become the norm and lead to institutional change (Wals & Benavot, 2017; Žalėnienė & Pereira, 2021).

Managing Change in an International Context

In our view, a very effective and sustainable parameter is the international development and maintenance of networks and cooperations. This is our core business. The build-up refers to cooperations with universities as well as those with companies. The exchange of knowledge between different actors such as companies, NGOs, governments, and civil society on different continents drives sustainable change. By sharing knowledge, resources, and best practices, many small changes are coordinated on a broader scale. These forces reinforce each other and create intellectual potential for action. It is about mutual learning and knowledge sharing: Encouraging a learning culture and facilitating knowledge sharing across different places enhance the effectiveness of change management efforts. Sharing best practices, lessons learned, and success stories from various regions will be bundled.

Managing change in an international context presents unique challenges and requires careful consideration. Change initiatives must take into account cultural differences and sensitivities in different countries and regions. What works in one cultural context may not work in another. Understanding and respecting cultural nuances is crucial to successful change management in an international context. Therefore, we work with our scientific partners around the world and in particular in Asia, North and South America, and Europe

We consider that effective communication is vital when managing change internationally. Language barriers and different communication styles have an impact for the understanding and acceptance of change. Clear and consistent communication, tailored to the cultural context, is essential for engaging stakeholders and conveying the rationale behind the change.

We will focus our research on different local contexts and its adaptation: change initiatives should be adapted to the local context. This involves considering local laws, regulations, and business practices, as well as the social and economic conditions in each country. Adapting the change strategy and implementation approach to fit the specific needs and expectations of each location is mandatory for success.

Let us now look at the thematic fields of the present book series. The advantage of a series is that we can describe the dimensions of sustainable business conduct in all its facets. In addition, a periodically published medium enables us to publish long-term studies.

We will look at the social dimension of sustainable business development: How can sustainable human resources management and employee engagement be established? How do we build a culture of stakeholder engagement in dialog processes? How can entrepreneurship fulfill its role of social responsibility and toward the common good? We will also focus on sustainable supply chains and procurement

measures, the role of entrepreneurship in development processes and related topics in the coming years.

Our institute and our partners have a lot of experience and expertise in the assessment and development of sustainability reporting and transparency. We will present standards and guidelines for sustainable reporting and describe corresponding trends.

Sustainable business development refers to a holistic approach in which companies align their economic activities with the environmental and social needs of society. The aim is to reconcile long-term economic success with protecting the environment and promoting social well-being.

Start-Up Cultures in Times of Global Crises: Sustainable and Innovative Approaches

This volume deals with start-up cultures in times of global crises and asks for sustainable and innovative approaches.

Startups should aim to create a corporate culture of resilience and adaptability, especially in times of global crises. In view of global crisis phenomena such as pandemics, economic turbulence, or environmental crises, it is important that startups are able to adapt quickly to new circumstances and respond flexibly to change. Important insights in this regard were gathered in the COVID 19 pandemic (Kuckertz et al., 2020)

We describe startups that focus on sustainable business models and take social and environmental responsibility into account. Innovative approaches that aim to solve global challenges such as climate change, poverty, or inequality can not only have a positive impact, but also have the potential to achieve sustainable economic success.

A larger proportion of our startups are dealing with digitization in their business models. Digital solutions, platforms, artificial intelligence, big data, and blockchain are technologies that are being used to open up new markets.

In times of global crisis phenomena, startups can benefit from collaboration and networking. Collaborations with other companies, research institutions, government organizations, or NGOs help to create synergies, share resources, and develop innovative solutions.

It is important to note that the specific approaches and strategies for startups depend heavily on their industry, market segment, and individual goals. There is no universal recipe for success, but the above aspects are clues to succeed in a rapidly changing global environment.

A Look at the Contributions

This volume contains two parts. The first deals with basic and principal findings on startups and entrepreneurship and studies from a Swiss perspective. This has resulted in seven chapters. The second part of the book in turn focuses on six chapters with case studies in which the international dimension has been included. Corresponding country examples round these off. An epilogue and an outlook conclude this volume.

In Chap. 2 of this book, Arie Hans Verkuil and Angela Milesi address the central question of what pro-socially oriented entrepreneurs need to meet today's challenges. Along the educational mission statement of the School of Business, University of Applied Sciences Northwestern Switzerland, it is defined what is meant by innovative, responsible professionals and managers. Subsequently, exemplary challenges of the twenty-first century are named under the keywords "networked" and "dynamic" world. Finally, the answer to the guiding question of the essay follows. With its fundamental character, this essay addresses at the same time the students and teachers in the education and training of the School of Business and wants to stimulate them to think about and discuss the orientation and the benefit of their "mission based" education.

In Chap. 3, Uta Milow and Arie Hans Verkuil shed light on pro-social and other motivations of innovative startups. They postulate that startups help to increase the sustainability of activities in our society. They describe the Swiss Innovation Challenge, a business plan competition, and examine participating startups in terms of their motivations for starting a business. They also develop a detailed analysis of their sustainability orientation.

Chapter 4 by Christoph Steinebach and Christian Bucher examines resilience patterns of startups and presents corresponding tools to develop resiliently. When coping with general and specific risks, the resilience of the participants as well as the company as a whole ensures optimal development. From a systemic perspective, conditions for successful coping can be named. It becomes apparent that the development of suitable strategies and plans is just as important as the consideration of one's own needs and the development of one's own competencies.

In Chap. 5, Barbara Eisenbart and Patrick Klotz examine the use of a digital maturity model for SMEs in the context of digital transformation. While digital transformation is widespread in large companies, there is great potential for startups and SMEs that have yet to take advantage of this opportunity. This paper aims to raise awareness of digital transformation among startups and SMEs by developing a digital maturity model specifically designed for internationally distributed work. The model serves as a framework for startups and SMEs to understand which dimensions influence and are important for digital transformation and which specific questions are relevant for each of the dimensions.

In Chap. 6, Dario Meyer and Rolf Meyer examine the situation of people with a migration background in Switzerland and their share of entrepreneurs. They ask who the entrepreneurs with a migration background in Switzerland are and what

their motivations and challenges are. This chapter is based on data from the Swiss Federal Statistical Office and a written survey of new entrepreneurs who started their business between 2014 and 2019. In the overall sample, 63 entrepreneurs with a migration background were interviewed. The knowledge gained can help providers of entrepreneurial support services to better target their offerings and attract both native and immigrant entrepreneurs to the same offerings, as they are all entrepreneurs first and foremost.

In Chap. 7, Rolf-Dieter Reineke and Oliver Gottschall examine the sustainability of entrepreneurship in an international context in a comparative study. Globally, the focus on ESG (environmental, social, and governance) issues has increased significantly in recent years. This is also true in Asia, where more and more Asian countries are committing to setting emissions reduction targets. They emphasize that sustainability reporting has an impact on companies' operational, financial, and market performance, although this varies widely by industry.

In Chap. 8, Volker Schulte and Andreas Hinz interviewed Ukrainian and Russian migrants who have either already founded a startup in the diaspora or intend to do so. The two diasporas are compared in terms of their opportunities in the international labor market and where they can be entrepreneurial. They have combined this with extensive source research. Individual statements are quoted. Due to the delicate nature of statements and at the request of the interviewees, they have been anonymized. The new waves of migration are analyzed and classified in this article in a historical context with earlier waves of migration.

In Chap. 9, Volker Schulte and Beat Birkenmeier deal with the international subsidy and promotion policy of state actors in favor of startups. In doing so, they identify the advantages and disadvantages of such subsidy policies. The comparative study considers European, Israeli, and Asian perspectives.

In Chap. 10, Roselina Ahmad Saufi and her colleague Wai Hong Tan analyze social entrepreneurship in Malaysia as part of an empirical study. Social entrepreneurship plays a central role in the economic well-being of the country. It promotes job creation, encourages innovation, and provides community development and collaboration. The authors identify the key drivers of social entrepreneurship and describe key factors such as attitude, subjective norms, and awareness.

Truong Minh Chương wonders in Chap. 11 why he thinks there are few innovations in Vietnamese startups and SMEs. Entrepreneurship and innovation are topics that have also attracted a lot of interest in Vietnam in recent years. They are expected to develop national economies. The Vietnamese government has made many efforts and policies to develop E&I and achieved some good results, but not as high as expected. Innovation in Vietnamese startups and SMEs is still limited. This paper will explain the reasons for this fact. To understand the overall picture of Vietnamese innovation, data published by the World Bank, OECD, and GMI were analyzed. Then, two studies on Vietnamese startups and SME innovation are presented.

Leo Aldianto and Grisna Anggadwita examine how effective story telling is in increasing entrepreneurial motivation among visually impaired people in Chap. 12. People with visual impairments are limited in performing socioeconomic activities. Entrepreneurship is an attempt to promote the active participation of visually

impaired people in improving their socioeconomic status. Managing motivation is critical to enhancing the self-confidence and potential of people with visual impairments. Storytelling is one method that is considered suitable to cognitively stimulate visually impaired people to generate entrepreneurial motivation. Therefore, the purpose of this study is to determine the effectiveness of the storytelling method in increasing the entrepreneurial motivation of visually impaired people. This study used a quasi-experimental design comparing treatment and control groups. Pretest and posttest results were statistically analyzed. This study was conducted in a social institution for the visually impaired in Indonesia.

In Chap. 13, Thomas Thiessen and Gerrit Neuhaus use the example of the future field of urban farming to address the question of how startups and companies can tap into new markets through innovative capabilities in the face of massive social challenges. The focus is on urban farming as an innovative business model for the food sector and possible criteria for sustainable urban development. Using current practical examples, the urban farming market will be made tangible and the interface of the topic area with sustainability will be discussed. In this way, potentials for newly emerging markets and the broad spectrum of actors involved will be made visible. At the same time, the challenges for sustainability-oriented innovations are described.

Volker Schulte and Ivan Köhle have written an epilogue in Chap. 14. In it, they develop an analogy of economic crises over three millennia and ask how people dealt with the crises of each era.

In Chap. 15, Arie Hans Verkuil ventures an outlook. With reference to the previous Chap. 14, he states that different epochs were confronted with different economic, social, and ecological challenges. The challenges of our time—as described in his second chapter—are demographic, technological, and ecological. Just as each epoch tried to solve the specific challenges of its time with the methods available to it, the solution approach of our time is pro-social sustainable business development, which can lead to the solution models described in this volume as examples.

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Part I
Fundamentals of Sustainability and Start-Up Innovations

Chapter 2
Challenges for Start-Ups and SME in the Twenty-First Century

Arie Hans Verkuil and Angela Milesi

Abstract The following essay examines the mission of the School of Business at the University of Applied Sciences Northwestern Switzerland and the key question of what pro-socially oriented entrepreneurs can contribute through start-ups and SMEs to meeting the challenges of the twenty-first century. The mission is: "We educate innovative, responsible specialists and managers for an interconnected and ever-changing world." Along the mission, it defines what can be understood by "innovative and responsible specialists and managers." Next, exemplary challenges in the twenty-first century are identified under the keywords "interconnected" and "dynamic" world. Finally, the answer to the guiding question of the essay follows. With its fundamental character, this essay addresses besides other interested readers in particular business students and wants to stimulate them to think and discuss the orientation and the benefit of their "mission-based" education.

Keywords Innovation · Ethical principles · New solution strategies · Pro-social entrepreneurship

Definitions

Innovation

Innovation is a multi-layered term that cannot be clearly grasped or defined. One major reason for the lack of a universally valid definition is the variety of contexts in which innovation is used. What is considered an innovation in areas such as technology, business models, products, or services may be irrelevant in another context. Moreover, what is considered an innovation is often subjective because the assessment depends on individual values, beliefs, and preferences. Finding a general

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A. H. Verkuil (ed.), *Start-up Cultures in Times of Global Crises*, Sustainable Business Development, https://doi.org/10.1007/978-3-031-53942-8_2

definition that is valid for all contexts is therefore difficult. Instead, descriptive definitions are often used to indicate the context and perspective from which the innovation is viewed. For the context of economic development, such a descriptive, contextual definition is already at the beginning of Joseph Schumpeter's use of the term innovation. He first presents the idea of innovation in 1911 (Schumpeter, 1911). As an independent term, he uses innovation from 1939 (Schumpeter, 1939). He sees the essence of innovation in the "implementation of new combinations," which does not take place continuously, but "discontinuously." According to this view, optimizations of existing products would not count as innovations, but inventions would. However, inventions per se are not actual innovations, but at best prototypes or illustrations. The decisive factor is rather the implementation of a new technical, organizational or market solution and thus the "innovation process from the idea to its realization." An invention thus only becomes an innovation through its application. According to Schumpeter, the development of a new sales market, the conquest of a new source of raw materials or semi-finished products or the implementation of a reorganization within an organization can therefore also be counted as innovations. In this sense, innovators bring fundamentally new things into the world in order to make living and working together easier, more pleasant, and at the same time more interesting. They see challenges not as problems, but as opportunities.

Responsibility

Responsibility as a term stands for an ethical principle (Jonas, 2020). An ethical principle is a fundamental rule or belief that serves as a guide for behavior. It is a generally accepted rule that is used to make ethically justified decisions and to guide the behavior of individuals or organizations in the interest of living and working together successfully. Responsibility thus stands for the opposite of indifferent or arbitrary behavior. Responsible behavior is tied to the motives for action (motivation) of responsible individuals. Underlying a particular behavior or action is a person's inner drive, which also determines the nature, direction, and intensity of behavior or action (Reeve, 2016). In contrast to deontological approaches to ethics, which judge the moral quality of an action not from its consequences but from its intrinsic intentions (Schmidt, 2011, pp. 43–49), we do not consider the motivation or the "good" intentions as sufficient for the ethical evaluation of an action. Likewise, we do not consider the contrary approach of consequentialist ethics to be sufficient (Darwall, 2007). Consequentialist ethics looks solely at the effect of an action and judges the value of an action from its resulting consequences. If the consequences are morally desirable, so is the action, regardless of the associated intention or motivation to act.

We consider the intention to act to be just as important as the effect of an action. From our point of view, the intentions to act, which are bound to certain motives, must remain connected just as much as the effect of an action, if responsible action

is to be taken. Only when the intention and the effect of an action are connected can the acting subject actually be held accountable for his deeds in an ethical sense. Thus, if a person wants to act responsibly, he has to account to himself and to others both for his motivation and for the resulting effects. Thus, acting responsibly contrasts to a certain extent with, for example, acting in a purely (legally) compliant manner, which is oriented toward avoiding punishment or sanctions. Those who act in this way can also shamelessly exploit loopholes in the law or, in extreme cases, act in violation of the law if it can be assumed that they will not be held accountable by third parties, and thus gain an advantage that is justified from a subjective point of view. This motive for action corresponds to a purely extrinsic motivation. Such a motivation exists when external circumstances motivate an action, e.g., a financial necessity or even compliance with mutual agreements, contracts, or legal regulations. Reeve's definition, on the other hand, focuses on intrinsic motivation, "the inner drive of a person that leads to a particular action or behavior," while also including the effect of the resulting action—"[the inner drive ...] which determines the nature, direction, and intensity" (Reeve, 2016).

Here, an analogy may be drawn to the definition of innovation according to Schumpeter above. Relevant for responsible action is not the idea, in the sense of an intention to act, but only its realization through the actual implementation of the intention into action. In this sense, taking responsibility means keeping promises or agreements to oneself (self-commitment) and/or to third parties, being accountable to oneself as well as to others for one's resulting actions and their consequences, and bearing the resulting consequences. A "good" motive is not sufficient to justify one's own actions and their consequences. Motives and their concrete realization must be consistent.

Professional and Managerial Staff

Specialists and managers are persons who have specialized knowledge for solving problems in a specific delimitable field of action. An example of a specialist would be a software programmer or IT supporter who can draw on his or her own knowledge or problem-solving skills to solve problems on his or her own responsibility and independently of recourse to the line manager. The higher the division of labor in advanced economies becomes, the more important skilled workers with their specialized knowledge become.

It is more difficult to define what is meant by executives ("managers"). This is especially true if it is implicitly understood to mean leaders. The spread of the term "leadership" can be traced back to a large extent to John P. Kotter. As early as 1990, the Harvard professor stressed the difference between management and leadership (Kotter, 1990). He later argued that managers tend to be administrators, while leaders are visionaries (Kotter, 2008). According to Kotter, there are three core processes to manage in each area.

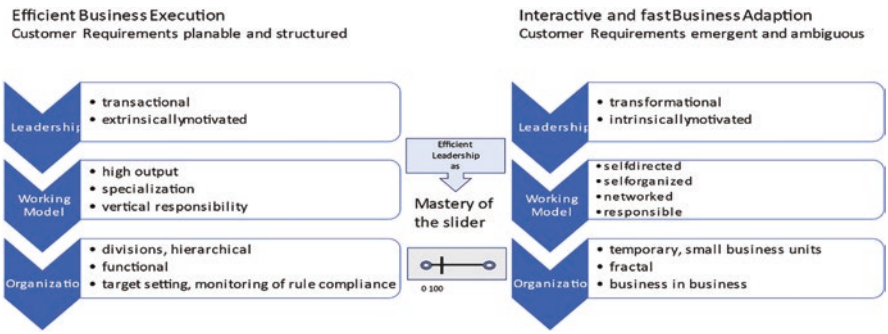

Fig. 2.1 Ambidexterity of leadership. Own representation, adapted from Petry, T. (Ed.). (2019). *Digital Leadership: Erfolgreiches Führen in Zeiten der Digital Economy*. Haufe-Lexware, p. 59

Management:

1. Plan and budget
2. Organize and fill positions
3. Controlling and problem solving

Leadership:

1. Set the direction
2. Align the employees accordingly
3. Motivate and inspire

A successful company needs both, and both functions can and must be combined in one leader, depending on the tasks and roles in the company. The right balance between management and leadership is important. Too much management causes the organization to stiffen internally; too much leadership lacks discipline and structure. This can be ideally illustrated in the image of ambidexterity in leadership (Fig. 2.1):

Summary of Definitions

Innovative and responsible specialists and managers bring fundamentally new things into the world from various aspects. Professionals, for example, develop and implement new solution strategies for existing problems or develop new products and services based on their expertise. Managers contribute to cost reductions and efficiency increases in their organizations through process innovations, and leaders promote transformation processes that fundamentally realign organizations and thus make them more competitive and more able to survive.

Responsible professionals, managers, and leaders are accountable to themselves and others for their motives and the impact of their actions and help to make living and working together easier, more successful, more pleasant, and at the same time

more interesting. They view challenges not as problems, but as opportunities. This is particularly visible in the case of the so-called entrepreneurs. In a start-up or existing SME, they may combine various characteristics of specialists, managers, and leaders in equal measure if they are responsible for the entire process from generating ideas for a new product or service to planning its implementation in a suitable business model to its implementation challenges of a networked world.

The basis of the networked world is information and communication technology. Information and communication technologies have a long tradition. The world has long been interconnected by postal traffic and telecommunications means such as radio, television, telephone, fax, etc.

A real technological leap came at the beginning of the millennium with the breakthrough of the basic ICT technology of the Internet and technologies based on it (Fig. 2.2):

The expansion of fixed and mobile networks dramatically increased "interconnectivity" and led to the rapid spread of social media via mobile telephony, for example.

In the business environment, digitization progressed mainly for the following reasons:

1. Digitization of business processes to increase efficiency (88%) and the associated reduction in costs (61%)
2. Transparency of processes (79%)
3. Satisfy the wishes of the clientele (64%)

Combined with ever more powerful computers that process and store large amounts of data and the further development of sensor technology, this opened the way to new business processes in the so-called Internet of Things (IoT): people, machines, and objects are connected in it (Erner, 2019, p. 58). The physical and virtual worlds form a so-called cyber-physical system (CPS). This was the starting point for the fourth industrial revolution under the keyword Industry 4.0.

Examples include the area of machine diagnostics and maintenance as well as the optimization of production processes and supply chains, including flexible adjustments to the required product quantities based on feedback (Erner, 2019, p. 8), and last but not least, other technologies such as blockchain and the so-called artificial intelligence. Blockchain technology can be used in various business models for data storage. It is best known as the basis for cryptocurrencies, which have a still unpredictable impact on the financial system. AI helps to identify patterns in large amounts of data with the help of machine learning. This helps, for example, to detect rare diseases in medical diagnostics or favors the production of individualized goods by recognizing consumer behavior. The same applies to the handling of purchase data in general. They are digitized and analyzed. Intelligent communication systems work out new solutions quickly and specifically (Negri, 2019, pp. 75–76). The risk of not liking a new product is significantly reduced (Keller et al., 2019, pp. 5–6). In parallel, the clientele can compare products transparently. This has led to striking changes in demands and purchasing behavior over the last 10–15 years compared to before the turn of the millennium (Werner, 2019).

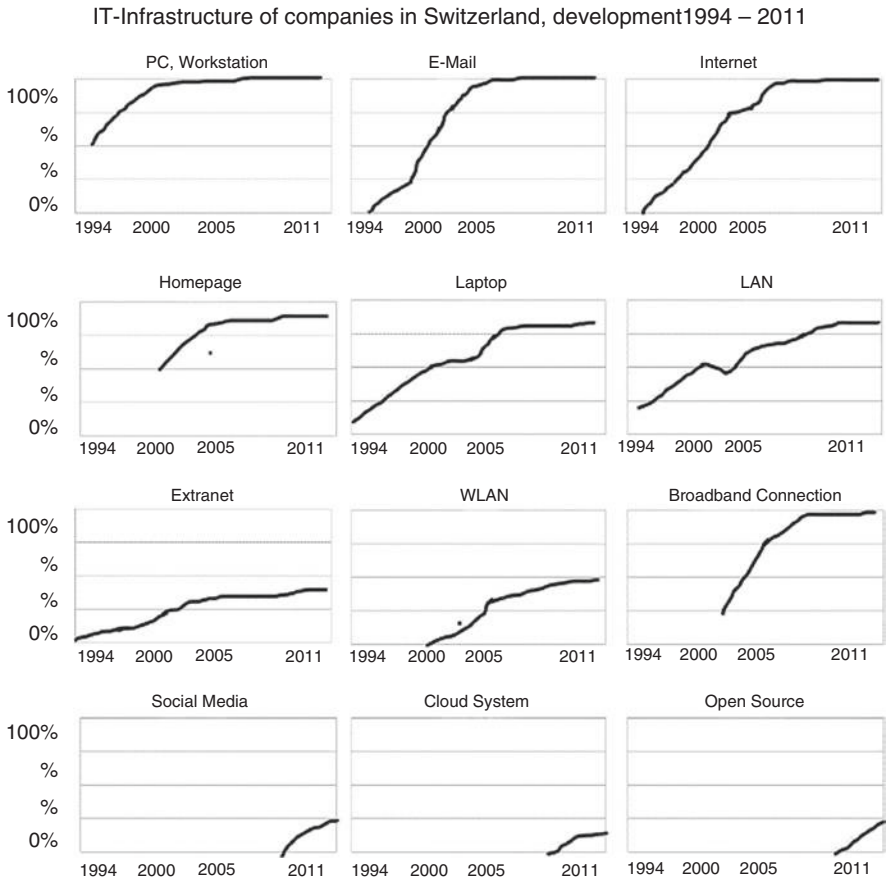

Fig. 2.2 Technological leap at the turn of the millennium, using Switzerland as an example. Own presentation, taken from the Swiss Federal Statistical Office

Digitization is not only affecting the secondary sector of the economy as Industry 4.0. The tertiary sector of the economy is also affected. Here, we speak of Service 4.0, which is making its way into the "business to business" and "business to customer" sectors (B2B and B2C). IT-supported e-services and e-commerce are being supplemented with apps and assistance systems provided by cyber-physical systems.

Bosse and Zink note that technological innovations allow products and services to be offered faster, more individually, more customer-oriented, and at lower prices (Bosse & Zink, 2019, p. 58). The trend toward faster customization and faster delivery of products and services will continue in the near future (Negri, 2019, p. 10).

Challenges of a Dynamic World

The growing number of system elements and their interactions creates a dynamic state, which can be described with the term VUCA world. VUCA stands for volatility, uncertainty, complexity, and ambiguity. Complexity is of central importance in the sense that the term VUCA is mostly used in connection with characteristics of complex situations. In this context, one can speak of dynamic complexity (Scheinpflug & Stolzenberg, 2017, p. 1).

Companies have to cope with "two different kinds of complexity" (Senge, 1996). With the so-called detailed complexity, the problem can be worked through according to a precise plan of action. In the case of "dynamic complexity," one and the same intervention can have different effects in the short term and unexpectedly than planned in the long term. The interplay of cause and effect cannot be surveyed on the basis of knowledge and experience. This makes it impossible to forecast future developments. Surprises or side effects must consequently be included unknown (Grösser, 2012, pp. 67–72).

SME companies have been exposed to the effects of such dynamic complexity for years now (Negri, 2019, p. 75). With increasing digitization, systems are becoming both more susceptible to failure (internal) and more vulnerable (external). Companies must protect themselves against both by means of data backup and other measures. Cyber security is a keyword for vulnerability due to cybercrime. Furthermore, due to globalization, competition and rivalry have expanded from often local to international. Companies have to compete with companies from abroad (Negri, 2019, p. 75). This has also resulted in social changes.

Other key system elements shaping the VUCA world are information and communications technology based on technological progress with its global impact on international trade, the consequences of climate change—as an indirect consequence of technological progress—and the associated trend toward sustainability, and demographic change with its challenges. They are examined in more detail in the following sections.

Internationalization

Technological development based on Internet technology is having an impact on internationalization in the digital sector. Companies use online platforms for trade and offer their products and services worldwide. The same applies to IoT, robotics, and artificial intelligence, which as new technologies support digital global trade, on the one hand, and, on the other hand, have the potential to change it further (Fig. 2.3):

At the same time, this means that international cooperation and partnership are becoming increasingly important. This enables companies to extend their reach beyond national borders and improve their efficiency. At the same time, they must

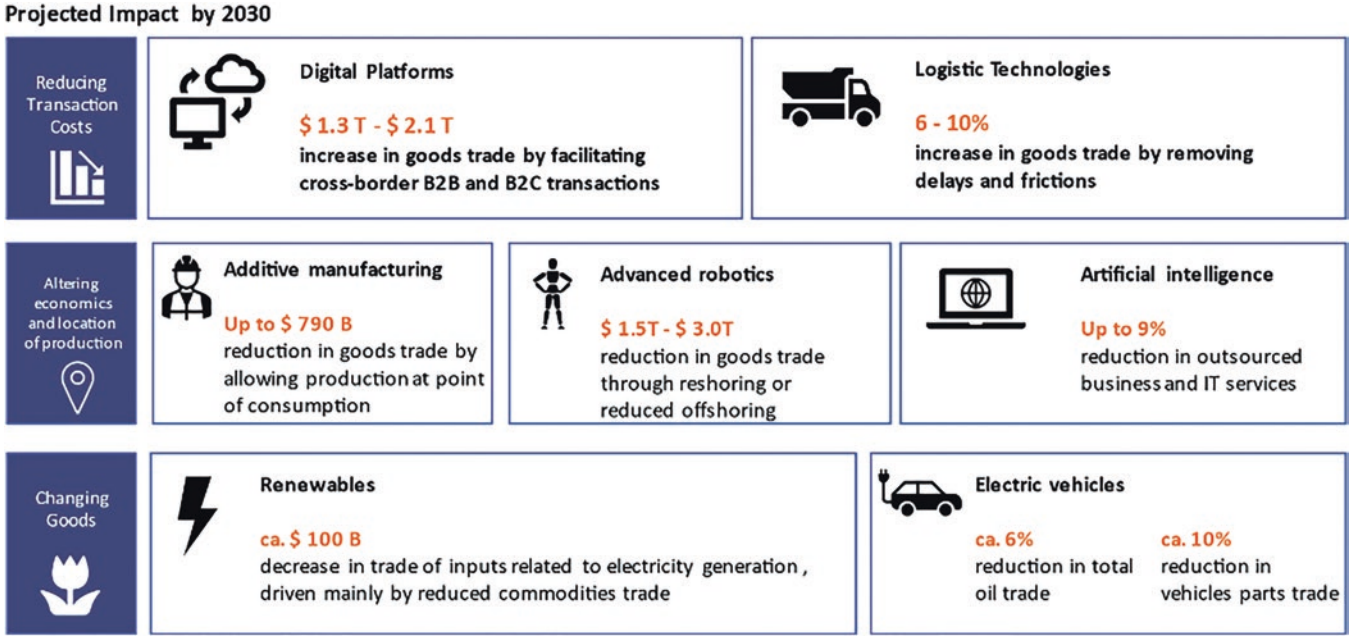

Fig. 2.3 Technological development and impact. Source: IMF; WTO; OECD; UNCTAD; McKinsey Global Institute analysis

ensure that they comply with the data protection and other laws of different countries. Data protection and data security are of paramount importance, not only to gain the trust of international clientele. One example of this is the cyber security mentioned above.

Climate Change and Sustainability

As early as 2007, a survey of 2611 companies conducted by the Cologne Institute for the German Economy as part of the IW Future Panel (Lichtblau & Neligan, 2009) climate change ranked third among future strategically relevant challenges, after raw material scarcity and demographic change (Mahammadzadeh, 2010, p. 47).

Sustainability and social responsibility are gaining in importance as consequences of climate change. The role of demographic development will be addressed in the following chapter.

For many years, the so-called "Earth Overload Day" has shown the date in the year when what the ecological systems can regenerate globally per year is used up. Thereafter, annual consumption exceeds the available resources, and humanity lives until the end of the year according to the principle of overexploitation (Thomaschewski & Völker, 2017, p. 23). Sustainability is the use of resources that takes only as much as can be regenerated, so that nature is not harmed in the long term. The principle of sustainability originates from forest management (Thomaschewski & Völker, 2017, p. 15). If one transfers sustainable management to a company, three pillars of sustainability, the so-called triple bottom line, must be taken into account. The triple bottom line concept calls for simultaneous consideration of environmental, economic, and social dimensions and their interactions.

Ideally, the three dimensions are described as three effectiveness targets or target and measurement systems of sustainability like this:

1. Economically sustainable companies guarantee sufficient cash flow and continuously generate above-average returns for their stakeholders.
2. Ecologically sustainable companies use natural resources only as long as their consumption is below natural reproduction.
3. Socially sustainable companies help society by contributing to the increase of human capital (Thomaschewski & Völker, 2017, pp. 18–19). In this context, human capital does not only mean a purely economic end-means relationship, but the responsible respect for people with their unique and non-negotiable (human) dignity.

With these sustainability goals in mind, a company can embark on the path of sustainability. In doing so, it not only makes a small contribution against the future ecological, social, and economic consequences of climate change, but also reduces the risks of later financial damage with early investments in sustainable products or solutions. The cost of future failures as a result of global warming could significantly exceed the expenditure on preventive investments (Hecht, 2009, p. 157).

If new target groups are also reached through the switch to sustainability, competitive advantages also result (Thomaschewski & Völker, 2017, p. 74). One challenge of global warming that should not be underestimated is greenhouse gas emissions. Here, too, measures for reduction should be aligned with the three pillars of sustainability (Zabel, 2010, p. 25).

Demographic Change

The term "demographic change" neutrally describes the change in the composition and size of the population, taking into account the age structure, birth rates, death rates, as well as immigration and emigration, including nationals and foreigners (bpb Bundeszentrale für politische Bildung, 2016). The increase in life expectancy over the past few decades, combined with the persistently low birth rate since 2004, is leading to an aging population in Europe. According to Eurostat's July 2021 statistics-based article, the EU-27 population is expected to peak at 449.3 million by about 2026 and then gradually decline to 416.1 million by 2100. The EFTA and candidate countries and the United Kingdom will be similarly affected (Eurostat, 2021). In parallel, the average age of the population will also rise sharply at the beginning of the twenty-first century and is expected to stabilize from 2040 onward (Immerschitt & Stumpf, 2019).

Demographic change is causing a reduction in the workforce. The retirement of the baby boomer generation can lead to a reduction in the workforce in companies. This also means a loss of qualified skilled workers. In a 2015 study, the Prognos Research Institute showed that Germany is expected to have a shortage of 1.8 million skilled workers by 2025, four times as many as in 2017 (Ehrentraut, 2015). Using a different approach, a picture emerged in Austria that certainly permits a comparable conclusion. Here, too, finding suitable skilled workers is more difficult than ever before and was seen as the greatest threat to the development of companies. The proportion of companies with major recruiting difficulties rose from 15% in 5 years to over 25% in January 2020, with differences depending on the industry and region. For 36% of companies in Austria, the shortage of skilled workers is associated with a loss of turnover; 9% lose more than 5% of their annual turnover (Lehner, 2020).

The Cologne-based Institut der deutschen Wirtschaft (Institute for the German Economy) also forecasts a long-term decline in economic output for Germany due to a lack of qualified workers. In 2018, the German economy lost more than 30 billion euros or about 0.9% of economic output as a result (Burstedde, 2018).

The shortage of labor will therefore occupy a prominent place among the challenges facing companies in the coming years and may threaten their economic development. At least for the supply of skilled workers, the problem could be temporarily alleviated in part by raising wages—which requires corresponding economic opportunities for companies—and/or with instruments of migration policy.

Contributions of Pro-socially Oriented Entrepreneurship

Entrepreneurs, as innovative and responsible professionals and managers, exploit entrepreneurial opportunities that they discover (Kirzner's opportunities), create themselves (Schumpeter's opportunities) or validate (Fuelistaller et al., 2019, p. 41 ff.). In the twenty-first century, the challenges of a networked, dynamic, and internationalized world play into all these fields of entrepreneurial opportunities. In addition, raw materials are becoming scarce, climatic changes are occurring, and demographic change is reducing the labor force. Pro-social entrepreneurship is facing up to these realities. In doing so, it can draw on the opportunities offered by technological and digital development for the business idea. In turn, pro-social entrepreneurs act responsibly by seeking early solutions to invest in sustainable products or services that help reduce the harmful effects of climate change and address the social impacts of demographic change. They are guided by the three pillars of sustainability with ecological, economic, and social sustainability goals. They will not only be accountable to themselves and others for their purely business (economic) success, but will also be measured by whether and to what extent they have been able to put their motives into practice in a sustainable manner. They will thus learn from their mistakes and see challenges as opportunities to continuously optimize their innovations.

Summary

The mission "We educate innovative, responsible specialists and managers for an interconnected and ever-changing world" provides the School of Business FHNW with orientation on how and in which topics future specialists and managers should be educated. In doing so, we come to the following conclusions:

1. Technological development offers opportunities for regional and international trade as well as potential for addressing the harmful effects of climate change.
2. Demographic change has a significant impact on the available skilled workforce and leads to difficulties in the supply of skilled workers. The impact on the economic development of companies can cause economic performance to decline.
3. Pro-socially oriented entrepreneurship uses entrepreneurial opportunities in start-ups and SMEs to address the challenges of a networked and dynamic world. It is guided by the three pillars of sustainability. Pro-social entrepreneurs will not only be accountable for their business success, but also for the implementation of their motives and the impact of their ethically responsible actions.

Conclusions

These findings lead us to the following conclusions:

Specialists and managers trained along the mission innovatively use the opportunities of technological change and meet the challenges of climate change and demographic development with ethically responsible action. They bring fundamentally new things into the world and are accountable to themselves and others for their motives and the impact of their actions. Ethics plays a central role in this. Prosocially oriented entrepreneurship contributes with responsible management.

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Chapter 3
Pro-social and Other Motivations of Innovative Start-Ups

Uta Milow and Arie Hans Verkuil

Abstract Start-ups can contribute to improving the sustainability of business activities in our society. In this study, start-ups that participated in the Swiss Innovation Challenge, a business plan competition, were examined regarding their motivation to found a company. The research question is, which role pro-social motivations of entrepreneurs play in the founding of a start-up. This was examined with an analysis of the start-ups' motivations in general and secondly with a detailed analysis of their sustainability orientation. First, in a literature review of possible categories of motivations, these were identified: financial motives, self-realization and identity, recognition and status, better working conditions, family tradition, and a pro-social sustainability motivation. Then, semi-structured interviews were conducted with the start-up teams and qualitatively analyzed. Many of the teams mentioned identification with the project and self-realization, this was the dominant motive. While most of the start-ups were profit-oriented, several interviewees also mentioned sustainability motives, with varying priorities. The range of sustainability aspects was particularly wide, also due to the very different business models. Founding teams that included sustainability aspects into their business generally had a higher sustainability orientation. Thus, raising the awareness of sustainable management issues, education, and training could improve the sustainability impact of start-ups.

Keywords Sustainability motivation · Founding · Sustainable entrepreneurship · Start-up · Start-up challenge · Business plan competition

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A. H. Verkuil (ed.), *Start-up Cultures in Times of Global Crises*, Sustainable Business Development, https://doi.org/10.1007/978-3-031-53942-8_3

Introduction

Starting a business requires the motivation of the founders to actually implement a business idea, in addition to financial resources and other suitable circumstances. For a general introduction into the challenges of founding and leading a company, see the introductory chapter of this book. This paper will examine various possible motivations of people who start a business. In this context, motivation is understood as the inner drive of a person that leads to a certain behavior or action and determines its nature, direction, and intensity (Reeve, 2016). In addition to aspects such as earning an income, independence, and autonomy in one's own business, aspects of society as a whole can also play a role (Murnieks et al., 2020). Conceivable and worth investigating is a possible connection that with a socially oriented founding motivation also actual sustainability aspects are considered in a business.

The question of what motivations founders have and what role pro-social, i.e. sustainability-oriented, aspects play in this context is embedded in the examination of the sustainability contributions of start-ups. Pro-social as a term refers to the societal orientation of an action. This not only includes in a stricter sense social aspects, but also other benefits for society like ecologic and economic improvements. In this article, this broad definition of pro-social can be seen as a synonym to sustainable.

Dealing with the consequences of human activity on our planet is a challenge that companies also have to face. They play an important role here, as they decisively influence the consumption of resources, the allocation of goods and thus our coexistence in society (George et al., 2016). The mandate for more sustainability in the Brundtland Report that calls for a preservation of the earth that will be worth living for future generations is still appropriate (World Commission on Environment and Development, 1987). In this report, companies are also made responsible for making their contribution. The term sustainability is understood broadly in this study. It is used in a sense that is later further described with the triple bottom line introduced by Elkington with social, ecological, and economic sustainability (Elkington, 1998). The sustainability topics for companies are wide-ranging and can include energy saving, the use of renewable energy sources, a social treatment of employees, and the consideration of ecological and social aspects in the supply chain—to name just a few examples. With regard to materials consumption in companies, the traditional linear economic model with a large consumption of resources is increasingly being questioned and should be replaced by business models of the circular economy (von Kutzschenbach & Milow, 2019).

Start-ups, like existing companies, need to contribute to greater sustainability (Bocken et al., 2014; Stubbs & Cocklin, 2008). Entrepreneurs who create a start-up identify, develop, and market a future business with a product or service. In doing so, they take risks that they must manage for long-term success (York & Venkataraman, 2010). Compared to existing companies, on the one hand, they have the opportunity to integrate sustainability aspects into their business at an early stage. Later adaptation of a business model might be more expensive than today's

higher investment into the development of a long-term sustainable business model. On the other hand, the production process in the start-up phase is often not yet finally clarified and sustainability aspects are not yet all foreseeable.

In the study described here, entrepreneurs are interviewed about their motivation and the circumstances surrounding their founding. For a start-up to be successfully founded, several factors must come together. The personal circumstances of the founders are one area that includes motivation. In addition to motivation, other personal characteristics such as endurance, self-confidence, risk-taking, etc. are required (Segal et al., 2005; Spence et al., 2011).These will not be discussed further here, nor will the prerequisites of the organization or company and the context.

Start-ups are analyzed where generally the business idea is not at its core focused on improving sustainability. This is the majority of start-ups with the biggest impact on the economy. Most of them primarily want to be successful with an innovative business idea and want to generate profit. Some do so while taking social and environmental needs into account. Few act entirely from an ethical motivation, and still others do not consider sustainability at all. The start-ups in this survey represent a diverse mix of very different business models from different industries and with different motivations. They participated in the business plan competition "Swiss Innovation Challenge." This contest was launched by the University of Applied Sciences and Arts Northwestern Switzerland (FHNW) in 2014. Participation in the competitions is open to start-ups in different entrepreneurial stages as well as to SME. The Swiss Innovation Challenge includes three pitches of the participants with an evaluation of their business ideas and projects by a jury. During the competition, participants can attend free, practice-oriented seminars and coaching sessions. The data from the 2021 cohort were evaluated for this article. Twenty-six teams in the second pitch were ready for an interview.

The research question that this study helps to answer is which role pro-social, that is sustainability-oriented motivations of entrepreneurs play in the founding of a start-up. This will be examined with the survey of their motivations in general (sub-question 1) and then with a more detailed analysis of their sustainability orientation (sub-question 2). The research project aims to contribute to a deeper understanding of the role of sustainability motivation in the founding process. This understanding can be the basis for developing sustainability programs that ideally improve the awareness for societal aspects and related motivations to include these in the founding process.

In the next section possible categories of motivations will be shown in a literature review, followed by the methods used in this study. In the third and fourth section the interviews will be qualitatively analyzed and discussed. Finally, the results will be summarized and completed with an outlook for further research.

Motivations to Found a Company: Theoretical and Contextual Background

Types and Categories of Motivations

This section identifies and categorizes possible motivations for founding a company. Here, only motives for founding are considered, not also those for the growth phase of the start-up or an exit. Furthermore, it is not examined whether and how the motivations have an influence on the success of the company. There are already studies on this, for example an overview in Stephan et al. (2015) or specifically on the influence of CSR in Saha et al. (2020).

The aim is rather to provide an overview of the motives of the start-ups considered and to examine whether and to what extent social motives play a role that could improve the sustainability of the companies. The motives are considered as a snapshot at the time of the interview, so no possible change over time is examined.

Several personal characteristics are needed to successfully start a business. Motivation, in the definition given earlier as a person's inner drive that leads to action, is one area of this. It is ultimately an expression of the manager's values. It has been shown, using the example of sustainability measures, that motivation can promote implementation within the company (Williams & Schaefer, 2013). Other promising personal characteristics are, for example, perseverance, frustration tolerance, and self-confidence (Spence et al., 2011), which are not considered here.

When describing motivations to start a business, several pairs of terms appear in the literature: intrinsic and extrinsic motivation, "push" and "pull" motivation, and "opportunity" and "necessity" motivation.

Extrinsic motivation is when external circumstances motivate an action, for example as a financial necessity or work–family balance. Intrinsic motivations include those that correspond to a person's personal desires (Murnieks et al., 2020). In the case of a start-up, these can be independence from an employer, self-realization or recognition, for example. Societal motives that flow into the founding process can be extrinsic, for example the expectation of customers for a sustainable business management, or intrinsic, when a person wants to contribute out of an inner drive (Murnieks et al., 2020). Intrinsic and extrinsic motives can influence each other and must be seen and should be viewed in context (Murnieks et al., 2020). For example, both financial incentives and pro-social values can lead to a stronger sustainability orientation among entrepreneurs (Baumol, 2016).

From a similar perspective, motivations are differentiated into "push" and "pull." A "push" motivation comes from external pressures with a rather negative connotation, for example, from the need to earn money, whereas the "pull" motivation means one's own (intrinsic) motivation to start, with a rather positive connotation, see, for example, in the case of Segal et al. (2005, p. 44).

Again, a similar idea is taken up by the frequently used distinction between necessity and opportunity entrepreneur. Mota, Braga, and Ratten describe this as the desire to take the opportunity and start a business (opportunity nascent

entrepreneur) and the necessity to do so, usually because there are no good alternatives to generating income (necessity nascent entrepreneur) (Mota et al., 2019; van der Zwan et al., 2016). Since 2001, the Global Entrepreneurship Monitor survey has asked about the motives for starting a business and distinguished between opportunity and necessity entrepreneurship (GEM Global Entrepreneurship Monitor—Motivation, n.d.). Opportunity entrepreneurship is generally considered more innovative and is more associated with developed countries. Necessity entrepreneurship, on the other hand, often copies existing business ideas in order to generate income for lack of alternatives, is less innovative, respectively, and is more likely to be found in less developed countries. In contrast to this view, an examination of the motivation to start a business in various countries shows that start-ups based on a good opportunity cannot be assigned primarily to developed countries.

They found that rather sociodemographic factors such as age, education, and family income play a role in motivation. The dominant motive in various countries was the opportunity to start up, even in the crisis (Mota et al., 2019).

The distinction into only two categories such as necessity and opportunity entrepreneurship does not distinguish the motivation in a differentiated enough way to identify financial, social, and other motives (Stephan et al., 2015, pp. 10, 26). Thus, to answer the research questions, motivations need to be further differentiated. In the following, frequently mentioned motives are sorted and grouped into categories.

Financial Motives

Entrepreneurs with a financial motive want their business to generate a profit or income to support themselves and their family. In addition, a particularly high income or wealth can also be an entrepreneurial motive. Income generation was identified early on as the main motive for starting a business (Schumpeter, 2003 (reprint)). The importance was later adjusted when other motives were identified. In today's view, it is not necessarily the most important motive for founding a company besides personal challenge and better working conditions, but it is still a frequently mentioned one, see, for example, Stephan et al. (2015, p. 25) and Yitshaki and Kropp (2016). Similarly, a study by Amit, MacCrimmon, Zietsma, and Oesch shows that wealth creation is only one of several motives, and not the most important one, for starting a new venture. Entrepreneurs did not assign a higher importance to wealth creation than non-entrepreneurs. In fact, this study found that entrepreneurs accepted the risk of lower income and wealth just to implement their business idea because of other motives (Amit et al., 2001).

In the Global Entrepreneurship Monitor, a distinction is made in the survey with regard to income as to whether one would like to earn a large income, in the sense of opportunity entrepreneurship already presented above, or whether one would like to earn an income at all, since jobs are scarce and alternatives are hardly available (necessity entrepreneurship) (GEM Global Entrepreneurship Monitor Global Report 2021–22, 2022, p. 69). The financial motives can also include the motive of expected business growth, as this is expected to lead to financial success (Stephan et al., 2015, p. 26).

Identity, Self-Realization, and Self-Efficacy
One motivation for a start-up is identification with the company, often through a deep emotional attachment to an industry or technique and especially to one's own project, the business idea. A market need is identified and a solution is found. The realization of the business idea enables the founders to realize their own efficacy, to bring their own business idea successfully to the market, i.e. to face a challenge and learn something in the process (Segal et al., 2005; Stephan et al., 2015). Another term mentioned in this context is passion as another motivating facet of self-realization (Murnieks et al., 2020, p. 132).

Recognition and Status
While the previous motive group dealt with a person's inner satisfaction, external perceptions also play a role in start-up motives. Entrepreneurs may be motivated to gain recognition with their start-up and to improve their social status (Murnieks et al., 2020; Stephan et al., 2015).

Better Working Conditions
Independence and autonomy are identified as motives for founders in several studies and literature reviews (GEM Global Entrepreneurship Monitor Global Report 2021–22, 2022, p. 69; Stephan et al., 2015). Sometimes the comparison is made with the previous job, citing dissatisfaction with the previous job as a motive. Or, to put it the other way round, as an entrepreneur one can have a higher job satisfaction than in the employment before (Stephan et al., 2015, p. 31), which also includes working in a friendly small team.

Family Tradition
Continuing a family tradition is also cited as a motive for starting a business (Global Entrepreneurship Monitor Global Report 2021–22, 2022; Stephan et al., 2015). This can be the desire to bequeath something to one's children, to follow the example of a person one admires oneself, or to be able to continue a family tradition with the ambition to found a business start-up (Stephan et al., 2015, p. 25). The idea here is to position a company sustainably (in an economic sense) in the long term and to be successful. Family businesses have not only financial but also non-financial goals, such as the reputation of the family and the sustainable management of the business over generations (Zellweger et al., 2013).

Pro-social Motivation
Finally, social, environmental, and economic motivations may also play a role in a start-up, which will be summarized here as pro-social or sustainability motivations. In the literature, societal or social aspects are mentioned (Murnieks et al., 2020), which can then more broadly include ecological ones, as these also benefit society, like "community and social motivations" (Stephan et al., 2015). Many aspects can be summarized under the term sustainable motivation, such as a fairer distribution of income and resources, the avoidance or reduction of environmental pollution, the fair treatment and remuneration of employees, and many more (Schaltegger et al., 2018). When sustainability aspects are taken into consideration, personal values play a role (Saha et al., 2020). Both values and derived motivations lead to an

entrepreneurial intention that ideally is followed by an action—the founding of a start-up (Fayolle et al., 2014). Here, values are seen as an aspect in motivation. It has been shown that the motivation of a more sustainability-oriented management depends, among other things, on the level of knowledge about social and environmental contexts (Patzelt & Shepherd, 2010). The social motives in corporate management are further differentiated by Schaltegger and Burritt, in which, in addition to the benefits of a sustainable commitment for society, the benefits for the managers and the company are also worked out (Schaltegger & Burritt, 2018).

The motivations described here can coexist, and with varying weights. Profit orientation and sustainability orientation are sometimes seen as opposites, or at least in the sense that they affect each other (Alberti & Varon Garrido, 2017; Hockerts, 2015; York et al., 2016). For companies that combine both social-sustainability and profit-oriented motivations with for-profit and non-profit aspects, the term hybrid firms or hybrid organizations has become established (Cesinger et al., 2021; Haigh et al., 2015). Sustainability-oriented companies are then understood to be only those that aim to improve sustainability at their core. These are sometimes not profit-oriented, but can be. Overall, a fundamental profit orientation can go hand in hand with consideration of sustainability aspects (Alberti & Varon Garrido, 2017).

While sustainable entrepreneurship is often used to describe start-ups that have a sustainability-oriented motivation at their core and a correspondingly aligned business idea (Bocken et al., 2014; Schaltegger et al., 2018), other start-ups may also have a sustainability motive alongside others. This range will be explored in this study. Murnieks, Klotz, and Shepherd see the need for further research on the influence of pro-social motives in relation to other motives on business formation (Murnieks et al., 2020, p. 133). This study aims to contribute to that.

Method

The approach is explorative, as knowledge in the area of sustainable and other start-up motivations is still limited and continuously growing. In this inductive research design, 26 start-up cases are considered, of which one member each of the founding teams was interviewed. The cases are each considered as a separate "experiment." By looking at numerous cases, the evaluation yields new insights into interrelationships and theories (Eisenhardt & Graebner, 2007).

The interview questions of the semi-structured interviews were derived from the above considerations. To start with, questions were asked about the circumstances of the founding and some facts about the start-up. Subsequently, the interview participants were asked about their motives and the goals of the business idea. This was first done in general terms, before social and environmental motives were addressed. Finally, the interview participants were asked about the general sustainability orientation and the experience in sustainability management of the founding team (Interview guide available on request).

Face-to-face (online) interviews were conducted as it was assumed that the interview participants had little prior knowledge in the field of sustainability. The interview provided the opportunity to ask questions. Compared to an online survey, the interview also has the advantage of a better participation rate. Finally, interviews give the interviewer the flexibility to follow up during the conversation and to include additional questions.

As suggested by Yin, suitable cases were first selected for this iterative, inductive approach (Yin, 2009). For the study, the start-ups were not to be selected based on their sustainability orientation, but to represent the breadth of the start-up landscape. By chance, those with a strong sustainability orientation could also be included. The target group is therefore "conventional" business models without a particular sustainability orientation as this is the majority of start-up activity. The start-ups should either already be founded or be about to be founded, i.e. at least be able to present an elaborated business plan. These requirements are met by the participants in the Swiss Innovation Challenge. Participants were invited for an interview after the second pitch in the 2021 cohort. Of the approximately 50 participants, 26 interviews could be conducted and evaluated. A slight bias toward a certain interest in sustainability topics cannot be ruled out here, as the topic of the interview was announced when the request was made. Due to the selection after the first pitch and the submission of a business plan for the second pitch, the business ideas have a good quality level and are suitable for evaluation. The contest participants come from different industries and have different business models. They come from all over Switzerland and occasionally from neighboring countries.

The interviews were recorded, transcribed, coded, and finally qualitatively analyzed. The codes were based on the interview questions. During the analysis, an overview was first created with the coded texts on the topic of motivation (Gioia et al., 2012). These were then supplemented with suitable answers in related codes, if useful, and the codes were further differentiated according to the above motivation categories in a second step. Subsequently, commonalities and peculiarities were worked out. For the evaluation, the interviews were numbered consecutively from 1 to 26 (number in parentheses behind the quotations below) and translated into English where necessary. Some interviews were already conducted in English.

Analysis of Swiss Start-Ups: Empirical Findings

The 26 start-up teams available for an interview were asked a few facts about the start-up and the company in addition to the actual motivational topics described above. Of the participants, most were in the seed stage (14 start-ups), i.e. in the founding phase with a developed business plan, but in which no sales had yet been generated. As many as 9 start-ups were in the start-up stage with a market-ready supply and initial sales. Three are already established on the market with strong sales growth (growth stage). The vast majority are either purely for-profit (15 start-ups) or have this as their first priority, but also consider non-financial goals (8

start-ups). Three teams indicated that non-profit goals are the main priority, but in principle operations must cover costs (no real non-profit). Eleven start-ups as the largest group can be assigned to the industry "information technology and information services" (categories according to NOGA, Swiss Federal Statistical Office). All other business ideas are spread across various other sectors, from "manufacture of electrical equipment" and "mechanical engineering" to the construction industry and the production of food or textiles.

All but three of the answers to the motivation to found a company included a statement from the area of self-actualization and identification with the project. Typical examples are "The goal is to make the company work, that we have a product that I can stand for, that generates added value for the customers. And also that I like doing it, the personal aspect is also very important" (1). This statement combines two areas that were frequently mentioned: problem solving for a market need and satisfaction with success and, in general, the fun of this work, possibly supplemented with the joy of learning new things. Regarding the former aspect, an example from house construction "I come from construction and got upset that we always make prototypes. So the prefabrication is then zero, and it has extremely many parts. [...] That was the approach, to make a building with as few individual parts as possible, with as much prefabrication as possible" (7), or "It is ingeniously simple, has a very large benefit. That is, my goal is—although I don't know if it will happen—I want to become as big as (name of a successful competitor)" (10). The following statement shows the willingness to learn in the project, "My motivation was to be able to do something that I continue to enjoy and learn a lot from, even if it might not become a big success story," in the same start-up, the market need was also specifically mentioned, "we were about, we do it faster, and Covid showed us that there really is a demand for [...]" (9). These statements show a strong opportunity motivation of the participants. Necessity motivation as explained above was not visible.

While these motives are primarily about personal, inner satisfaction and enthusiasm, some few interview partners also mentioned the need for external recognition and visible success. "When you say you're building a start-up, everyone thinks it's cool. I'd be lying if I said it didn't matter" (1).

While most of the teams generally are profit-oriented, few explicitly addressed financial motives such as income or profit generation or the related variables of sales and growth. "My personal motivation was to take advantage of such an opportunity, even as a relatively young person. [...] and the economic knowledge was just missing, which I now contribute" (16). "In the end, sustainability can never be the top priority. You have to make sales, otherwise you can't continue to run the company" (1). In contrast, two people explicitly mentioned that economic success is not the focus, for example here "so we are not non-profit in the classical sense, but we are impact driven, which means that for us profit maximization is not the priority goal" (12).

About one-third of the respondents explicitly commented on the higher job satisfaction in a start-up as a motivation to become self-employed. Above all, the good cooperation in the team was mentioned, "In the meantime, the cool team that has

been built up also motivates a lot. Interacting with them is a super thing. You grow personally and work together toward a goal that is still in the future" (9), or "The second aspect is that I personally see myself in a smaller, more flexible environment or team, where I also have a lot of freedom" (13). As here, the greater flexibility in a start-up was also mentioned by others, for example "...so having the possibility to structure your day," supplemented by the greater autonomy in decision-making, "... and not being trapped there in a hierarchy of the company" and "...that you get into a position where you can make decisions that have an impact, and in a start-up you can of course do this relatively early" (all 23). For one person, a motivation for founding a start-up was to be able to work in his home canton.

A social motivation was mentioned comparatively often in the interviews, rarely in the general question about the motivation, often then on inquiry. There were very different aspects in the statements, for example about more durable solar panels "To make the entire value more sustainable and accelerate that option was his [the founder's] idea" (2). Another company also has a strong sustainability-oriented motivation, "that was the motivation, like how to bring houses to many people, [...] so I was interested in developing the house. A cheaper construction material, using local resources" (3). Interestingly, this team was not initially aware that there was a strong sustainability connection here. They were very focused on their case. Other motivations mentioned were reducing the carbon footprint, better medical care (both several times), or feeding many people with innovative farming.

Finally, the motivation to start a family business or to continue a family tradition with a start-up was not mentioned at all in these 26 interviews.

In addition to the founding motivation, the interview partners were asked about the general sustainability orientation of the management team and about the team's experience with sustainability management from their professional or private background. A cross-comparison showed that if the founding motivation explicitly included sustainability aspects, in almost all cases there was also a general sustainability orientation, i.e. an interest in these topics. In some cases, the topic of prioritization was taken up again here. An interest in sustainability aspects in corporate management does not necessarily mean that this is a high priority. Some explicitly said that sustainable management is only considered as a secondary aspect, "environmental sustainability we have in [...] but it is not a top priority for us" (18), "sustainability is not a focus for us" (16). Some teams had obviously not thought about sustainability issues yet, "We haven't really thought about it yet" (19). In the case of start-ups whose interviewees had also mentioned a social founding motive, the sustainability orientation was often clearly pronounced, "Within the project there are clear principles for progress, we are not prepared to make any compromises there either. But I think with us, the personal interest is also extremely high to strive for sustainability in our private lives" (24).

The question about existing experience with sustainable management in previous activities gave a mixed picture. Overall, few teams had previous experience, "Not at all. Never encountered it professionally. It doesn't exist in medicine either" (4). Some had prior knowledge through their university studies in, for example, geology, energy technology, or life sciences.

Discussion

The dominant motivation for founding a start-up in the responses is identification with the business idea and, related to this, the satisfaction of successfully founding one's own company. This leads to self-affirmation and self-realization. Almost everyone mentioned this. When reading the entire interview transcripts, it is noticeable that most of the interviewees were deeply involved in explaining their business model, which is probably why they initially only answered in this direction and did not think about other motivations. The corresponding external effect with recognition and status was mentioned less in the answers, so it could be less important compared to their own enthusiasm and satisfaction. The greater job satisfaction with more flexibility and decision-making authority was frequently mentioned and seems to be important to the people, interpreting the wording.

Profit orientation is not perceived as a motivation by many, which is why they do not mention it in the corresponding question, but rather see it as a technical and very necessary aspect of the start-up. As mentioned above, however, most start-ups are wholly or predominantly profit-oriented according to their own statements. Income generation could therefore also be a founding motive, even if it is not mentioned. This cannot be finally clarified with the available interview material. Among the 26 start-ups considered, there was no company that wanted to found or revive because of a family tradition.

While the statements on the motivation categories already mentioned are often similar in content, the range of sustainability aspects in the answers is particularly wide. This may be due to the broad understanding of the concept of sustainability, which includes very different social, ecological, and economic aspects. And it may be due to the different business models from different industries that were examined. Unsurprisingly, people who are generally interested in sustainability issues (sustainability orientation) are also more likely to address these issues in terms of start-up motivation. This offers a baseline if one wants to improve the sustainability orientation of start-ups (Tur-Porcar et al., 2018). In coaching programs, start-up competitions and similar support programs, sustainability topics could be included and best practice cases could be shown in order to sensitize the founding teams (Daub et al., 2020). Some interviewees mentioned university studies as the only previous occasion where they could become acquainted with sustainability issues. Accordingly, this could also be a promising approach to include these topics in many degree programs (Storey et al., 2017). In this way, it would be possible to reach many people who later have decision-making functions in their professional lives—not only in start-ups, but in companies and other institutions in general.

It should be emphasized that more than one motivation is documented for most founding teams. These can stand side by side or even influence each other (Murnieks et al., 2020). Thus, the categories elaborated above are not mutually exclusive in this study either, and a person may, for example, have both intrinsic and extrinsic motivations for starting a business.

Conclusion

In this study, start-ups were asked about their motivation to found a company. The statements could be assigned to the motivation categories presented. It was found that few of the interview partners mentioned social aspects with a sustainability-oriented motivation on their own. When asked, some were able to identify sustainability aspects in their company, but these motivations were generally not the main focus.

The results of the study show the importance of various possible motivations in the group under consideration (sub-question 1), with identification of the business model and personal satisfaction being the dominant founding motives. The described findings on the role of sustainability-oriented motivation (sub-question 2) can be the basis for further research.

A limitation of this study is that with few exceptions only one person was interviewed for each start-up. It is possible that other members of the founding teams would have given different answers and have different priorities in the motives. Secondly, the selection of cases was not perfectly random as probably persons with a general interest in sustainability issues would rather give an interview about this subject than others. Thirdly, a quantitative study with a higher number of cases could further explore the motivations and priorities of start-ups.

The influence of an already existing sustainability orientation on start-up motivation as well as its interconnectivity and promotion could be further investigated in future research. Furthermore, besides motivation, other influences such as financial support on the sustainability orientation of companies could be analyzed to foster sustainable companies. Finally, the identified relationship between the general sustainability orientation in the management team and the inclusion of societal aspects in the start-up in this group is promising for the promotion of such teams with sustainability training. For universities, a task arises to integrate sustainability topics in as many study programs as possible so that former students can draw on this knowledge in their professional careers.

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Chapter 4
Resilience Patterns for Start-Ups: Strategies and Tools

Christoph Steinebach and Christian Bucher

Abstract Starting a business is considered a particularly challenging time for entrepreneurs. Risks must be well judged and mastered. It is a time when identity, profession, and competence make it possible to build up the offerings and the company. In dealing with general and specific risks, the resilience of the participants as well as the company as a whole ensures optimal development. From a systemic perspective, conditions of successful coping can be named. As it turns out, the development of appropriate strategies and plans is just as important as the consideration of one's own needs and the development of one's own competencies. Based on these considerations, various offers and methods of resilience support are recommended for start-ups.

Keywords Resilience · Risk taking · Successful coping

Introduction

Setting up a business is often a long journey. It is not uncommon for this path to prove challenging, energy-sapping, and risky. As with a real hike, it makes sense to prepare and plan as well as provide what is needed along the way and ensure that help is available when needed. All of this can be either exciting and exhilarating or stressful and threatening. And quite often it is both at the same time. For this, it makes sense to ask what is needed for a start-up to cope with this period of building and expanding (for example, Spruijt, 2012). And what helps them emerge from these stresses stronger.

So, what helps start-ups overcome the current challenges and look to the future with more competence and confidence (cf. Aldianto et al., 2021)? Or, in short, what makes young start-ups resilient? Current research cites various factors that are

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A. H. Verkuil (ed.), *Start-up Cultures in Times of Global Crises*, Sustainable Business Development, https://doi.org/10.1007/978-3-031-53942-8_4

Fig. 4.1 Success factors of start-ups

weighted differently depending on the industry (for example, Kim et al., 2018; Sreenivasan et al., 2022). Figure 4.1 gives a first impression.

We notice that in these considerations, the success of the business start-up is explained from the strengths of the business itself. The factors mentioned are all occupation- or work-related. This makes sense, but only partially covers all the factors that make up life in its fullness. After all, founding a company is a process in which, in addition to foundation-specific competencies, one's own personality development is advanced and one's own mindset is developed, as well as the design of the founding team and the relationships with the various stakeholders are carefully established (cf. Bland & Osterwalder, 2019). Last but not least, conditions of the wider financial, social, societal, and physical environment play a role. And all of this is important not only at the time of the decision for or against a start-up, but also in the run-up and later on. For this reason, we choose a developmental perspective of entrepreneurial resilience for the search for resilience patterns, in which work is an important, but just one, part of development over the life course.

Profession and Organization

Before we pursue the question of which personal characteristics and competencies support coping, we want to explore the question of what significance the profession has for the formation and maintenance of an organization or a company. This question is important because it also reveals societal expectations toward company founders. As a rule, these expectations relate more to character traits, attitudes, and personal attitudes than to the specific competence profile of a profession.

Belonging to a profession can be viewed from a sociological perspective, from a management perspective, or from an activity-based perspective. From a sociological perspective, it is about power, about interests, and securing resources for members of a particular profession. From the management perspective, different professions allow the best competencies to be used in the founding team. From the activity-related perspective, different professions and their successful management enable different activity profiles to be used in such a way as to provide special services and products (e.g. Steinebach, 2023).

How can a start-up meet these requirements? Entrepreneurship is becoming a necessary attitude and competence in a demanding and increasingly confusing, but at the same time very liberal economic space. Societal expectations of professions and companies reflect these developments: Society organizes itself in the sense of New Public Management, in which a variety of services are offered and high-quality services are demanded; a company organizes itself in the sense of the three breakthroughs according to Laloux (2015), by focusing on self-management instead of hierarchical structures, by aiming at the wholeness of the human being instead of the ego of individuals, and by offering an evolutionary purpose to those involved. Thus, it is clear that the different perspectives, developments, and expectations are quite contradictory. This accounts for a significant part of the tensions in which corporate start-ups find themselves today (cf. Brock & Saks, 2016; Saks, 2016).

World of Work and Society

The world of work interacts closely with changes in society. These are very fundamental and can be distinguished from one another historically, for example, when we speak of working worlds 1.0 to 4.0. Working world 1.0 stands for the beginning of industrial society with the emerging question of workers' rights. With industrialization toward the end of the century before last, mass production begins and the state provides the first services to secure the working population. In the middle of the last century, a stronger internationalization and globalization of the economy announces itself and the social market economy is more strongly secured, at least in the Western European countries. Today, the working world 4.0 uses the possibilities of virtually networked working and value creation across different continents. Today, personal responsibility and entrepreneurial thinking are particularly required. This also applies to the shaping of professional careers (cf. Schreiber, 2020). Meaningfully shaping one's career as a part and stage of one's life becomes an individual challenge and task (Bailey et al., 2019; Lips-Wiersma et al., 2022; Ristl, 2018). In this context, the constant evolution of demand profiles proves to be a particular challenge: In addition to the question of the objective fit of individual personality traits and competencies for a specific demand profile, there are new societal and generational demands on the subjective meaning and meaningfulness of activities as well as the motivation and reflection of work from the perspective of working people. Digitization and globalization, demographic changes, and the increasing importance of specialist knowledge pose major challenges for company founders in particular. Starting a business requires skills that are technology-intensive, knowledge-intensive, and highly innovative and creative. Globalization and pluralization and the increasing dependence on specific expertise reinforce the impression of uncertainty. Growing degrees of freedom and the increasing polarization of beliefs lead to orientation problems. Perceptions of problems not the least of which are threats to the natural environment and risks to mental health create a greater need for counseling (Black & Walsh, 2021; Stevens, 2007). In the search for

sustainable, regional, and participatory solutions (Stevens, 2007), professional advice and guidance for start-up entrepreneurs is becoming increasingly important.

Risks and Crises

There are many risks for start-ups. It can be assumed that not all relevant factors are known at the time of founding and not all resources are secured in the long-term. In addition, the founding of a company takes place in a social environment that is itself shaken by various crises. The World Economic Forum (2020) maps economic, ecological, geopolitical, social, and technological risks on its "Global Risks Interconnections Map 2020." These risks differ in the probability of their occurrence as well as in their impact, if they do occur. A glance at this map makes it clear that many risks are interconnected. What is particularly tragic is that in the meantime, many events have also occurred that only a short time ago were considered unlikely.

Now, as a first step, we can transfer findings on positive adaptation to negative environmental events in companies, institutions, and organizations to start-ups. According to this, appropriate coping will also depend on the characteristics of the event. How surprising is it, how serious, and to what extent does it affect the company's relevant partners? But it is also crucial how the start-up itself is positioned. Vision and mission, availability of funds, competent leadership, and high cohesion of the founding team are important here. Adaptation can mean, on the one hand, adapting the start-up to the changed conditions or, on the other hand, actively shaping the environment. The direction and extent of assimilation and accommodation also depend, of course, on the characteristics of the start-up. The available strengths, design options, resources as well as creativity fundamentally influence successful coping. The resilience of the start-up is then reflected in a learning process that affects all aspects of the business, preparing it to deal with further challenges and crises (Appe, 2019; Prasad et al., 2019; Rai et al., 2021; see Fig. 4.2).

Resilience and Optimal Development

Terms such as "adaptation," "assimilation," and "accommodation" illustrate our systemic understanding of resilience. From this point of view, resilience does not mean pushing through one's own concerns and goals with all one's might, but rather making good decisions while taking into account external obstacles and support potentials as well as all internal weaknesses and strengths. In doing so, long-term internal and external changes come into view, as do the effects of individual actions. Therefore, we define resilience "as the positive adaptation and sustainable development of a system to respond to short- or longer-term everyday challenges or severe stress" (Steinebach, 2015, p. 557). However, resilience does not just mean "back to

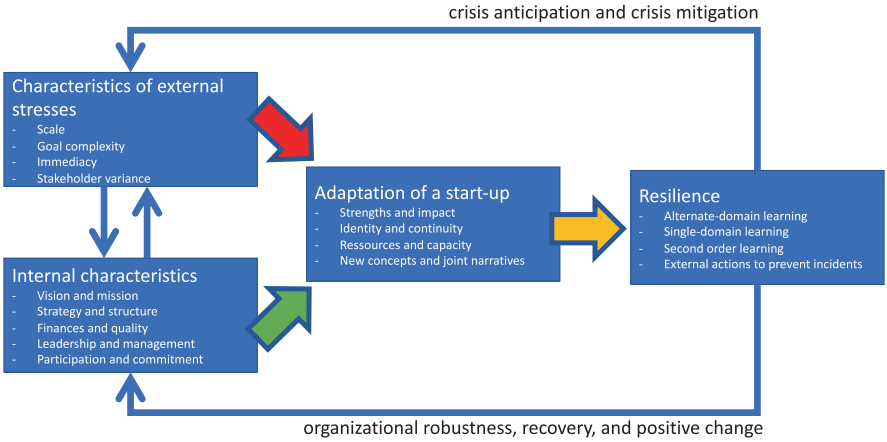

Fig. 4.2 Start-ups under stress

the previous state". It also means growth: "Based on internal system processes and through dealing with the environment, the system defines new reference values and develops required competencies, and the ability to cope with future stresses improves" (Steinebach, 2015, p. 557). Thus, resilience also stands for sustainable change (Rai et al., 2021).

In terms of the bio-psycho-social model of human development, the human being appears as a system of different system levels. In addition to cognitive processes, a level of emotional, a neuromuscular level, and a level of neurochemical processes are distinguished. These levels interact in complex ways with each other, as well as with various environmental domains: the micro, meso, exo, and macro systems. The environmental systems span from direct social relations at the micro level to culture and society (Steinebach, 2019; see also Fritsch & Wyrwich, 2019). Initially, processes at the various individual levels are of particular interest. If we assume that each level in itself is an adaptively self-optimizing system that seeks the best possible adaptation semi-autonomously, then we can distinguish different system elements. They stand for perceiving (input) and exercising (output), mapping (representation of internal and external processes) and motivating (internal needs and motives, external requirements and expectations), and processing (naming and evaluating the available information). When people talk about how important it is for start-ups to reliably assess risks, this has to do with perception, with a realistic picture of the environment and one's own possibilities, and with goal-oriented processing of this information. For resilience, however, it is also crucial to what extent it is possible to adapt goals or define appropriate measures under the given conditions (Fritsch, 2019; Fritsch et al., 2019; Fritsch & Wyrwich, 2019). This concerns motivation, and in the process, self-ideal and self-real. And of course, the success of this process depends on ensuring learning via feedback loops.

In teams, organizations, and institutions, it is recommended that the balancing of assimilation and accommodation be negotiated in conversations, i.e., participatively

(see also Mai et al., 2022). Questions such as "What's going on? Have we had this before? How can we make this work? Did that make a difference?" represent a joint analysis of these internal and external elements or conditions. "If Höher (2018) speaks of dialogic organizational resilience, dialog is the foundation on which seven different pillars of resilience are built:

1. Social capital, such as leadership culture, values, and relationships
2. Mindfulness as a characteristic of the organization
3. Culture, identity, and meaning
4. Organizational learning
5. Ability to integrate the unexpected
6. Settings and types of dialog and
7. Structures that enable dialogue within the organization" (Steinebach et al., 2022, 104).

Based on these considerations, we can formulate assumptions about what helps start-ups to become more resilient. For example, Sreenivasan et al. (2022, see Fig. 4.3) name various success factors that can also be understood as characteristics of positive adaptation of a self-optimizing system:

– Organizational flexibility stands for a differentiated picture of one's own organization.
– Technological competence stands for the system's ability to act using specific techniques and tools.
– Dynamic capabilities generally stand for motivational aspects, but also for openness in the processing procedures.
– Workforce diversity stands for a resource in the start-up's microsystem (e.g., Cavallini et al., 2022; Geiger, 2020).
– Complex first- and second-order learning is evident in the sustained practice of resilience.
– Innovation ambidexterity stands for special capabilities of the system element "exercising" (output).

Fig. 4.3 Factors helping start-ups to become more resilient (Sreenivasan et al., 2022)

- Agile leadership has its basis in corresponding mindsets, but also stands for agile work forms in the micro- and, if applicable, mesosystem.
- Team empowerment stands for the growth-oriented design of the microsystem.
- Effective communication with stakeholders creates a bridge between micro- and mesosystem.
- Successful change management thrives on the feedback loop between action and reaction.

Strategies and Plans

Up to this point, the lists of strengths that ensure the resilience of a start-up still seem very arbitrary. Again and again, it is emphasized that a good start-up idea is needed. It is reflected in the vision, mission, and guiding principles and is the basis for the strategy. The structure of the company should then be aligned with the strategy. If this is known, the need for necessary resources can be estimated and thus also the financial requirements. The concept of the Business Model Canvas (Osterwalder & Pigneur, 2010) also takes all of this into account in terms of quality assurance for start-ups. But even if the vision, mission, guiding principles, strategy, structures, finances, and quality are well defined, this still says little about how it becomes reality in the everyday life of the company. Not only for individuals, but also for start-ups, there is a gap between what we want and what is actually implemented. As research shows, it helps to plan to turn good intentions into practice. But it's also important to shield the planned from outside interference and move the processes forward. In doing so, it is important to provide the necessary resources and to organize and to evaluate what has been achieved (cf. Fig. 4.4).

In this model, then, strategy-based plans are an important key to success. This is generally true for the success of any company and certainly also for start-ups. Founders are expected to shape all these aspects, to combine them in a meaningful way, and to develop them in a goal-oriented way (Haase & Eberl, 2019). This leads

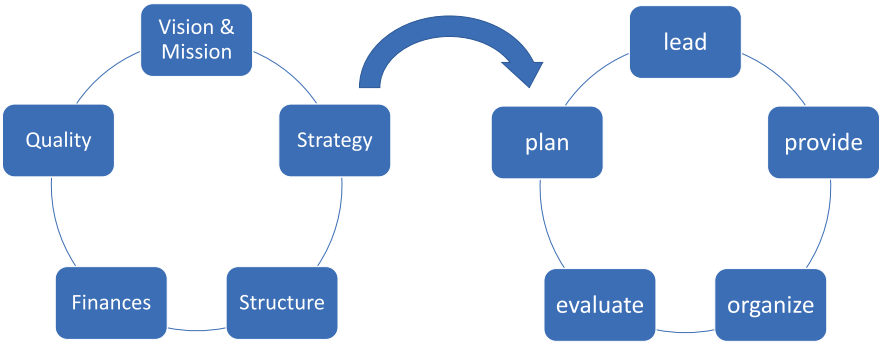

Fig. 4.4 From vision to action

us to the question of what competencies are needed to cope well with the many tasks. But it also leads us to the question of which needs must be addressed among founders so that they keep up and do not give up at some point.

Needs and Competencies

In fact, the list of what is needed is very long here as well. If we take a look at a proposal by Müller and Gappisch (2005) on personality traits of entrepreneurs (see Fig. 4.5), it quickly becomes clear that needs, motivational factors, personality traits, and competencies are mixed here (see also Stracke & Schmäh, 2018).

First of all, this list includes basic needs as mentioned in the Self-Determination Theory according to Deci and Ryan (2012): Experience of competence or autonomy, but also interpersonal bonding. But we also find terms in which the Big Five of personality psychology according to Costa and McCrae (1992) are reflected. Then we find attitudes, for example toward risks or unsettled situations, or attitudes such as satisfaction with one's job or life in general.

If we assume that all these are character strengths (Peterson & Seligman, 2004), then stability over situations and time is also attributed to these conditions. However, if we are talking about entrepreneurial resilience, then we also want to assume here that change is possible and desired, that individuals adapt to different situations in the process of starting a business, and that different skills, abilities, competencies,

Fig. 4.5 Personality traits of entrepreneurs (cf. Müller & Gappisch, 2005)

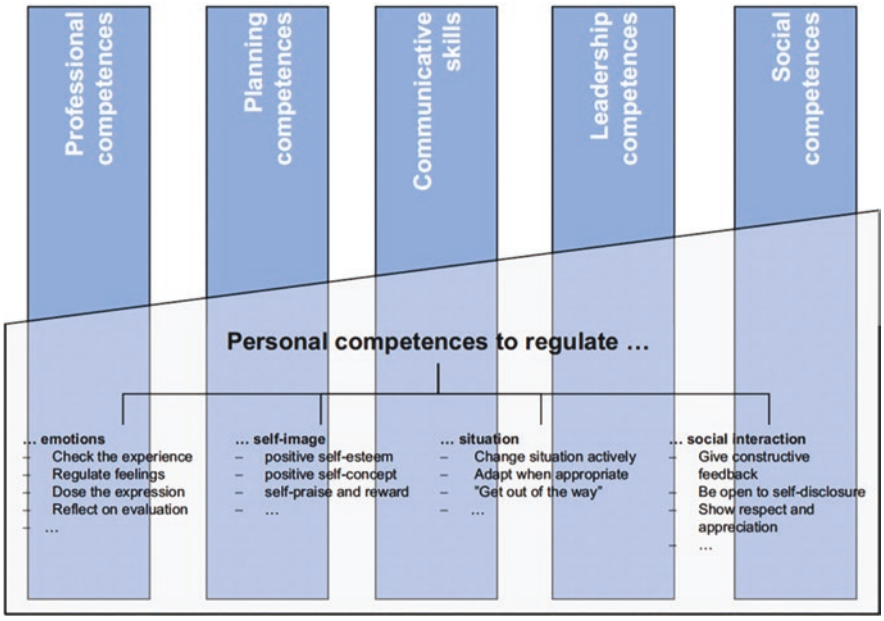

Fig. 4.6 Psychological competences for the workplace (Steinebach, 2022, p.13)

and attitudes come into play depending on the situation and phase of starting a business (Haase & Eberl, 2019; Lange, 2019). Thus, reflecting on all these aspects from the founder's perspective becomes very important. Reflecting on oneself, asking for feedback from others, and working on oneself become important conditions for the resilience of business founders and their start-ups. It is therefore a matter of personal competencies to regulate oneself: to think about one's own feelings, one's own self-image, to perceive and shape situations in a differentiated way, and to positively involve oneself in social interactions (see Fig. 4.6). Your own professionalism, your own strategic methodological competence in the sense of management, and your own communicative skills in the sense of leadership benefit from these self-competencies, as do your social competencies in shaping relationships.

They can continue to develop and differentiate in the sense of learning and development and thus prepare the individual as well as the start-up for new challenges (Steinebach, 2022).

Offers and Methods

Reflecting on professions and organizations, it becomes clear that founders are confronted with multiple expectations. Societal expectations are relevant because they define standards for entrepreneurial action. Such standards influence the founders'

own identity and self-worth. In this context, founders can very quickly find themselves in a field of tension in which they are confronted with contradictory expectations. Self-employment by founding a company shows the successful handling of the inherent human fear of freedom (Fromm, 1941) and the simultaneous fear of failure with one's own start-up. However, areas of tension also exist in competencies when, on the one hand, it is appreciated that founders are spontaneous, creative, and innovative, and on the other hand, they are confronted with a high degree of control from the outside, which repeatedly sets limits to entrepreneurial endeavors.

- Founders need support that helps them deal with conflicting expectations. These offerings can include coaching that helps them reconcile their own desires and expectations with the demands of society.
- Founders also need offerings that help them learn to cope with stress and deal with negative emotions.
- Founders also need offers that support them in dealing with emotional tensions when employees of a start-up identify differently with the company.
- The start-up team is a resource to collectively reflect and support each other. This can help to deal constructively with conflicting expectations and stress.
- Reflection can focus on different aspects: The perception of the current situation, possible contradictions between self-ideal and environmental ideal, between self-image and environmental image, problems of processing, and also the question of appropriate actions and measures to positively cope with the existing problems.

With what has been said so far, we have described the coping with existing tasks from the perspective of the founders and their employees. On a higher organizational level, coping with existing burdens is also dependent on vision, mission, and guiding principles as well as strategies and the available resources for sustainable human resources, and health management (cf. Steinebach et al., 2022).

- The vision, mission and, guiding principles should make it clear that diversity in the competencies of employees is considered as added value.
- It should become clear that personnel development, also in the sense of personal growth, is a central concern of the company's management, just like workplace health promotion.
- Work and assistance should address the basic needs of employees and thus make autonomy, the experience of competence, and a sense of belonging tangible.
- Continuing education and workplace health promotion offerings should be geared toward different competencies that help employees and the company alike to master the difficult phase of starting a business.

This brings us to principles of how support should be designed:

- Offers for competence development and the promotion of mental health in the workplace should be sustainable. Learning needs repetition and time. Appropriate opportunities should also be created for this.

- Appeals to change behavior are not enough. Help is also needed to ensure that what is learned is applied in everyday life.
- It is not always important that the learning path leads from theory to practice. Ritualized exercises also help when learners still know little about the underlying theory.
- The offerings should address the whole person, his or her thinking and feeling.
- The offers should be available over a longer period of time and, if possible, also be retrievable flexibly. In this way, virtual offerings can support the learning process because they give employees flexible access to the learning offerings.
- All learning opportunities should always be supplemented by opportunities to reflect on what has been learned. This allows them to consolidate what they have learned. In addition, successes can increase self-efficacy and promote resilience in the long term.
- In addition to targeted offerings, less targeted measures are also conceivable. An appealing design of the company's physical environment, workplaces, meeting spaces, and public areas promotes well-being and resilience.

The question now remains as to what concrete measures are feasible: On an *individual level*, we would be particularly concerned with the prevention of burnout and thus with concrete help for coping with stress: Autogenic training, exercises to promote mindfulness, meditation training or offers of sport, and exercise are certainly helpful.

At the *team level*, the shaping of relationships and the promotion of a constructive dialog of competencies for conflict management should be considered. Social integration and support can be promoted via collegial team supervision or positive peer counseling (Steinebach, 2019). The goal here is to foster a culture of mutual support and help. In the case of persistent tensions in the team, coaching would also be considered at best to reflect on the team dynamics. Finally, it is important to ensure a balance between closeness and distance, on the one hand, and power or mutual influence, on the other. If the team dynamics have become entrenched in extreme positions of closeness and distance or hierarchy over time, various measures to promote appreciative cooperation are conceivable in addition to team discussions. For example, tackling common tasks and reflecting on the process and success can lead to a new way of working together.

Support programmes for employees and managers as well as for the team as a whole will also change the culture of the company at the *organizational level*. However, the development of organizational culture is a leadership task. Therefore, it must be the concern of managers to reflect values and the norms of social relations, cultural identity, and rules, to define them in terms of a positive organizational culture and to exemplify them. From this understanding, offers for personnel development, team development, or workplace health promotion are not an end in themselves, but an expression of an appreciative organizational culture. Based on this understanding, individual resilience is supported by organizational resilience, as is team resilience.

Outlook

Resilience is a challenging concept. It provides an opportunity to better understand the special requirements of start-ups and define appropriate measures. The complexity of the resilience concept is matched by the complexity of the practice. It is good that resilience is a common concept not only in psychology, but also in biology, education and therapy, economics and ecology. This gives us the opportunity to bring together insights from very different sciences and professions to help entrepreneurs in the difficult phase of starting a business. A nuanced understanding of resilience also helps build bridges between individual resilience, team resilience, and enterprise resilience (Blatt, 2009; Brykman & King, 2021). Processes of assimilation and accommodation represent the question, "are we changing and/or are we changing the world?" Knowledge of resilience, the possibility of its development and promotion give the chance to achieve the best possible. The real strength of a resilient company is that it can use this success as an important resource in dealing with upcoming challenges.

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Chapter 5
SMEs Talk—Startups Walk: How Startups Can Benefit from the Use of a Digital Maturity Model for SMEs as Part of Digital Transformation?

Patrick Klotz and Barbara Eisenbart

Abstract *Purpose*—While digital transformation has been widely implemented in large corporations, there is a big potential for startups and SMEs that are lagging behind in utilizing this opportunity. This chapter aims to raise awareness among startups and SMEs about digital transformation by developing a digital maturity model adopted, especially for international distributed work. The model serves as a framework for startups and SMEs to understand which dimensions influence and are important for digital transformation, and what specific questions are relevant for each of the dimensions.

Design/methodology/approach—The research followed the Design Science Research with explorative interviews of two CEOs and development of case studies of companies currently undergoing the digital transformation process to get a deeper understanding of the different dimensions and which dimensions really matter. The artifacts are the dimensions that have a direct impact on the successful implementation of digital transformation, including a sample report of the digital maturity to position a company's digital transformation against a baseline. Those dimensions were identified and chosen based on the review of 27 existing digital maturity models.

Findings—The perception, that digital transformation is all about technology, has been disproved. Seven dimensions identified were (a) Culture and Leadership, (b) Digital Technologies, (c) Organization and Processes, (d) Employees and Digital Skills, (e) Customers, (f) Products and Innovation, and (g) Digital Strategy. Once a digital strategy is defined, a company can then focus on either internal or external environment. Culture and leadership need to be defined top-down as a base for driving change. Digital technologies are enablers, not drivers.

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A. H. Verkuil (ed.), *Start-up Cultures in Times of Global Crises*, Sustainable Business Development, https://doi.org/10.1007/978-3-031-53942-8_5

Business implications—The use of a digital maturity model raises companies' awareness about the current digital transformation phase and helps to understand, kick-off and accelerate their digital transformation to realize the aspired situation. While SMEs need to carefully plan and transform all aspects of a running company to benefit from digital opportunities, startups can launch digitally right from the start.

Originality/value—Startups and internationally active SMEs can use the maturity model for a self-assessment as a first step to understand key dimensions to build a digital strategy and continuously work on improving maturity level as well as sustainability. Researchers in other countries can use the maturity model for classification and conduct a survey for comparative analysis among countries and different industries in different countries.

Keywords Digital transformation awareness · Digital maturity · Digital strategies

Introduction

There is no way around Digital Transformation—Digitalization is one of the hot topics of many governments, supporting their economic players to cope with the rapid developments and making sure they are staying or becoming competitive in the global market. Ironically, digitalization can be identified as an opportunity and threat at the same time. Players from other countries can now serve very remote markets more easily, which results in more competition in the local market. At the same time, a local company can now offer services on a global market, competing in areas where it would not be possible in an analogue way.

Successful entrepreneurs in Malaysia contribute to the improvement of living standards, jobs, and incomes, with the consequence of better education and health. Furthermore, sustainability dimensions become increasingly important for startups and SMEs for sustainable competitive advantage, innovative and sustainable business models as well as meeting regulation needs or sustainable development goals (Reis & Melão, 2023).

While digital transformation has been widely implemented in large corporations there is a big potential for startups and SMEs which are lagging behind in utilizing this opportunity. This chapter aims to raise awareness among companies about digital transformation by developing a digital maturity model adopted, especially for startups and SMEs with international distribution of work. The model serves as a framework to understand which dimensions influence and are important for digital transformation and what specific questions deepen the evaluation of dimension.

Theoretical Relevance

A sheer endless number of definitions and explanations on what digital transformation means seems to be available written by scientists, consultants, service providers, and other practitioners on the Internet. Even researchers do not come to a universally agreeable composition or a dominant confirmed understanding (Peter et al., 2020) of what defines the term.

Business Relevance

The fast-paced growth of digitally native companies such as UBER, AirBnB, Google, Facebook, Netflix, and others were popular in many use cases that showed how "easily" they won against incumbent analogue enterprises that missed out on the digital transformation. To top it all off, the recent pandemic proved that companies not ready for the digital world would miss out on opportunities, and numerous enterprises went bankrupt. No doubt both accelerated Digital Transformation in many aspects. The importance of digital transformation for startups and SMEs has become significant.

However, there is a difference in the approach between startups and established SMEs. While SMEs need to carefully plan and transform all aspects of the running company to benefit from the digital opportunities, Startups have the advantage of launching digitally right from the start being digital native. Still, it is equally important for a startup to understand the dimensions relevant for digital transformation, so they can be considered, defined, and grown over time, without the need for major and risky changes.

Among the lack of understanding as to what Digital Transformation really means, researchers identified several challenges, especially for SMEs in implementing and executing a real transformation. Those challenges have a great diversity and can be found across many of the dimensions that define Digital Transformation. Berghaus (2016) suggests that "Digital transformation seems to be intuitively managed rather than strategically planned." Peter (Peter et al., 2020) proposes that "Digital Transformation is addressed in a general […] manner which remains too abstract for businesses," while Vial (2019) finds "the increasing complexity of the environment within which firms operate" an addressable challenge.

Key Concepts of Digital Transformation

Different articles have done a systematic review of the literature on digital transformation, reflecting the ongoing importance of digital transformation (Table 5.1).

Often "digitization" and "digitalization" are used interchangeably, both in academic literature and in the numerous sources found on the Internet. Sometimes the same applies also for the terms "digitalization" and "digital transformation." The following are some of the more relevant and interesting quotes from these academic articles.

Digitization

We searched for definitions that clearly distinguish between the terms "digitization" and "digitalization." Schallmo and Williams "define digitization as digitally enabling analogue or physical artifacts for the purpose of implementing into said artifacts into business processes with the ultimate aim of acquiring newly formed knowledge and creating

Table 5.1 Overview of systematic literature review articles

Major topics	Major insights	Literature	Author and year
Implementation	Synthesized guidelines and practices on how to roll out digital transformation projects	Best practices for digital transformation based on a systematic literature review	Van Veldhoven and Vanthienen (2023)
Technological, business, and societal impacts	Major research avenues through visualization of literature node network	Digital Transformation: An Overview of the Current State of the Art of Research	Kraus et al. (2021)
Dimensions and categories	Comprehensive description of six dimensions with a new dimension: sustainability	Digital transformation: A meta-review and guidelines for future research	Reis and Melão (2023)
Implications for strategy and organizational change	Comprehensive list of research matrix on contextual conditions, mechanisms, and outcomes	A Systematic Review of the Literature on Digital Transformation: Insights and Implications for Strategy and Organizational Change	Hanelt et al. (2021)

new value for the stakeholders" (Schallmo & Williams, 2018). For digitization, the *direction* was clearly to have something analogue such as paper being transformed into a digital counterpart. "The entry defines digitization as the material process of converting analogue streams of information into digital bits" (Brennen & Kreiss, 2016).

Digitalization

For the term "digitalization" it became obvious that it is based on the *outcome* of digitization. The digitized objects are being used to create, improve, and ideally automate a process. Again Schallmo and Williams provide a comprehensive definition—"we define digitalization as fundamental changes made to business operations and business models based on newly acquired knowledge gained via value-added digitization initiatives" (Schallmo & Williams, 2018).

To simplify it, this research thus understands digitization as the *process of transforming an analogue artifact into a digital one*, while digitalization can be defined as taking advantage of the *digitized artifacts to improve (business) processes* by leveraging digital technologies.

Digital Transformation

Finally, digital transformation can be understood as the next step in a digital journey, which must start with digitization and is followed by digitalization. However, "digital transformation is a complex issue that affects many or all segments within a company" (Hess et al., 2020). Also during the study, we could identify that digital

transformation is not a one-time project but an *ongoing process* as described in a comprehensive definition by Teichert. "Digital transformation itself can be seen as an ongoing process of adoption to a significantly changing digital landscape in order to meet the digital expectations of customers, employees and partners" (Teichert, 2019).

We have summarized our own definitions of these three relevant terms in the following graphs, also displaying the idea of a continuous process that is building on the previous process step(s) (Fig. 5.1):

Digital (Transformation) Maturity Models

As there are dozens, if not hundreds of digital maturity models available by both academia and practitioners, a search for articles with a literature review on the topic was conducted. For the digital maturity models, the following three relevant documents were identified and used to find and analyze different digital maturity models: Digital Transformation Maturity: A Systematic Review of Literature (Teichert, 2019), Digital Maturity Models for Small and Medium-sized Enterprises: A Systematic Literature Review (Williams et al., 2019), How to Measure Digitalization? A Critical Evaluation of Digital Maturity Model (Thordsen et al., 2020).

Roughly 60 maturity models were analyzed, thereof only 27 were useable to identify specific dimensions. Interestingly, most of these models were created between 2015 and 2019, with only a few prior to that time range (Table 5.2).

Besides the differentiators' industry focus, company size and author (practitioners, academic, or hybrid) the level of maturity was an important factor as well as dimensions that were used to define the maturity level.

A total of 34 different dimensions could be identified and we initially categorized them roughly (e.g., technology, digital technology, IT technology, or a specific technology that was named, went into the same category). In a second step, we further summarized categories, which try to accomplish the same goal, or are easily identifiable as similar (e.g., digitalization/processes, Governance/Control, and ecosystem/collaboration). In the final step, we focused only on the dimensions that

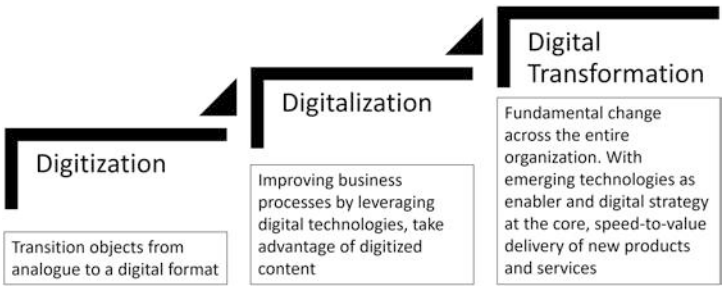

Fig. 5.1 Our own definitions of terms

Table 5.2 Overview of digital maturity models

#	Name of the digital maturity model	Author	Year	Reference
1	IMPULS Model	Lichtblau et al.	2015	Lichtblau et al. (2015)
2	360 Digital Maturity Assessment	Colli et al.	2018	Colli et al. (2018)
3	No specific name	Remane et al.	2017	Remane et al. (2017)
4	No specific name	Berghaus	2016	Berghaus (2016)
5	Industry 4.0 framework	Canetta et al.	2018	Canetta et al. (2018)
6	SIMMI 4.0	Leyh et al.	2017	Leyh et al. (2017)
7	DREAMY Model (Digital Readiness Assessment MaturitY)	De Carolis et al.	2017	De Carolis et al. (2017)
8	VTT's Digimaturity model	Leino et al.	2017	Leino et al. (2017)
9	Industry 4.0 Maturity Index	acatech STUDY	2017	Schuh et al. (2020)
10	No specific name	Valdez-de-Leon	2016	Valdez-de-Leon (2016)
11	No specific name	MIT/Deloitte	2017	Kane et al. (2017)
12	N/A (Qualitative research)	MIT/CapGemini	2011	Westerman et al. (2011)
13	Value-Centric Maturity Model	PWC	2017	Shahiduzzaman et al. (2017)
14	Digitizing Index	Katz et al.	2014	Katz et al. (2014)
15	Forrestor's digital maturity model 4.0	Forrester's	2014	Gill and VanBoskirk (2016)
16	Industry 4.0 Maturity Model	Schumacher et al.	2016	Schumacher et al. (2016)
17	e-Business Maturity Model	Depaoli et al.	2013	Depaoli and Za (2013)
18	SMEs Maturity Model Assessment of IR4.0	Hamidi et al.	2018	Hamidi et al. (2018)
19	No specific name	Anggrahini et al.	2018	Anggrahini et al. (2018)
20	Quick CheckUp's Industrie 4.0 maturity assessment	Häberer et al.	2017	Häberer et al. (2017)
21	Industry 4.0 Toolbox	Verband Deutscher Maschinen- und Anlagenbau	2015	Anderl et al. (2015)
22	Digital Quotient	McKinsey	2015	Tanguy et al. (2015)
23	No specific name	Salviotti et al.	2019	Salviotti et al. (2019)
24	No specific name	Deutsche Telekom	2018	Deutsche Telekom (2018)
25	Maturity Model of technology adoption for educational organizations (MMEO)	Ifenthaler et al.	2020	Ifenthaler and Egloffstein (2020)

(continued)

Table 5.2 (continued)

#	Name of the digital maturity model	Author	Year	Reference
26	Digitaler Reifegrad von Schweizer KMU	Lucerne University of Applied Sciences and Arts	2017	Wyss (2017)
27	Strategic Action Fields of Digital Transformation	University of Applied Sciences and Arts Northwestern Switzerland	2019	Peter et al. (2020)

Source: Own table based on the analysis of 60 digital maturity models

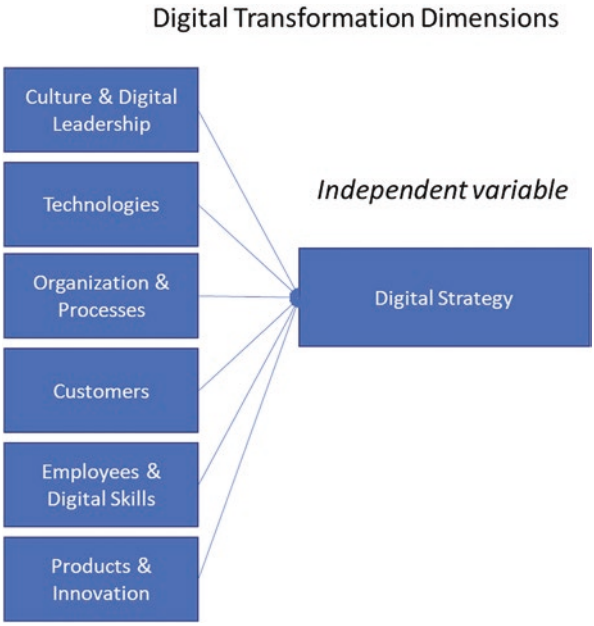

Fig. 5.2 Digital transformation dimensions. Source: Own

were mentioned most. It was possible to further merge some categories to simplify and get to dimensions that are tangible and mostly self-descriptive.

This analysis resulted in the following seven dimensions, with "digital strategy" at its core, that represents the one dimension, which is basically described and defined by the six others. All seven dimensions were represented in at least 40% of the available digital maturity models. Not surprisingly "Technology" was mentioned in almost every single model (except three). As identified in the literature, historically digitalization has always focused on technology. Furthermore, most service providers in the market offer some kind of technology under the umbrella of digitalization. It remains to be identified, if that is really the most important dimension, or other dimensions will play a much more important role to measure the level of digital transformation (Fig. 5.2).

The model consists of seven dimensions in total, where six of them directly influence the seventh: "digital strategy." The digital strategy can be defined and is

influenced by the six dimensions on the left side. Depending on how these dimensions define the digital strategy, and how the strategy is then being executed, will define the success of the digital transformation of the company.

The research aimed to identify how these dimensions are defined and which questions would need to be asked to identify how advanced a company is in each of these dimensions. It might also lead to questions as to how relevant any of these dimensions are for a company. The focus on digital transformation might vary—success can be defined in different ways.

Research Gap

To understand where a company in terms of digital maturity stands (current and future), different digital maturity models were developed. These digital maturity models can serve as a foundation for startups and SMEs to understand, what digital transformation is about, what the respective dimensions mean, and how it is important for the success of the digital transformation of their own company.

It turns out that the challenge of not having an unambiguous definition of the term digital transformation also results in an equally large quantity of digital maturity models, by both practitioners and academia. They not only take different dimensions into consideration but also vary greatly with the year that they were produced, the industry scope or the size of the company itself.

The purpose of this study was to find and develop an updated maturity model specifically for startups and SMEs that are not in the manufacturing industry and which are neither government agencies nor government-linked agencies with a strong aim for internationalization, the reason for this being:

- Most of the analyzed digital maturity models are Industry 4.0 related and thus focus on the manufacturing industry.
- Digital maturity models of big consulting firms such as PwC and Deloitte focus on large enterprises, not on the startup or SME market.
- There are many more digital maturity models, and respective digital maturity assessments, provided on the Internet by practitioners with little to no scientific background, so the background is entirely unclear.

Methodology to Explore Digital Transformation

The research followed Vaishnavi's Design Science Research (DSR) model (Vaishnavi, 2007). While the approach is increasingly applied in the field of Information Systems, we choose this model as it offers a problem-solving process by creating artifact(s).

Research Design

The research followed the Design Science Research with explorative interviews ($n = 2$) of companies currently undergoing the digital transformation process to get a deeper understanding of the different dimensions and which dimensions really matter. Based on the interviews two case studies were developed incorporating additional company data. The artifacts are the dimensions that have a direct impact on the successful implementation of digital transformation, including a sample report of the digital maturity to position a company's digital transformation against a baseline.

Following the process of this model, questions per phase were identified and expected outcomes were defined (Table 5.3).

Table 5.3 Summary of design science research phases

Phase	Research question per phase	Operational view	Expected outcomes
Awareness of Problem	How can Digital Transformation be defined? How to measure digital maturity?	Identify concepts and requirements for the research aim	– Identify one or more definitions of Digital Transformation – Identify requirements of a digital maturity model of digital transformation, to measure the level of the digital status of a company based on literature
Suggestion	Which measures to choose to analyze the digital maturity of a company?	Choose an alternative for development of an artifact	– List potential artifacts in a table and why one specific has been chosen
Development	Which variables have an influence on the artifact that leads to success of digital transformation?	Develop your artifact based on documented requirements (see awareness)	– Design a digital maturity model, taking the most relevant dimensions into consideration – Create a sample report of the digital maturity and possible action to position a company's digital transformation against a baseline
Evaluation	How can a digital maturity model be used to identify gaps in a company's digital journey? Is the digital maturity model with the chosen dimensions suitable for startups and SMEs?	Evaluate and compare requirements of literature with feedback from experts Identify similarities and differences	– Evaluate the created model by gaining feedback from experts concerning the requirements from the awareness phase and artifact designed

(continued)

Table 5.3 (continued)

Phase	Research question per phase	Operational view	Expected outcomes
Discussion and Conclusion	In which areas can the model be applied? How important is the template or model for business? Which contribution do the results (from field data) provide for the literature? – What's the digital maturity level of Malaysian startups and SMEs?	Explain similarities and differences between theory and feedback on artifact (primary and secondary data collected) Find areas for generalization	– Identify own contribution (based on research gap): Final adapted own model – Identify potential improvements from the survey feedback

Source: Own contribution based on Vaishnavi (2007)

Table 5.4 Data collection and data analysis per research step

	Step 1a and 1b	Step 2
Data Collection	Literature review and mini case studies	1-to-1 interviews with CEOs of SMEs
Data Analysis	• Comparative analysis of two mini-cases, process approach—academic holistic approach instead of targeting to solve one single challenge only • Understanding of relevant/important dimensions in a digital maturity model	• Transcription, coding, and analysis of interviews • Comparative analysis, understanding how these dimensions are perceived • Case study development • Validation of developed dimensions

Source: Own contribution

Data Collection

The research followed a qualitative approach with interviews of two company leaders who had undertaken digital transformation with their ventures, and the development of case studies of the companies.

Table 5.4 provides an overview of the data collected and analyzed in the two steps.

Results

Qualitative Analysis

Based on the literature review, different dimensions of digital transformation were elaborated and validated during the interviews with the two CEOs of small and medium enterprises (SMEs) (Table 5.5).

Table 5.5 Quotes by interview partners on specific dimensions

Dimensions of digital transformation	Case study I: Golf networking	Case study II: Holiday experience	Dimension confirmed valid	Dimension confirmed important
Culture and leadership	"I'm cautiously supporting [digital], the reason being […] the major concern is we *lose control, control is everything*"	"Digital is fundamental, without digital there's no business. *Automation* allows us to differentiate from competition as they are still very *heavy labour* focused."	✓	★★
Digital technologies	"That is the purpose, whatever we do, it must *ease our flow of work*, catch-up my time, so we can focus our time in something else."	"The way we communicated [with customers] hasn't allowed to *store and use the data in an efficient* way."	✓	★
Organization and processes	"[Digital solutions] help them [employees] to *make better decisions*, less misunderstanding, because they are very *clear what's going on*."	"As the business grows and we automate more of the tasks, there will be more time available for the leaders to concentrate on specific revenue generating parts of the business, rather than being locked in administrative tasks."	✓	★
Employees and digital skills	"It's very important, we need to educate them [employees], let them know what our goal is, so they *understand why* they are doing this. Worst, if they don't understand what they should input and what are the information for, so they may enter the *wrong information and data into the system* or certain processes they do wrong."	"At some stage, of course we're going to *train employees on the digital things* we are doing, so they can carry out their functions and support the business."	✓	★
Customers	"That [an App] is effective, a place where *users can always go and look*, rather than they get lost in a series of WhatsApp messages. So yes, I guess it's very important."	"[Interacting with the customer in a digital way] is important to a) To demonstrate the professionalism of the business, b) Give a *feeling of belonging*, create brand loyalty, c) Provide a simple way to *access historical information,* and d) *Communication* being more *personalized*."	✓	★★

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Table 5.5 (continued)

Dimensions of digital transformation	Case study I: Golf networking	Case study II: Holiday experience	Dimension confirmed valid	Dimension confirmed important
Products and innovation	"What we do now with the App will *put us further ahead* [from the competition], we develop early to the culture and what we want—it's still in the process of adjusting, not finalized yet. Due to this digital transformation […] we can do things faster, at a larger scale with minimal efforts."	"It is very difficult to find products in the market that give you all the things, all the tools that you need to do the job the way you want to do it. Our own *new digital product is going to transform business*."	✓	★
Digital strategy	"No, [I do] not [have a digital strategy] yet, but I have a *business strategy*."	"The truth is no [we didn't put a formal digital strategy in place], the reason is 1) most of what I do is in my head and 2) in many respects over the last 35–40 years my businesses have fundamentally been driven by innovative systems, so it was always in *my mind* by doing this business, that I'll be using digital strategy to *differentiate* us."	✓	– The importance is not represented by the interviewee's answers

Legend: ★ Important; ★★ Very Important
Source: Own

The different approaches and primary targets for utilizing digital solutions were intriguing. One focused on enhancing *customer* engagement and communication, while the other prioritized streamlining internal processes through automation. It is noteworthy that both aspects contribute to a comprehensive digital transformation.

One interviewee stressed the importance of digital *leadership*, while the other expressed caution and concerns about control and system alignment. However, both acknowledged the necessity of embracing digitalization.

The holiday experience company, with a focus on enhancing customer interaction and improving their experience, actively incorporated feedback into their product development. They utilized new communication channels to foster better customer interaction and enhance their product. In contrast, the golf networking company, however, prioritized customer-to-customer interaction, allowing members to connect and engage directly. Consequently, feedback to the CEO occurred

less frequently as their initial focus was on improving internal processes, efficiency, and automation. However, he anticipates increased interaction between the company and customers in future developments.

Both companies, currently small in size, prioritize direct communication due to employees performing multiple roles. However, there is a consensus that the *digital platform* is crucial for future growth. As they expand their workforce, they believe digital solutions will be essential for effective communication and management.

Table 5.6 summarizes the general sentiment and perception of the two interviewees on the dimensions as described. We added the conclusion as a summary of those sentiments as the validity of the dimensions of digital transformation.

In general, the questions for these interviews allowed a very good and direct discussion, with many insights and takeaways. We realized that a lot more explanations and awareness are needed to convince customers about the benefits of digital transformation outweighing the time and money for change. If *perceived benefits* are higher than investment for change, transformation will happen. For example, while the titles of the dimensions seem very clear, there were some challenges in

Table 5.6 Analysis of perception of dimensions

Dimension	Case study I: Golf networking	Case study II: Holiday experience	Conclusion and insights
Culture and leadership	Fundamentally important	Concern of losing control	A top-down leadership approach seems relevant for the entire digital transformation process. If a digital culture is not supported by the leader, the transformation process will never happen
Digital technologies	Improve customer/services focus	Improve internal processes	Digital technologies are important; however, it is for the customer not so important which technology (for example, Cloud, Artificial Intelligence, or even programming language) is used. Digital technologies seem to have more of a supportive character and not being the driver
Organization and processes	Similar/Same perception		Less relevant for small companies. However, important for growth, so it is better to have a good organizational structure before too many employees are hired. Process automation (Digitalization) can be considered as very important
Employees and digital skills	Outsource for expertise and flexibility	Outsource for ROI and control	Surprisingly, employees and digital skills does not seem to be the highest priority even though digital skills are important, and employees should be trained. Hiring external experts (outsourcing) is always an option

(continued)

Table 5.6 (continued)

Dimension	Case study I: Golf networking	Case study II: Holiday experience	Conclusion and insights
Customers	Personalize and interact, feedback for improvement	Reach out to customers via marketing only, not much customer feedback yet	The customer dimension is very important, especially if customer centricity is at the core of the companies' culture already Interaction and engagement are important to improve the product, however, not all industries/companies might have the same need for digital engagement with the customer
Products and innovation	Similar/Same perception		A customized, self-developed/-owned platform can be a competitive advantage, especially when competition is still mainly acting in an analogue way. However, the approach to innovation and developing new products seems to be a challenge
Digital strategy	Business Strategy, no IT alignment	In the mind only, not planned	Might not be available in many SMEs and analogue startups. Awareness is important Most underestimated dimension: Golf networking has a business strategy but no alignment to the IT strategy. Holiday experience has it in his mind

Source: Own findings based on interviews with two SME CEOs

understanding how/why they really influence, respectively, contribute to digital transformation and/or digital strategy. On another note, talking about digital leadership, digital skills, or digital technologies raised the questions by CEOs to clarify the core concept. What does it mean to be a digital leader? Or how do digital skills differentiate from the "normal" skills every employee needs to have already?

Case Studies

Case Study I: Golf Networking

The Entrepreneur

The owner of the startup is a seasoned businessman, who is passionate about connecting business owners and company decision makers via golf. The monthly games organized by him add a networking format to exchange business opportunities.

Digital Transformation

A golf networking app was developed that supports the management of members and events and provides exchange and engagement for its members. Digital

transformation helps an "analogue" startup to go digital to improve efficiency, customer-centricity, and be ready for international growth. By identifying digital opportunities and finding a way to implement new features monthly according to the budget, the company digitized paper-based forms, digitalized their processes, and is even looking for some new digital business models to generate additional revenue streams.

Challenges and Objectives

The company was running on a lower digital maturity level. Some items were still in analogue form (e.g., sign-up forms) and some of the digitized items were handled in a very manual way (e.g., writing invoices). With the rapid growth of golf membership numbers, the management of those becomes more difficult and time consuming. In addition, communication and engagement among the members became more challenging, as there was only a WhatsApp group (too many messages about too many topics).

The digital transformation journey includes digitizing documents, automating, and improving processes in a digital exchange app. Furthermore, the app helps members to engage with each other and share more business opportunities in an easier way.

Digital Product

In exchange with the owner, detailed user journeys were developed, and subsequently a backlog of features and modules on how a future app could look like. The focus was on the administrative part, creating a useful members' management portal for the admin to easily add and manage members. This also included fully automated invoicing. The app is built in an agile way, using scrum to build features monthly according to the customers' budget.

After members' logins/profiles had been created, new features were added based on the backlog, giving the customer full control and flexibility on what should be developed next. Modules that facilitated the monthly events with simplified sign-up processes and golf flight arrangements helped to keep the members active and using the app.

Results

The administrative effort to manage new members has decreased massively. The processes that could be automated (such as invoicing) had the biggest impact on efficiency. Another important aspect is that the app offers scalability to the company, far beyond a small group or a regional distribution only. The app is appreciated by the members, having all the contacts of the other members and a focused sign-up to events in one place. Having the app in place allows the startup also to better market the company/association.

Case Study II: Holiday Experience

The Entrepreneur

A diverse pair of entrepreneurs (young lady, seasoned gentlemen) have had their SME for several years, not being a startup any longer. They have a very clear vision

of how they want to support their customers' experience of the best-organized vacations of their lives.

Digital Transformation
An established holiday booking business transforms digitally through improving a holiday booking webpage, and later developing a multi-functional platform to increase customer-centricity. The journey started with fixing some generic issues on their current webpage, followed by process improvements and automation, and finally setting up a new digital business model to establish a two-sided marketplace to generate new revenues.

Challenges and Objectives
The company has developed a webpage that lists various apartments/houses for rental and displays some concierge services that can be booked. The page is static, does not allow for growth, and processes cannot be automated. The goal of digital transformation is to have a platform that can be expanded by different services, offers an administrative console for the owners to manage requests, automates processes and engagement with the customer, and is made future ready.

The vision is to add a marketplace for concierge services, that connects concierge providers (e.g., chefs, barbers, and babysitters) with the VIP guests—services can be booked easily via an app.

Digital Product
Current solutions were analyzed with the entrepreneur and designed user journeys, and a high-level overview was developed of which modules and features could/should be built. To make the platform feature ready, in a first stage the backend had to be changed to a different framework. Adding and managing dynamic content was at the center of that approach. In the next phase, the management of requests was improved, automated where possible to ensure the company could serve the customers' requests in a more structured way. After the improvement of internal processes by an internal administration console, the next step will be on the customer, making sure bookings and reservations can be requested in an easier way, all online via the platform, without the need of sending numerous e-mails back and forward, and without the risk any request gets lost or forgotten by the company.

Results
Higher efficiency in managing the booking processes and a simplified and automated approach in the entire planning phase helped the customer save a lot of time. The platform offers a higher customer centricity, while the dynamic and automated itineraries prevent any human errors. The platform is maximally expandable in any direction, specifically for further growth.

The next phase completes the vision of the customer to build a seamlessly integrated marketplace for concierge services. The marketplace will offer local providers (e.g., barbers, chefs, and babysitters) to offer and provide their services directly to the holiday makers, while the holiday makers will be able to seamlessly order any needed service directly via the app—a few clicks to order anything that makes their holidays perfect.

Comparison of Case Studies

The two case studies serve as a very good entry point in getting a holistic understanding of how company transforms digitally (Table 5.7).

An interesting observation is the focus of the described digital transformations. For the holiday organizers the target is clearly the customer. How to engage with current customers, provide them with a better service, making sure to retain them, and then of course how to gain customers on a global market. The digital solution is to be innovative in the premium accommodation market and thus a competitive

Table 5.7 Comparison of case studies

Description	Case study I: Golf networking	Case study II: Holiday experience
Startup/SME	Startup	SME (previous startup)
Industry	Sports/Golf	Holidays/Accommodation
Offering/product	Membership Business Networking over Golf	Total organization of VIP holidays including concierge services
Old execution	Interaction with customers via e-mail and WhatsApp	Manual booking of pre-selected villas
New digital product	Physical networking supported digitally with an app	E-commerce booking of pre-selected villas Platform for third-party products and services (concierge, drivers, cooks, babysitting)
Challenge and objectives	Improving internal organizational effort to make the business sustainable and scalable	Digital interaction with potential customers and customer retention
Digital transformation phases	Phase 1: Digitize member details into an app Phase 2: Automate invoicing process, member management, flight arrangements, and event management Phase 3: Develop member app to share profiles, business opportunities, 1-to-1 customer interactions	Phase 1: Digitalize e-commerce (booking of villas), concierge service manually Phase 2: Automate internal processes via a platform to reduce the number of Excel sheet Phase 3: Enhance e-commerce solution with multi-sided concierge service
Concept of digital transformation	*Digitization* Transition analogue objects to digital	*Digitalization* Improving business processes by leveraging digital technologies, taking advantage of digitized content
Focus	*Internal processes and organization*	*Customer engagement*
International scope	Based out of Malaysia—target is to regionalize in South-East Asia and then globally	Based out of Spain for UK customers—target to regionalize in Spain first and then around the Mediterranean Sea for global customers

Source: Own

advantage. For the Golf Networking startup, the focus is clearly on process efficiency, improving and automating internal processes. The entrepreneur stated that only with a running system handling daily repetitive tasks, he can grow his business further.

The case studies confirmed that seven dimensions are important for digital transformation and provided deeper understanding with quotes by the entrepreneurs.

From the case studies it became clear, that not every company has the same targets, and there is no one-fits-all approach. The Golf Networking business had a clear focus on *internal environment* improving and optimizing processes, while the Holiday Experience CEO focused on *external environment* optimizing the customer experience and an innovative digital product. Both companies have similar targets to grow and internationalize, simply the priorities are different to start with.

Discussion, Conclusion, and Further Research

In this section, the updated model of digital transformation will be discussed as well as contribution to knowledge, managerial implications, and limitations of research.

Adapted Model on Digital Transformation

Seven relevant dimensions of SMEs have been identified with dimension "digital strategy" as one of the driving factors. These dimensions include *(a) culture and leadership, (b) organization and processes, (c) employees and digital skills, (d) customers, and (e) products and innovation* which are supported by *(f) digital technologies* to define the *(g) digital strategy*.

The perception, that digital transformation is all about technology, has been disproved. However, the challenges of how the remaining dimensions can be tackled and how they can influence digital strategy were deepened.

Digital Technologies Contrary to literature review stressing digital technology as the main driver for digital transformation, the interviewees see it more as an enabler and not as a significant concern for them. Recognizing the importance of new digital technologies, they prefer that the IT provider handle the selection and implementation of the technical details.

Digital Strategy Findings from the literature review, that alignment between business and IT strategy is important (Kraus et al., 2021), have not been confirmed in the interviews. Both interviewees realized that they lack a digital strategy due to the fact that they started analogue, however, there is no indication that they want to change in the near future.

Employees and Digital Skills

The mechanism of digital skills development is supported by digitalization of the individual (Hanelt et al., 2021). The importance has been confirmed by the interviews. As there are challenges to train employees appropriately, there is always the possibility of hiring external experts (outsourcing) on a temporary basis, increasing flexibility and expertise.

The initial model of digital transformation was adapted to distinguish between the focus of the company on either the internal environment (optimizing internal processes) or on external environment (improving customer interaction and engagement). Dimensions that focus on *internal environment*, such as improvements, optimization, and automation to lower production cost, increase efficiency, and free resources from repetitive tasks include *organization/processes* and *employees/skills*.

Since the perception, that digital transformation is all about technology, has been disproved, "Technology" as a dimension was moved to the same level as all others. While it is definitely an important one, we see *technology* more as an *enabler*, gluing the other dimensions together or being kind of a lubricant, that makes sure the other dimensions are harmonizing. Overall, all those dimensions directly influence the main dimension "digital strategy" (Fig. 5.3).

The developed digital maturity model separates the dimensions among internal and external environments to help with prioritization. Some of the identified questions startups and SMEs have with digital transformation are: How/Where to start? Is there a sequence that makes sense? Which dimension is the most important? Or do you have to start several or even all of them in parallel?

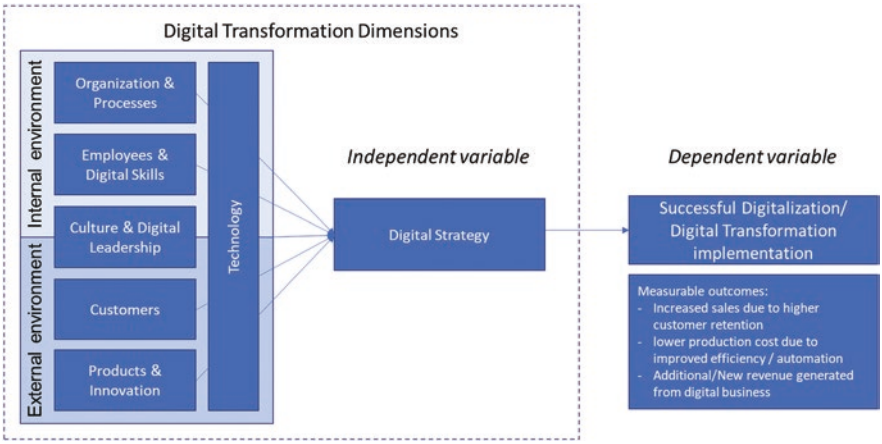

Fig. 5.3 Adapted digital maturity model from a research perspective. Source: Own, based on research findings

Internal Environment Versus External Environment

Focusing on the *external environment,* dimensions are *customer* and *product/innovation* to improve customer engagement, influence sales, generate new revenue streams, and ensure new customer acquisition, and more importantly, keep a customer.

Our contribution to knowledge is insight regarding a possible *sequence of implementing the different dimensions* of digital transformation linked to the focus of the company. An SME with limited resources cannot work on all dimensions in parallel, even though most of them are interrelated. An important base for digital transformation is defining the *digital strategy*. Going through all seven dimensions of the new digital maturity model, the companies specify their digital strategy.

With a defined digital strategy, a company can decide where to focus on either *internal environment* such as process automation, leadership, culture, and employees' skills first or *external environment* of customer centricity including innovation and new products/services. It must be understood that this decision relates only to the immediate next steps and first steps, respectively, in transforming the company. To make the digital transformation successful, all dimensions (internally or externally focused) must be handled after all.

The dimension of *culture and digital leadership* is so important for both approaches that it needs to be addressed after the digital strategy is defined. It should not be underestimated to define the understanding and an action plan to have a clear vision for this dimension (Fig. 5.4).

Fig. 5.4 New digital maturity model. Source: Own diagram, based on author (2022)

Managerial Implications

The findings help consulting companies to better understand the requirements as well as concerns of (potential) customers, it allows them to identify some gaps in the service offering, such as helping with awareness/understanding of what digital transformation is, explaining the dimensions involved, the impact, targets, and approaches. This might be done with specific workshops, training, and/or coaching sessions. Another area would be the support in creating and implementing a digital strategy. This would include the definition of clear KPIs and key success factors (KSF) for either a transformation project or the entire digital transformation process.

The digital maturity model created raises awareness about the current digital transformation phase, and helps companies to understand, kick-off and accelerate their digital transformation. Doing a *self-assessment* along all seven dimensions, a company realizes its current Digital Maturity Level. All dimensions and the maturity level are compared to all other participants' assessments, to give a better indication of where the company stands, respectively, to realize the current and aspired situation after doing a self-assessment along all seven dimensions and realizing their *digital maturity level* (Fig. 5.5).

Internationally active SMEs can use the maturity model for a self-assessment as a first step to understanding the key dimensions to build a digital strategy and continuously work on improving the maturity level. *Identified gaps* can be filled per every dimension and the understanding of interrelations and dependencies of these dimensions are better understood.

The results of the assessment and the newly gained understanding of the digital transformation dimensions can then be used to define a digital strategy. Ideally, all dimensions are clearly defined by formulating and outlining the vision and creating a high-level action plan.

With the definition of the digital strategy comes the decision of whether to focus first on internal or external environments, which leads to a clearer picture of which dimensions should be prioritized. Finally, the last step is the implementation based on the gaps identified and the priorities defined. Digital Transformation is an ongoing process, that needs testing, validation, and continuous improvement (Fig. 5.6).

The importance of digital transformation for startups and SMEs is significant, however, differences in the approach. While SMEs need to carefully plan and transform all aspects of the running company to benefit from digital opportunities, *Startups can launch digitally right* from the start. However, it is still important for digital native startups to understand the dimensions of digital transformation and follow the process, by starting to define the digital transformation.

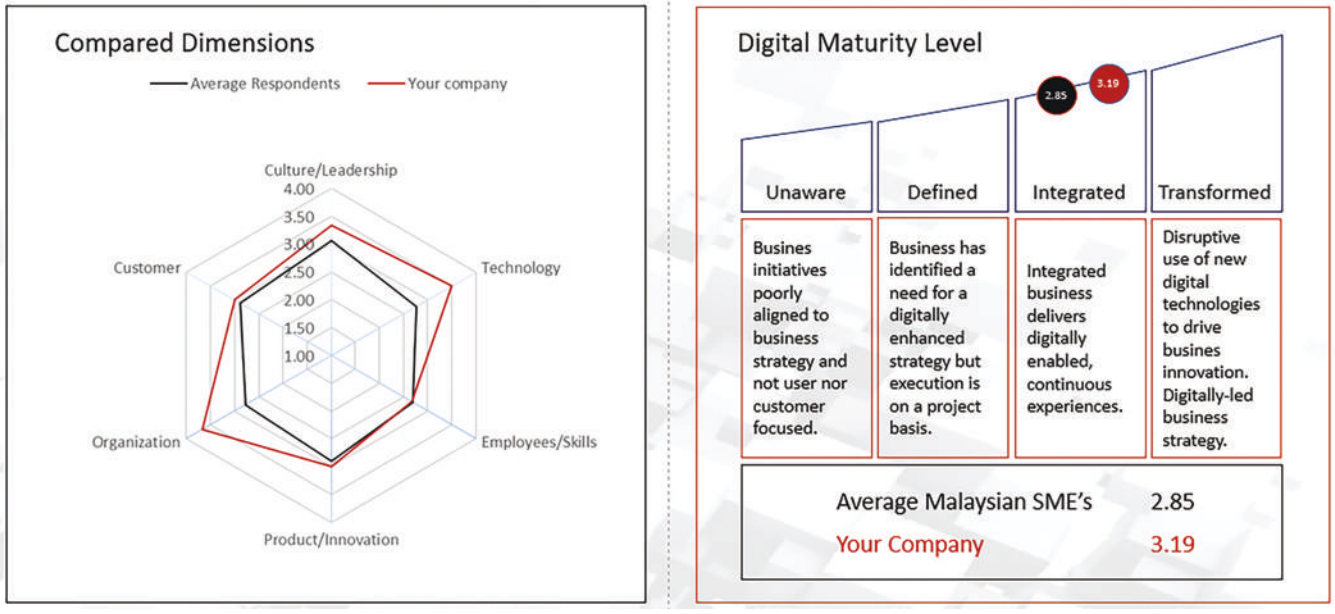

Fig. 5.5 Sample report/comparison of the company against a baseline, based on the author (2022)

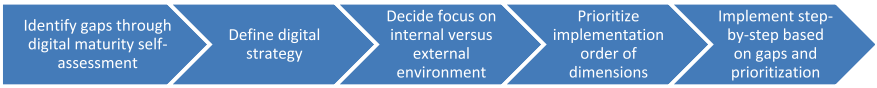

Fig. 5.6 Own digital transformation process approach. Source: Own

Limitations

As with every research, this study has a few limitations. We identified two main ones:

The first limitation is the small number of interviewees ($n = 2$). A larger number of interviews might be helpful to get more insights on the importance and prioritization of each dimension.

The second limitation is the fact that the two companies are at different stages of their business journey (existing company versus analogue startup) and from different industries. Advanced research could identify similarities and differences among different industries.

Future Research

Digital Transformation affects the entire company—all departments and all employees will be involved. Considering the dimensions, we see potential research in different areas:

Review the Importance of Dimensions
Some dimensions of digital transformation might need to be added, others become obsolete—this might also change over time. A weighing of the dimension can be done either on a company level or country level, as the maturity level between countries might vary to a great extent.

Deepen Research by Every Dimension
To have a clearer description of every dimension, further research would allow refinement and deep dives in a survey. As indicated, every single dimension is already complex by itself. Having a clear definition of its variables and sub-variables would provide measurements on a very granular level. This can help to get an even more detailed and insightful maturity level.

Further research could use a mixed-method approach utilizing qualitative research methodologies (Ishtiaq, 2019). A survey is a good method to understand general tendencies or identify some larger gaps, however, it will still leave many questions open, that would need a follow-up qualitatively. The survey can serve as an exchange with companies to review self-assessment and possible actions.

Comparison with Other Countries
The quantitative data explored the maturity level of Malaysian startups and SMEs. Researchers in other countries can use the maturity model and conduct a survey for comparative analysis among countries and different industries in different countries.

Implications for Startups

The importance of digital transformation for startups and SMEs is significant, however, differences in the approach. Newly founded startups can start as digital native companies with digital solutions from the beginning. On the other hand, existing companies of startups and SMEs must evaluate opportunities of the digital journey whether these include internal optimization or digital solutions for the customer. If a startup or SME cannot or does not aspire to transform digitally, there is a high probability that they will lose out and eventually run out of business.

There are two dimensions of sustainability: Securing survival of a startup, meaning a startup is sustainable long-term as well as improving the sustainable impact of, for example, sustainable development goals or sustainable measurements.

Appendix (Table 5.8)

Table 5.8 Comparison of literature quotes with quotes from SME CEOs interviews

Dimensions of digital transformation	Literature quote and source	Business quote and source	Comparison of quotes
Culture and leadership	"Adapting their leadership style enables managers to take advantage of any preexisting affinity or even enthusiasm towards digital innovation" (Berghaus, 2016). "Another leadership style suitable for organizational change is so-called servant leadership, which is based on considering the needs of the followers, that is the employees, and gaining their trust, so that they are open to change" (Berghaus, 2016). Corporate cultures shift with the transition from siloed operations to cross-functional teamwork. Shared goals and incentives that make cross-functional teaming effective also influence employee mindsets by exposing them to new ways of engaging each other. New mindsets and working styles, in turn, strengthen the company culture and boost its agility (Kane et al., 2017).	"Digital is fundamental, without digital there's no business. Automation allows us to differentiate from competition as they are still very heavy labour focused" (CEO, Holiday Experience). "I'm cautiously supporting [digital], the reason being […] the major concern is we lose control, control is everything" (CEO, Golf Networking).	Literature describes the shift in leadership and culture and how leaders must adapt and potentially change their style. Interviewees seem to understand the digital change, however, might struggle to make these adjustments, probably due to their vast non-digital leadership experience.

(continued)

Table 5.8 (continued)

Dimensions of digital transformation	Literature quote and source	Business quote and source	Comparison of quotes
Digital technologies	Maturity goes far beyond simply implementing new technology by aligning the company's strategy, workforce, culture, technology, and structure to meet the digital expectations of customers, employees, and partners (Kane et al., 2017). Organizations use digital technologies to alter the value creation paths they have previously relied upon to remain competitive (Vial, 2019).	"So, because through the conversion from manual to technology has been thought-provoking and it has thrown up some interesting anomalies, which has meant that we had to create technology to mimic what we have done manually. […] it helped refined offering and make it much more customer specific" (CEO, Holiday Experience). "The way we communicated [with customers] hasn't allowed to store and use the data in an efficient way" (CEO, Holiday Experience). "That is the purpose, whatever we do, it must ease our flow of work, catch-up my time, so we can focus our time in something else" (CEO, Golf Networking).	While literature provides a quite diverse perspective on digital technologies, there is a consent between the interviewees and the literature that emphasizes on the importance of digital technologies, however not as the driver but more as the 'lubricant' for a successful digital transformation.
Organization and processes	"This indicates that at the beginning of the transformation process, companies tend to experiment with digital innovation or react to external changes, while only at a later stage does a more systematic planning of the transformation process evolve" (Berghaus, 2016). The digital, paperless office will enable employees to collaborate independently of time and place, to access data and information, and the organization to create more transparency (Peter et al., 2020).	"As the business grows and we automate more of the tasks, there will be more time available for the leaders to concentrate on specific revenue generating parts of the business, rather than being locked in administrative tasks" (CEO, Holiday Experience). *Collaboration within the Organization:* "Because you have a technological solution that automates processes, then that can be shared amongst everybody. If you do it manually, people tend to keep things in their own little unit, because they have no platform to share it" (CEO, Holiday Experience). "[Digital solutions] help them [employees] to make better decisions, less misunderstanding, because they are very clear what's going on" (CEO, Golf Networking). Collaboration with partners: "Most definitely (the digital solution) will enhance the relationship with partners, to collaborate with a lot more people, than we currently do, we will be able to scale-up much more quickly. We can be more specific in terms of requirements and communication" (CEO, Holiday Experience).	Literature and opinions of interviewees are quite aligned and matching.

(continued)

Table 5.8 (continued)

Dimensions of digital transformation	Literature quote and source	Business quote and source	Comparison of quotes
Employees and digital skills	"a workforce with broad skill sets is a key success factor in reaching the goals" (Lichtblau et al., 2015). Only 26% of Skeptics have employees with "strong" digital marketing skills, compared to 66% of the overall sample and 100% of the most mature companies in our study. this is due not to scale, or even overall staff budget limitations (Gill & VanBoskirk, 2016). Skeptic's waste money hiring the wrong talent: people with market knowledge rather than expertise critical to digital maturity like media, content, customer insights or technology experience (Gill & VanBoskirk, 2016).	"At some stage, of course we're going to train employees on the digital things we are doing, so they can carry out their functions and support the business" (CEO, Holiday Experience). "It's a very important, we need to educate them [employees], let them know what is our goal, so they understand why they are doing this. Worst, if they don't understand what they should input and what are the information for, so they may enter the wrong information and data into the system or certain processes they do wrong" (CEO, Golf Networking). "If things are time-sensitive, need to be done in a rush, I tend to do it internally. But it depends also on the expertise, if we cannot acquire in time, there's a need for outsourcing" (CEO, Holiday Experience).	Literature and interviewees are aligned. Specifically in the understanding that digital skills and trainings are fundamentally important, however, that there is also a lack in doing so, respectively, a gap to where the education level should be.

(continued)

Table 5.8 (continued)

Dimensions of digital transformation	Literature quote and source	Business quote and source	Comparison of quotes
Customers	"To bring about collaboration and horizontal integration, companies should take the first steps toward system-integrated information sharing with external customers and suppliers" (Lichtblau et al., 2015). As digital platforms allow customers to approach the company's product line as a coherent whole, the company will likely need to reorganize in order to meet these customers' needs effectively (Kane et al., 2017).	*Interacting with customers in a digital way:* "[Interacting with the customer in a digital way] is important to a) To demonstrate the professionalism of the business; b) Give a feeling of belonging, create brand loyalty; c) Provide a simple way to access historical information; and d) Communication being more personalized" (CEO, Holiday Experience). "Information like Events, what's happening, broadcasting—fine. That is effective, a place where users can always go and look, rather than they get lost in a series of WhatsApp messages. So yes, I guess it's very important" (CEO, Golf Networking). *Customer feedback for future developments:* "Customers both in the sense of potential new revenue generators that buy services from us, they indicated the way we're going was taken very positively. But also shared with the industry, they are very keen to buy into that e.g. agents that are interested to offer the concierge services" (CEO, Holiday Experience). "The target groups are quite senior, so they are not very technical oriented, it take them a long time to learn—therefore there is also not much demand yet. But I think as we go towards the younger profiles which are only now coming in, […] if they are long enough in the system they may say it would be nice if we have this [feature]" (CEO, Golf Networking).	Literature and interviewees are aligned for this dimension. Customer-centricity is important, different approaches and targets seem possible when taking customer engagement into consideration.

(continued)

Table 5.8 (continued)

Dimensions of digital transformation	Literature quote and source	Business quote and source	Comparison of quotes
Products and innovation	"at the beginning of the transformation process, companies tend to experiment with digital innovation or react to external changes, while only at a later stage does a more systematic planning of the transformation process evolve" (Berghaus, 2016). In conjunction with agile methods (survey participants regard agility as a key benefit of process engineering), this should increase productivity and innovation (Peter et al., 2020).	"It is very difficult to find products in the market that give you all the things, all the tools that you need to do the job the way you want to do it. Our own new digital product is going to transform business" (CEO, Holiday Experience). "What we do now with the App will put us further ahead [from the competition], we develop early to the culture and what we want—it's still in the process of adjusting, not finalized yet. Due to this digital transformation […] we can do things faster, at a larger scale with minimal efforts" (CEO, Golf Networking).	Literature emphasizes on the importance of innovation and innovative products. For the Interviewees, innovation is more of a by-product, it happens or not, when they think about how to extend and improve their digital product.
Digital strategy	Our studies consistently find that strategy is the strongest differentiator of digitally maturing companies, which are more than four times as likely to have a clear and coherent digital strategy in place (Kane et al., 2017). Yet companies struggle to get their digital strategy right. Among the 18 practices in our DQ diagnostic, those related to strategy show the biggest variance between digital leaders and more average-performing companies (Tanguy et al., 2015). To ensure they capture the business value of digital transformation, companies should carefully devise a digital transformation strategy that coordinates the many independent threads of digital transformation and helps them navigate the complexity and ambiguity of identifying their own digital "sweet spots" (Hess et al., 2020).	"The truth is no [we didn't put a formal digital strategy in place], the reason is 1) most of what I do is in my head and 2) in many respects over the last 35–40 years my businesses have fundamentally been driven by innovative systems, so it was always in my mind by doing this business, that I'll be using digital strategy to differentiate us" (CEO, Holiday Experience). "No, not yet, but I have a business strategy" (CEO, Golf Networking). "From all the dimensions, Customer and Organization seems the most relevant, because of Client perception and Loyalty combined with company efficiency—Leadership/Culture, Employees and Technology are not specific enough" (CEO, Holiday Experience). "Leadership is the most important dimension. Only when you're thinking is right, your direction is right and you understand your business very well then you can execute the others [dimensions] properly " (CEO, Golf Networking).	Literature outlines how important to have a digital strategy in place is and surveys confirm that those companies have a digital strategy in place are more sustainable and successful. Literature confirms the interviewees' feedback, that they agree having a digital strategy would be important, but struggle to create one.

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Chapter 6
Migrant Entrepreneurs in Switzerland: Not Very Different from Native Entrepreneurs

Dario Meyer and Rolf Meyer

Abstract Switzerland is a country with a high share of people with a migrant background in the population; however, there is a lower share of migrant entrepreneurs compared to native entrepreneurs in most countries. This raises the question of who the migrant entrepreneurs in Switzerland are and what their motivations and challenges are. This chapter is based on data from the Federal Statistical Office as well as a written survey of new founders who started their company between 2014 and 2019. Sixty-three entrepreneurs with a migrant background were surveyed among the total sample. The results show that the differences between native and migrant entrepreneurs are small to non-existent. The motivation and challenges are the same, only in getting support the migrant entrepreneurs rely more on external help than the native entrepreneurs. Also, migrants more often start their business alone. The research contributes to the existing literature by confirming the findings of other countries that migrant entrepreneurs are very similar to native entrepreneurs and have the same daily challenges. This knowledge can help providers of entrepreneurship support to shape their offerings and attract native as well as migrant entrepreneurs to the same offerings, as they are all entrepreneurs first.

Keywords Entrepreneurship · Migrant entrepreneurship · Migrant entrepreneurs · Entrepreneurial motivation · Entrepreneurial challenges

Introduction

Migration has become a key factor in today's global society. The World Migration Report of the International Organization for Migration (IOM, 2021) estimates the number of people living outside of their home country to be 281 million or 3.8% of the world's population. It has increased by 83% since 1990. Europe and Asia have

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A. H. Verkuil (ed.), *Start-up Cultures in Times of Global Crises*, Sustainable Business Development, https://doi.org/10.1007/978-3-031-53942-8_6

the highest number of migrants with each having around 85 million. Migrants can play a vital role in the economic development of a country by reducing shortages in the local workforce, bringing new skills, or founding their own companies (Marchand & Siegel, 2014; OECD, 2015).

Switzerland has traditionally been a country of migration and has today the highest share of migrants in its population in Europe (IOM, 2021). The Federal Statistical Office states that 38% of the population over 15 years have a migration background, whereas 24% have foreign citizenship (Federal Statistical Office, 2022a). Most migrants come with the Free Movement Act into Switzerland, 64% are from the European Union, with the top three countries being Germany, Italy, and Portugal. Another 18% come from other European countries (Federal Statistical Office, 2022b). The two prevailing reasons for migration to Switzerland are family and professional. Forty-three percent came to the country to either start or rejoin a family, while 32% came to work. Other reasons only reach less importance with asylum (6%) and studying (5%) being number three and four (Federal Statistical Office, 2019). These numbers show that against conventional wisdom, refugees and asylum seekers from outside Europe only make a very small number of migrants in the country.

Only 68% of the third of the migrants coming for work to Switzerland already have a job, when they come to Switzerland. This leaves a majority of the migrant population without a job when they arrive in Switzerland. Self-employment might therefore be an option and the OECD/European Union (2015) reports that among all OECD countries the share of entrepreneurs among the migrant population is slightly higher than the share among local entrepreneurs. Migrants have habitually set-up businesses in their new host countries due to a variety of reasons, which can reach from opportunity recognition to the inability to find work in the respective job markets. A set of challenges have been associated with setting up a business in a foreign country, mainly in understanding the local legislation and business environment, as well as issues with the language and culture. Interestingly, migrant entrepreneurs identify themselves as entrepreneurs first with the same issues that local entrepreneurs have (Golob et al., 2020).

Besides positive economic benefits, promoting migrant entrepreneurship is a way to foster integration and can also be a catalyst for prosocial outcomes (Glad, 2022; ImpactHub, 2021; Mestres, 2010). Migrant entrepreneurs often demonstrate prosocial behavior by actively engaging with local residents, participating in community projects, and supporting social initiatives. Their businesses can serve as platforms for promoting diversity, cultural understanding, and social cohesion (ImpactHub, 2021). Moreover, the success of (migrant) entrepreneurs can inspire others, including both migrants and natives, to pursue their entrepreneurial aspirations. Therefore, by promoting migrant entrepreneurship, societies can also foster a culture of prosocial behavior that benefits the whole community.

In a research study among entrepreneurs in Switzerland, also 63 migrant entrepreneurs were surveyed. Based on this data, this chapter answers the following questions:

– Who are the migrant entrepreneurs in Switzerland?
– What motivates the migrant entrepreneurs in Switzerland?
– What are the major challenges of migrant entrepreneurs in Switzerland?
– How do the migrant entrepreneurs start their companies?

This chapter is divided into four further sections. First, we will define the terms around migrant entrepreneurship and look at the general literature on the topic in Switzerland, but also worldwide. We look especially at the motivation and challenges. The next section shows the methodology of the survey and describes the sample. The results are first shown alone and thereafter discussed and put into the context in the discussion section. The chapter concludes with a summary, areas for further studies and limitations.

Literature Review

In the literature migration, it is often differs between refugees and everyone else—a differentiation which is impractical for the present study. The United Nations (2022) proposes an inclusive definition that a migrant is "any person who is moving or has moved across an international border or within a State away from his/her habitual place of residence." This definition does not include people with a migration background, for example, a person who was born in a country to foreign parents. For this paper, we therefore use the definition for the term population with a migration background of the Statistical Office of Switzerland, as a big share of the data as well as the research itself is based on this definition. The population with a migration background is defined as "all foreign nationals, naturalized Swiss citizens, except for those born in Switzerland and whose parents were both born in Switzerland, as well as Swiss citizens at birth whose parents were both born abroad" (Federal Statistical Office, 2022a).

The International Organisation for Migration (IOM, 2019) contends that due to a myriad of reasons such as conflict, natural and man-made disasters, climate change, widening social and economic disparities between the north and south, among others, one out of every seven human beings on the global landscape is on the move. Such migration has had far-reaching consequences on the socio-economic set-up of source, transit, and host economies with migrant entrepreneurship being singled out as one of the positives (Hangartner et al., 2019). Entrepreneurship has accorded opportunities to refugees and migrants which has made it possible for them not just to reconstruct their lives but to also contribute meaningfully to the socio-economic outlook (through the provision of various goods and services, job creation, diversification of the economy) of both the host countries and their countries of origin.

Various definitions of migrant entrepreneurship have been put forward by different scholars. Sinkovics and Reuber (2021) and Bernardino et al. (2022) set the tone by defining migrant entrepreneurship simply as the wholesome entrepreneurial activities practiced by individuals in countries other than that of their birth or origin.

Similarly, Davidavičienė and Lolat (2016) opine that migrant entrepreneurs are foreign-born businesspeople who engage in business activities in their resident countries where they are not citizens. Tshishonga (2022) summarizes immigrant entrepreneurship as the process by which immigrants create wealth by means of enterprise activities in host countries. Davidavičienė and Lolat (2016) further highlight how migrant entrepreneurship differs from indigenous entrepreneurship. They argue that, unlike indigenous entrepreneurs, migrant entrepreneurs stand out in their focus on migrant products and services, migrant customer markets, and migrant business strategies.

It is important to note that migrant entrepreneurship plays a significant role in the economies of their host countries. According to surveys conducted in the United States of America (USA) and Europe, migrants particularly have a big share of business in small to medium enterprises (Davidavičienė & Lolat, 2016; Sahin et al. 2006). To illustrate the importance of migrant entrepreneurship in global economics, IOM (2019) contends that migrants account for more than nine percent of the global gross domestic product which is approximately US$ 3 trillion.

Motivation of Migrant Entrepreneurs

Understanding the motivation of migrant entrepreneurs is paramount for policymakers, scholars, and practitioners (Duan & Sandhu, 2022; Rametse et al., 2018). There are a number of reasons that bring migrants into entrepreneurship. A review of current literature exposes different ways and approaches in which the reasons have been advanced. Regardless, the reasons center around the availability of business opportunities, culture, social networks, inability to find a job, regulations in host countries, and access to capital.

The main reason for migrant entrepreneurship is the need for survival. In line with the research done by Cruz and Falcão (2020), owing to their different ethnic backgrounds and language barriers, many immigrants face mammoth tasks in finding formal employment in their host countries. Resultantly, immigrants turn to entrepreneurship as a means of self-employment and creation of wealth for their survival. In a research study that examined migrant entrepreneurship in the USA, Kerr and Kerr (2020) discovered that immigrants were more likely to be involved in self-employment and entrepreneurial activities than natives and that businesses founded by immigrants are more likely to survive and be more successful than those founded by their native counterparts.

Agoh and Kumpikaite-Valiuniene (2018) classify the motivations for migrant entrepreneurship into positive and negative factors. The positive factors are quantified as possession of business skills, knowledge of products and markets, availability of large ethnic groups, favorable business climate and regulations in host country, and support from family and social networks. Agoh and Kumpikaite-Valiuniene (2018) go on to identify the negative factors for migrant entrepreneurship as lack of

jobs and job skills, language barriers, poor working environment (such as discrimination and gender inequality), and poor integration programs in host nations.

Duan et al. (2021) highlight an immigrant entrepreneurial ecosystem with eight dimensions of determinants of migrant entrepreneurial motivation which are categorized into individual and environmental factors. The individual category has five determinants namely demographics, business ideas and opportunities, personal circumstances, self-efficacy, and personal values. The environment category houses three determinants that include the home, host, and ethnicity contexts.

In a study conducted to ascertain the motivation of African migrant entrepreneurs in Auckland, New Zealand, income generation, community service, availability of business opportunities, unfair labor practices in the job market, and being one's own boss were revealed as the major determinants for African small business owners (Omisakin, 2017). In the same breath, a study that sought to establish the motivations of migrant entrepreneurs in Greece identified the need for family survival, ties with immigrant community, personality traits, availability of markets, and the general economic conditions in Greece as the major influences (Liargovas, 2012).

The Difference Between Migrant Entrepreneurs and Nascent Entrepreneurs

Differences and similarities can be established between migrant entrepreneurship and nascent entrepreneurship. While it has been established in the preceding sections of this paper that migrant entrepreneurship summarily involves the business activities of foreign-born individuals within their host countries (Davidavičienė & Lolat, 2016; Kerr & Kerr, 2020; Sinkovics & Reuber, 2021; Tshishonga, 2022), nascent entrepreneurship is a process by which individuals begin a new business venture in which they are owners or co-owners with the venture not paying any benefits (such as wages or salaries) to founders for more than 3 months (Dzingirai, 2021; França et al., 2021; Zhou & Wu, 2021).

From the definitions above, differences between migrant entrepreneurship and nascent entrepreneurship can be noted. Whereas migrant entrepreneurship is undertaken by foreign nationals living in another country, nascent entrepreneurship can be practiced by anyone (migrants or natives). It can, therefore, be concluded that migrant entrepreneurs can be regarded as nascent migrant entrepreneurs as long as they are confined to the dictates of nascent entrepreneurship (Kraus & Werner, 2012).

One similarity between migrant entrepreneurship and nascent entrepreneurship lies in the motivation as they both are driven by necessity (high unemployment levels, for example) and opportunity (such as the chance prospect of creating wealth) (Dzingirai, 2021). Further, both migrant entrepreneurs and nascent entrepreneurs face challenges that are characteristically similar in their quest for business set-up and survival (Walsh & Cooney, 2022). The following section covers in detail the challenges faced by migrant entrepreneurs.

Obstacles and Challenges for Migrant Entrepreneurs

Migrant entrepreneurs face a number of impediments in their pursuit of business ventures which ultimately prevent them from attaining their potential in spheres of growth, competitiveness, and socio-economic revitalization (Davidavičienė & Lolat, 2016; Njaramba et al., 2018). These obstacles mostly stem from the conditions obtained in the host countries which negatively impact on migrants' ability to enter and flourish in the business set-up (Hamid, 2020; Njaramba et al., 2018; Zaid et al., 2019). A study conducted by Hamid (2020) on the challenges faced by migrant entrepreneurs in Malaysia summarily lists issues with the governing body, finance-lending institutions, local community environment, business competition in the host nation, poor market knowledge, language barriers, inadequate business skills, and limited social capital as the major highlights. A reason often given for migrant entrepreneurs' difficulties in accessing funding is that financial institutions cite lack of migrants' financial history that would enable them to conduct credit checks beforehand (Zaid et al., 2019).

Another challenge faced by migrant entrepreneurs is that of navigating the legal issues of attaining residency and being able to legally set-up their businesses. Olarewaju (2021) argues that whereas only a few countries like Canada, the United Kingdom (UK), and Singapore have start-up visa programs (which are meant to attract talented migrant entrepreneurs by host governments), many countries like the USA do not have such initiatives. While the European Union (EU) has a similar program for EU-originating migrant entrepreneurs, the same cannot be said about non-EU originating migrants (Olarewaju, 2021).

Interestingly, Prah and Sibiri (2020) are of the assessment that, in comparison, migrant entrepreneurs face more social challenges than economic ones. The social challenges highlighted include their deficits in socio-cultural resources such as lack of influential contacts within their host countries, inadequate wealth, small family ties, unfamiliarity with host culture, and lack of political power. This view is shared by Njaramba et al. (2018) who adds that cultural elements like social networks, family set-up, and human capital stand out as the barriers to the business operations of migrant entrepreneurs. Socially, migrant entrepreneurs also face hostility in their host countries, particularly from indigenous entrepreneurs who blame them for driving them out of business and from locals who blame them for taking away their jobs (Olarewaju, 2021).

Entrepreneurs with a Migrant Background in Switzerland

The Federal Statistical Office of Switzerland publishes yearly data on the shares of entrepreneurs among the migrant and non-migrant population (Federal Statistical Office, 2021) as shown in Table 6.1. The share of self-employed among the non-migrants was 6.7% in 2020 and has decreased over the last 8 years, when it was

7.4%. The share among migrants is 4.1% and was stable in the past, as it was 4.2% in 2012. Also, the difference between first-generation and second or higher-generation migrants is small (4.1% vs. 4.0%). In both groups, the share of male is much higher. In the population without a migration background, women have a share of 25.9%, while 30.9% of the entrepreneurs with a migration background are female. The fact that the native population is more entrepreneurial is not a new phenomenon and has been reported already since the beginning of the 1990s (Piguet, 2010). These numbers contrast with the general numbers reported by other countries, where the share of entrepreneurs is higher in the migrant than in the local population (OECD/European Union, 2015).

Table 6.1 also shows that the better integrated migrants have higher share of entrepreneurs. When the population with migrant background is divided into Swiss and non-Swiss, it is visible that 5.1% of the migrants with a Swiss passport become self-employed, compared to 3.6% of people without citizenship (Federal Statistical Office, 2021). It can be assumed that better integration leads to higher entrepreneurial activity and a share closer to the native population.

Looking at the geographical background of the migrants in Table 6.1, it becomes apparent that being European leads to more entrepreneurs. The highest share is among the migrants from Europeans outside the EU and the European Free Trade Association (EFTA) with 4.6%, followed by 3.6% of nationals from the EU and EFTA and 2.6% by people from outside Europe (Federal Statistical Office, 2021). The closer cultural links might help Europeans to start a business in contrast to entrepreneurs from outside.

The gap between native and migrant entrepreneurship widens the higher the education of the entrepreneurs. Among the share of people that only finished the compulsory education, 2.9% of migrants become self-employed, compared to 2% among the natives. This changes for people that have a vocational education or high school diploma (secondary level II) with 5.4% of natives and 3.8% among migrants.

Table 6.1 Share of self-employed among the total population in total, without and with a migration background (Federal Statistical Office, 2021)

	Total	Without migration background	With migration background
Total activity	5.7%	6.7%	4.1%
Male	7.9%	9.7%	5.5%
Female	3.1%	3.4%	2.4%
Share of females in total	28.1%	25.9%	30.3%
Citizenship			
Switzerland	6.4%	6.7%	5.1%
Foreign	3.6%	n/a	3.6%
Country of migration			
EU and EFTA	3.5%	n/a	3.5%
Other Europe	4.6%	n/a	4.6%
Outside Europe	2.6%	n/a	2.6%

With graduates from tertiary education, the gap widens and 9% of locals become entrepreneurs. In contrast, only 4.9% of migrants do (Federal Statistical Office, 2021).

Methodology

For the research project, an extensive written survey was conducted among people who have registered a business in the last 5 years (between August 2014 and July 2019). In order to obtain a meaningful overall figure, a large sample of just under 11,000 businesses was selected. These were sent the link to the questionnaire by letter and, where available, by e-mail. The survey was conducted online only, i.e., every participant took part via a link or QR code.

Measures of Variables

The survey was based on a similar questionnaire from two research projects in 1999 and 2009. In order to be able to compare the results as best as possible, only minor adjustments were made to increase understanding and to do justice to new developments, such as digitalization and migrant entrepreneurship.

Pre-test

The questionnaire was tested with five companies in the vicinity of the research institution that met the criteria and minor adjustments were made. After the test, the questionnaire was translated into French and Italian.

Sample and Response

The questionnaire was sent by mail in June 2020 to a total of 10,719 entrepreneurs. This is a representative sample of all new entries in the Swiss commercial register between July 01, 2014, and June 30, 2019. 7613 German, 2404 French, and 702 Italian letters were sent out. The questionnaires were not sent out physically. A QR code was printed on the letter and a shortened URL for typing if needed. In August 2020, a reminder e-mail was sent to companies with an existing e-mail address with the link to the questionnaire. A total of 2397 e-mails were sent.

Participation was completely anonymous. People who were interested in the results could provide their e-mail addresses to receive the published reports.

However, these were taken out of the database for analysis and no conclusions can be drawn.

The data is based on entries in the Swiss commercial register. Therefore, all sole proprietorships with an annual turnover of less than 100,000 Swiss francs that do not register voluntarily are not included in the survey.

All new registrations were considered, and no check was made as to whether the companies still exist. As a result, we potentially also wrote to companies that no longer exist. However, it must be assumed that these either no longer received the questionnaire or participated less than successful companies. This also leads to a survivorship bias, which is a main limitation of this research.

Almost 80% of the respondents chose the German version, 14% the French, and 7% the Italian. Compared to the letters sent out by language, fewer people chose the French questionnaire and more chose the German one, while the number of Italian responses was equal to the number of letters. Thus, either the net response in French-speaking Switzerland was lower or more French speakers also used the German questionnaire.

Eight hundred sixty-nine letters were not deliverable, which gives a total sample of 9934. Four hundred eighty-three people sent in a response, and an additional 302 people opened the survey but did not finish it. This means that 4.5% of the companies contacted sent in a response, which is a normal average for today's mass surveys. The average processing time of the survey was 21 min.

The responding companies can be divided into the following categories:

1. Twelve companies are not active. Either they are not yet active or no longer active. It is also possible that they are no longer registered in the commercial register. Due to anonymization, we cannot verify this.
2. Fourteen companies are subsidiaries or branches of companies that have existed for some time.
3. Sixty-nine companies were founded before 2014. They filled out an abbreviated questionnaire. We will use these results in further reports for comparison purposes.
4. Three hundred eighty-eight businesses are active and were established between 2014 and 2019 during the survey period. As the number of compulsory questions was intentionally chosen low, the number of actual answers per question varies.

Of those 388 active businesses, 63 have a migration background (16.2%), being defined as having migrated to Switzerland themselves or being born in Switzerland as second-generation migrants.

Statistical Analysis

The 63 responses from migrant entrepreneurs, who founded their companies between 2014 and 2019, were statistically analyzed using the statistical software SPSS.

Results

The following section shows some of the key results from the survey.

The Profile of Migrant Entrepreneurs
The average age of the migrant entrepreneurs is 42.45 years and 26.98% are women. 77.77% have a university education (either bachelor, master, or PhD) and 37% have an education in management, such as an MBA or continuous education. Compared to the native entrepreneurs, the migrant entrepreneurs are on average slightly older and better educated. Furthermore, there are fewer female entrepreneurs among the migrants.

Motivations of Migrant Entrepreneurs
Looking at the motivations of migrant entrepreneurs to become self-employed, there are no significant differences from native entrepreneurs visible. The main reason is independence, which is a very important reason for 77.8%. Also pursuing a meaningful activity is very important for a large part with 71.4%. Less important is entrepreneurship as a way out of unemployment and to have a better reputation. A difference can be seen in the striving for a better income, which is unimportant for half of the migrant entrepreneurs, compared to 62% among the native entrepreneurs (Table 6.2).

Challenges and How to Overcome Them

Also, when we look at the challenges, there are no significant differences between the migrant and native entrepreneurs and there were rarely big problems in any field. Exemplary looking at the data on the legal challenges, as they have often been reported as a main difficulty for the self-employed with a migration background, it can be seen that 60% have no or only small issues with legal questions in regard to the company set-up and administration and 73.8% have no to small problems with regulatory requirements. These numbers are similar to the numbers of the Swiss population, for which the two numbers are 61.5% and 71.6%. The biggest, and in fact the only big, problem is the marketing and customer acquisition, where a majority has medium to big issues. However, this is a general problem in entrepreneurship and cannot be explained by the migration background of the entrepreneurs (Table 6.3).

Table 6.2 Motivation of migrant entrepreneurs to become self-employed (own data)

	Very important	Rather important	Unimportant	Total
Independence	49 (77.8%)	11 (17.5%)	3 (4.8%)	63 (100%)
Pursuing a meaningful activity	45 (71.4%)	14 (22.2%)	4 (6.3%)	63 (100%)
Assertion of own ideas	36 (57.1%)	18 (28.6%)	9 (14.3%)	63 (100%)
Self-realization	35 (55.6%)	22 (34.9%)	6 (9.5%)	63 (100%)
More flexible time management	30 (48.4%)	21 (33.9%)	11 (17.7%)	62 (100%)
Recognizing a gap in the market	23 (36.5%)	25 (39.7%)	15 (23.8%)	63 (100%)
Unsatisfactory work situation at a previous job	22 (35.5%)	19 (30.6%)	21 (33.9%)	62 (100%)
Creation of social added value (impetus for social, ecological, and societal change)	20 (31.7%)	25 (39.7%)	18 (28.6%)	63 (100%)
Creation of a job in a suitable location (e.g., at or near the place of residence)	17 (27.0%)	19 (30.2%)	27 (42.9%)	63 (100%)
A way out of threatened or actual unemployment	8 (12.7%)	7 (11.1%)	48 (76.2%)	63 (100%)
Better income	8 (12.7%)	24 (38.1%)	31 (49.2%)	63 (100%)
Higher reputation/recognition	6 (9.5%)	21 (33.3%)	36 (57.1%)	63 (100%)
Family reasons (marriage, children, divorce, death, etc.)	5 (7.9%)	12 (19.0%)	46 (73.0%)	63 (100%)
Continuation of family tradition	2 (3.2%)	4 (6.3%)	57 (90.5%)	63 (100%)

Support During the Start-Up Phase

The first point of contact when facing challenges for migrant entrepreneurs are external and can be advisors, banks, or trustees, followed by advice from relatives and acquaintances. Also attending further education and solving issues through cooperation have been named by at least 25% of respondents. There is one significant difference between migrant and native entrepreneurs in the factor of getting advice from relatives and acquaintances: While only 34.9% of migrants use this form of support, 51.7% of native entrepreneurs do. The Pearson chi-square test, testing that the results are independent of the participants' origin, shows an asymptotic significance level of 0.02. No significant differences were observed in the other areas (Table 6.4).

Table 6.3 Challenges in setting up a business for migrant entrepreneurs (own data)

	No/small problems	Medium problems	Big problems	Total
Search for new customers/marketing	22 (36.1%)	22 (36.1%)	17 (27.9%)	61 (100%)
Pricing and enforcement	34 (55.7%)	24 (39.3%)	3 (4.9%)	61 (100%)
Bookkeeping, accounting	36 (59.0%)	22 (36.1%)	3 (4.9%)	61 (100%)
Personal problems (e.g., family, motivation, and double burden)	36 (59.0%)	19 (31.1%)	6 (9.8%)	61 (100%)
Legal issues/taxes/insurance	36 (60.0%)	19 (31.7%)	5 (8.3%)	60 (100%)
Raising capital/liquidity	39 (65.0%)	14 (23.3%)	7 (11.7%)	60 (100%)
Regulatory or official requirements for the products/services produced	45 (73.8%)	12 (19.7%)	4 (6.6%)	61 (100%)
Hardware/software/website	46 (75.4%)	12 (19.7%)	3 (4.9%)	61 (100%)
Business idea	46 (75.4%)	15 (24.6%)	0 (0.0%)	61 (100%)
Organization/mgmt./human resources	49 (80.3%)	8 (13.1%)	4 (6.6%)	61 (100%)
Purchasing/procurement	50 (82.0%)	9 (14.8%)	2 (3.3%)	61 (100%)
Customer service	52 (86.7%)	6 (10.0%)	2 (3.3%)	60 (100%)
Production	53 (86.9%)	7 (11.5%)	1 (1.6%)	61 (100%)

Starting Alone Versus Team

A substantial difference can be seen in the question of how the entrepreneurs started their businesses. For the migrant entrepreneurs, 79.4% (50 participants) started out alone and 12.7% (8) started in a team. For the native entrepreneurs, the rate of team-founders is higher with 23.7% and 65.9% started alone. The remaining entrepreneurs have either bought an existing or part of an existing company, did a management buyout, started a franchise, or become a partner in an already running company.

Table 6.4 Support in overcoming challenges, migrant entrepreneurs in % (own data)

	Yes	No	Total
I have sought external help (advisors, banks, trustees, etc.)	24 (38.1%)	39 (61.9%)	63 (100%)
I have sought advice from relatives and acquaintances	22 (34.9%)	41 (65.1%)	63 (100%)
I have furthered my education	20 (31.7%)	43 (68.3%)	63 (100%)
I have solved my problems through business cooperation	16 (25.4%)	47 (74.6%)	63 (100%)
I have conducted market research activities (internally or externally)	8 (12.7%)	55 (87.3%)	63 (100%)
I have delegated these tasks to my employees	6 (9.5%)	57 (90.5%)	63 (100%)
I have sought advice from the business development/location marketing department	2 (3.2%)	61 (96.8%)	63 (100%)

Income and Job Offer

Migrant entrepreneurs earn on average less than in previous fixed position. Fifty-eight percent (36 participants) earn less or considerably less and 11% (7 participants) earn the same. Only 30% (19 participants) earn more than before. Most entrepreneurs however do not want to move back into employment. Only 11% (7 participants) would accept a similar and well-paid job offer. Fifty-five percent (34 participants) would not take it and 34% (21 participants) are unsure. Due to the survivorship bias in the survey, these numbers might be biased though.

Discussion and Implications

Compared to the total population, migrant entrepreneurs are fairly similar in terms of demographics. The only larger difference is the lower share of female entrepreneurs, which is one-third among the entire population and only 27% among migrant entrepreneurs. This finding is in contradiction to the numbers published by the Federal Statistical Office (2021), which show that the share of female entrepreneurs is higher among the migrants than the native population. The gender gap in migrant entrepreneurship has also been shown by Brieger and Gielnik (2021) and is not only related to migrants but has been identified as an issue in the entrepreneurship literature in general (Klyver et al., 2013; Meyer, 2018; Thébaud, 2015). One of the main factors in reaching a higher share of female migrant entrepreneurs is a supportive environment for entrepreneurship, which seems to be more important for women than men (Brieger & Gielnik, 2021).

This survey shows what has already been reported in different studies. The needs and motivations of migrant entrepreneurs are not distinct from local entrepreneurs.

The only difference in motivation can be seen in the better income, which is slightly, but not significantly, more important for migrant entrepreneurs. One can argue that migrants more often work in low-paid jobs—21% compared to 13% of the native population (Federal Statistical Office, 2022c)—and therefore see self-employment as a way of increasing their salary.

Also, the often-reported necessity entrepreneurship, meaning migrants start a business as they have no other options, is not prevalent among migrants in Switzerland. The same number of migrant entrepreneurs state that they chose self-employment due to unemployment as native entrepreneurs do. It might be that this is due to the low unemployment rate and that also foreigners have fair chances to find jobs in Switzerland. The social security system of Switzerland will influence this as well, as people get governmental support when they are unemployed. This does not lead to an urgent necessity to earn money through self-employment. The numbers also show that the people with a migrant background, who became Swiss citizens, have a higher share of entrepreneurs than the non-Swiss with a migrant background. This shows that becoming an entrepreneur equals to a better integration into society and becomes a matter of choice and not of necessity (Piguet, 2010).

In the literature, one of the major challenges for migrant entrepreneurs is understanding the legal frameworks of their host countries (Golob et al., 2020). Migrant entrepreneurs in Switzerland do not have this challenge more often than native entrepreneurs. One explanation can be that the process of starting a business is quite straightforward in Switzerland and easy to understand. Also, through its multilingualism, the documents are at least available in German, French, and Italian, and often also in other languages such as English or Portuguese. This gives the migrant entrepreneurs better access to all the legal information than it might be the case in other countries.

The big problem for migrant entrepreneurs is finding their customers. However, as Swiss entrepreneurs report the issue in similar numbers, it cannot be motivated by cultural differences and not understanding the local business environment. Acquiring customers is one of the main hurdles of every new company and this finding confirms that the challenges of migrant and native entrepreneurs are the same. Also, Golob et al. (2020) state that migrants usually do not see their challenges as special and are in line with the issues reported in general entrepreneurship literature and not due to their migrant background. In getting support, migrant and local entrepreneurs are also using the same techniques to overcome them, bar one which is the support through the direct social network by family and acquaintances. It can be assumed that migrants have fewer members of their family in Switzerland and therefore also have a smaller support structure within the country. Thus, this raises the question, whether there is a need for specific programs to support migrants in Switzerland or whether it is more beneficial to better include them in the existing programs. This would also allow them to network among native entrepreneurs and build their own supporting structure.

The share of people with a migration background who become entrepreneurs is lower than the share of migrants in the general population. While studies in many other countries have confirmed a higher entrepreneurial activity among migrants

(e.g., OECD, 2010; OECD/European Union, 2015), this is not the case in Switzerland, which has also been confirmed by the number of the Federal Statistical Office (2021). One reason could be that Switzerland has a very low unemployment rate of between 3.2 and 2.3% within the surveyed period of 2015–2019 (Federal Statistical Office, 2022d) and a shortage of skilled workers. This means that the job market can better absorb migration than in other countries and that there is less necessity for entrepreneurship among migrants. This is also shown by OECD (2022) stating that Switzerland has the fourth highest labor participation rate by the foreign-born population worldwide with 83.2%. Another reason could be the lower educational level of migrants. As shown, for example, by the Federal Statistical Office (2021), the higher the education, the more people start businesses. While the share of entrepreneurship is higher among migrants than natives among people who only have compulsory education, this changes for people with vocational and tertiary education.

People who migrated to Switzerland from Europe have a higher share of entrepreneurship, whereas people from the EU and EFTA have lower numbers than people from non-EU countries This can be due to the free movement agreement that Switzerland is part of with the European Union. For citizens of a European country, it is fairly easy to find a job in Switzerland and to move without many legal requirements.

However, unemployment rate among migrants is higher in Switzerland. If we look at the unemployment rate in Switzerland according to the definition of the International Labour Organisation, the people without a migration background are 3%, while migrants are at 7%. These figures show that migrants have it harder to find a job in Switzerland (Federal Statistical Office, 2022e). Nevertheless, these do not seem to impact entrepreneurial activities, as it was shown that unemployment is not higher ranked as a motivation factor among migrants.

Migrants more often start their businesses alone than native entrepreneurs. This finding has also been confirmed by the OECD/European Union (2015), which reports that 75% of migrant businesses have no employees. Also, in all countries of the OECD, there is a smaller share of migrant businesses with more than ten employees than in the native population. This raises the question, whether there are missing skills to grow or whether they are happy with their one-man company with no intent to grow.

Even though the migration background has been used as the main variable in this chapter, it should not be considered the only factor in explaining the differences. There are other variables, such as age, education, and prior experiences, which can have an impact.

Conclusion

Migrant entrepreneurship has the potential to contribute to economy of the host country through the creation of jobs, innovation, new skills, and economic growth among others. This chapter has looked at the state of migrant entrepreneurship in Switzerland. In contrast to other countries, the share of entrepreneurs among migrants is lower than the share among the native population. However, the motivations and challenges of entrepreneurs are the same. These two findings are partially different than in other countries, where migrants more often choose the entrepreneurial path, mainly due to necessity reasons—difficulty in finding a job, no acknowledgment of their degrees, and cultural and language barriers. The fact that migrant entrepreneurs see themselves as entrepreneurs with the same challenges has also been confirmed by other scholars. They often reported legal and cultural issues, which has not been the case in the present study.

Therefore, it is recommended that the current offerings for entrepreneurs, such as trainings and coaching emphasis their openness to migrant entrepreneurs. By engaging with native entrepreneurs-to-be, migrants can also build a support network, which is crucial. Nevertheless, it can still be useful to create additional support offerings. As seen, migrants have less support from their families and are more dependent on external support, which can be offered by entrepreneurial institutions or economic development organizations. Also, migrant businesses start and stay smaller than the companies of native people, meaning that the offerings should focus also on skills to grow a business.

For these institutions, as well as universities, it is recommended that they do not see migrants differently, but in the same light as local entrepreneurs. Also, they should actively target female migrant entrepreneurs. As studies show, they are more reliant on a supportive local business environment and can benefit from trainings and mentoring.

From an economic perspective, it would be desirable if Switzerland could attract even more well-educated founders to establish their innovative start-ups in Switzerland. Several factors can support this. A good start-up environment is key, which is the case in Switzerland. The Global Entrepreneurship Monitor (2022) has confirmed this with their ranking of framework conditions, which includes Switzerland within the top 10. There are already specialized accelerator programs for specific sectors or technologies available, providing additional know-how, networking, support as well as access to capital. This should be open to foreigners with the aim of setting up their businesses in Switzerland. Furthermore, the universities must be open to PhD topics that could lead to a start-up, such as application-oriented or development of a technology that could have practical applications. Ideally paired with support services to drive the start-up during the PhD. Also in this area, Switzerland is already strong with programs at world-renowned universities like ETH or EPFL. The basis for all this is migration rules that allow start-up founders to get a resident permit. In this area, there are currently discussions ongoing to make it easier for non-EU-/EFTA nationals.

To conclude, as many other studies have shown, the area of migrant entrepreneurship should be looked at in a more generic context of entrepreneurship. The motivations, challenges, and needs of migrant entrepreneurs in Switzerland are the same as for local entrepreneurs. Treating migrant entrepreneurs as equal and not special because of their background, will also help them to grow, network, and get the best out of their business, which eventually supports the economy as a whole as well.

The study has two main limitations. Firstly, the sample is rather small with 63 respondents, and thus, no generalization is possible. A bigger study can further assess the challenges and motivations of migrant entrepreneurs to further improve the support structures. Secondly, there is the possibility of a survivorship bias, as assumingly, only still existing businesses have answered the survey. Another survey targeting companies that are out of business can specifically look at the challenges again.

In addition to large-scale studies that also include failed companies, further studies can in detail analyze what supporting offerings migrants need. Also, the reasons why the share of entrepreneurs among migrants is smaller should be analyzed, as it might help to increase this number. The share of foreign founders among the innovative and scalable start-ups should also be looked at to conclude with ways on how to attract more of these start-ups to Switzerland.

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Part II
Social Innovation Through Start-Ups from an International Perspective

Chapter 7
Sustainable Entrepreneurship: A Cross-Country Comparison

Rolf-Dieter Reineke and Oliver Gottschall

Abstract Globally, the focus on ESG (environment, social, and governance) related issues has increased significantly in recent years. According to recent research by McKinsey & Company, more than 90% of S&P 500 companies now publish ESG reports, while inflows into sustainable funds rose 14-fold in 2021 to reach USD 70 billion, compared to just USD 5 billion 3 years earlier (Perez et al. 2022).

Asia is no exception, with a growing number of Asian countries committed to setting emission-reduction targets and companies racing to capture a USD 5 trillion opportunity in green business building (Balasubramanian et al. 2022).

Keywords Social innovation · ESG · Sustainable entrepreneurship

Based on the findings from their global cross-sectoral study, Al Hawaj and Buallay (2022) ascertain that sustainability reporting indeed *does* have an impact on firms' operational, financial, and market performance, but that such impact varies significantly across different industries, with companies in the manufacturing, retail, and tourism industries seeing relatively more positive impact form sustainability reporting than banks or financial services firms.

The increased focus and attention on sustainability and related issues by all kinds of stakeholders of businesses may lead to the assumption that the entrepreneurial sector (start-ups, young growth businesses) is equally impacted by this trend, and that also more and more entrepreneurial focus is spent on building environmentally and socially sustainable businesses—or at least on building ESG principals into the business plans of young growth companies.

Various definitions of "Sustainable Entrepreneurship" have been proposed in recent literature (cf. Schmidpeter & Weidinger, 2014, Schaltegger & Wagner, 2011,

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Porter & Kramer, 2011; Rosário et al., 2022). We propose to follow Schaltegger & Wagner, who take a rather broad perspective and define sustainable entrepreneurship as "a business approach in which businesses engage in sustainable business practices to achieve efficiency and competitiveness by balancing the impacts of their environmental, business, and social activities" (Schaltegger & Wagner, 2011, cited in Rosário et al., 2022: 1).

This chapter examines elements of sustainability in entrepreneurship as evident in data collected from the Swiss Innovation Challenge (SIC), a business plan competition spanning three countries (Switzerland, Indonesia, Malaysia). Findings from the three countries are analyzed and compared with each other.

Review of Recent Literature on Sustainability in Entrepreneurship

The Impact of Culture on Business and Entrepreneurial Outcomes

Even though this research set out to conduct a cross-country comparison, and country-specific differences cannot easily be equated with cultural differences, the works of Hofstede (1980), Hodgetts and Luthans (1997), and many others suggest at least part of the differences in managerial and organizational behavior between different countries can be explained by what Srnka (2004) refers to as nation-specific "macro-culture" (Srnka, 2004: 4).

The impact of cultural differences on business, management, and entrepreneurship has been long discussed (Hofstede (1980); Hofstede (1991); El Kahal (1994); Rothlauf (1999); Dülfer (2001); Adler (2002); Gottschall (2018)). El Kahal (1994: 5) identified 22 factors from a firm's environment that influence businesses and management practices. Specific to entrepreneurship, Cheng and Adejumo (2021) identify three groups of factors that influence what they call "Entrepreneurship Sustainability Channels": (1) Basic Requirements (such as Health, Equality, and Basic Education); (2) Efficiency Enhancers (Higher Education, Financial Markets, Technology), and (3) Innovation and Institutions (Research & Development, Infrastructure, Public Policies) and show the impact of these factors on entrepreneurial outcomes in Asia (Cheng & Adejumo, 2021: 805).

Country-Specific Studies on Sustainable Entrepreneurship

A number of country-specific studies investigate the relationship between particular country-specific factors (such as economic policies, culture, infrastructure, and entrepreneurial networks) and sustainable entrepreneurship. Cao and Zhang (2022)

studied the relationship between the entrepreneurial ecosystem and entrepreneurial value creation in China and conclude that in China government support is indispensable for sustainable entrepreneurship as the market itself lacks self-supporting mechanisms. Their findings imply that the state of China's economic and human capital development may be a hurdle for sustainable entrepreneurship: "Moreover, it is necessary to promote sustainable development of financial inclusion and entrepreneurship, due to the lack of directly promoting effect from economic development. […] Thus, governmental complement is indispensable because of polarization led by the endowed wealth gap, and continuous promotion is appealed due to the transforming lag of mutual promoting feedback" (Cao & Zhang, 2022: 1564).

Using a set of case studies, Tuhin (2021) comes to the opposite conclusion for Bangladesh. He proclaims that—due to Bangladesh's specific challenges around poverty and economic development—there are substantial opportunities for entrepreneurs to start social/sustainability-oriented businesses, and that "social entrepreneurs can be lifted up with proper guidance" (Tuhin, 2021: 7), e.g., by offering them low-interest microcredit, therefore, creating a self-reinforcing ecosystem of social enterprises.

Cross-Country Studies on Social Entrepreneurship

Mittal et al. (2022) evaluate and compare case studies of 10 social enterprises across different countries in Asia and propose that each business can be categorized along a "socio-economic continuum," using a social enterprise spectrum between traditional non-profit businesses and traditional for-profit businesses (Mittal et al., 2022: 3–5).

Vitell et al. (2003) study the impact of Hofstede's cultural dimensions as well as elements of idealism and corporate cultural values on marketers' perceptions of the role of ethics and social responsibility and conclude that results "indicate that the perceived importance of ethics and social responsibility to the success of the firm (PRESOR) is indeed influenced by at least some of Hofstede's cultural dimensions" and that "higher levels of idealism and corporate ethical values—as well as lower levels of relativism—were associated with high levels of PRESOR" (Vitell et al., 2003: 78).

Cherry et al. (2003) conducted a cross-cultural comparison of the USA and Taiwanese business practitioners and found that "Taiwanese practitioners exhibit lower perceptions of an ethical issue in a scenario based on bribery" (Cherry et al., 2003: 359) and that "Taiwanese respondents' deontological evaluations are more influenced by normative pressures from their in-group than their U.S. counterparts (2003, 370), which the trio link back to the fact that in Taiwan "it is common for small businesses (…) to be organized around a nucleus comprised of family members, more distant family members, and friends" (2003, 364) and consequently be more influenced by such peers than their US counterparts. Overall, the study implies that US business practitioners take ethical considerations more into consideration

when making business decisions than their Taiwanese counterparts, while Taiwanese rely more on the influence of their superiors/top managers for ethical judgments and intentions (Cherry et al., 2003: 371).

In a comparative study of companies from 49 countries, Ho et al. (2012) examined the impact of national culture and geographic environment on firms' corporate social performance (CSP) and found that "Hofstede's cultural dimensions are significantly associated with CSP" (Ho et al., 2012: 423). Furthermore, they conducted a comparison across regions and found that

> firms from the developed European countries in general have significantly higher ratings in overall CSP and the four subcomponents. On the other hand, firms from the developing countries on average have significantly lower ratings *across* the board. (…) The cross-regional/economic comparison implies that factors pertaining to region or economic development contribute to differences in CSP.
>
> (Ho et al., 2012: 428)

Similarly, in an attempt to understand the drivers of CSP, Ioannou and Serafeim (2012) investigated a sample of firms from 42 countries over a period of 7 years and came to the conclusion "that the political system, followed by the labor and education system, and the cultural system are the most important (…) [factors] that impact CSP" (Ioannou & Serafeim, 2012: 834). Their study findings lead to the conclusion that

> cultural traits play a significant role in explaining CSP variation across firms. Our results confirm Hypothesis 9, according to which, in countries that are characterized by higher levels of individualism (Individualism), corporations fare better on the CSP index. In individualistic societies that actively encourage broader discretion of economic actors, CSR materializes in a more explicit, proactive and strategic form, and consequently it enhances CSP.
>
> (Ioannou & Serafeim, 2012: 852)

Ethical Investing: ESG in Finance and Investment

Widely discussed in academia as well as in public is also the relevance of ESG to the area of finance and investments (e.g., Statman, 2000; Bauer et al., 2005, 2006, 2007; Renneboog et al., 2008). López-Arceiz et al. (2018) studied 488 socially responsible (SR) mutual funds and concluded that "The performance of SR funds differs from that of conventional funds. The source of these differences is a lower risk level that results in outperformance" (López-Arceiz et al., 2018: 274). In the search for the potential root causes of such outperformance, the authors analyze cultural differences between funds and conclude: "Rather than the SR (or non) character of a mutual fund, a relevant explanation for this behavior is the cultural environment in which the fund operates" (López-Arceiz et al., 2018: 259).

> The results of our study provide empirical evidence of how the management of a fund depends on the cultural environment in which it operates, based on a specific sphere of

> values, regardless of any declaration of an ethical/SR or conventional stance, and beyond any pure methodological aspect. (…) Thus, a mutual fund's behavior will reflect the dominant ethics of the location where it is settled because the fund's managers will assume the society's prevailing values as their own. As a consequence, there is no universal ethical framework or social responsibility. Any comparison of SR and conventional funds should consider these circumstances because to do otherwise is to advocate for the existence of a unique and universal ethical view or social responsibility, common to all products marketed under these names. The assessment of the cultural element enables for a more accurate comparison, given the singularities that can be considered between different environments. In fact, there are more similarities in terms of return, risk, and performance between SR and conventional mutual funds sharing the same cultural origin than between SR mutual funds of different cultural environments.
>
> (López-Arceiz et al., 2018: 273-274)

The findings of López-Arceiz et al. (2018) are in so far interesting and relevant for the field of entrepreneurship as there may be implications on the availability of (start-up) funding depending on the cultural environment of the company, and that entrepreneurs operating in cultures that place higher value in firms' ESG practices may be able to obtain easier access to funding if their idea/business concept has tangible ESG benefits.

Expected Research Outcomes

Based on the insights from our literature review, we derived three sets of expected outcomes which we set out to explore in this research:

> Expected Outcome #1: Given the different cultural environments and different development stages of their economies, there should be significant differences between Switzerland, Malaysia and Indonesia with regards to the sustainability focus of entrepreneurs in each respective country.

Our initial assumption was that the largest differences are likely to be found in Switzerland when compared to Indonesia and Malaysia, and the latter two countries are likely to show relatively more similarities—given their geographic proximity in Southeast Asia, their state of economic development as well as their cultural similarities with regards to language and religion, among other elements of culture.

The particularly strong ESG focus in the USA and Europe (cf. Perez et al., 2022) led us to the assumption that entrepreneurs in Switzerland would give relatively more importance to building sustainability aspects into their businesses:

> Expected Outcome #2: Sustainability goals are relatively more important in Switzerland, and therefore also more frequently found in entrepreneurs' business plans there when compared to Malaysia and Indonesia.

Finally, with regard to ecological/environmental measures entrepreneurs would build into their business models, we expected that entrepreneurs in Switzerland would put forward a stronger emphasis on supporting elements of a circular rather than a linear economy:

Expected Outcome #3: Environmental and ecological aspects are more frequently found among business models from entrepreneurs in Switzerland when compared to Indonesia and Malaysia.

Methodology

Methodological Framework

The literature review reveals that the comparative cross-country research on sustainable entrepreneurship is not well-established as yet. The nature of this paper is explorative, a quantitative analysis with descriptive statistics. It is based on the accompanying research that is conducted by the School of Business of the University of Applied Sciences and Arts Northwestern Switzerland FHNW together with university and industry partners in Switzerland and selected countries in Southeast Asia at the Swiss Innovation Challenge (SIC). The SIC is a business plan competition with a promotional component that was established in 2014 and brought to Southeast Asia in 2017. Besides the elaboration of case studies (cf. Milow et al., 2021) an empirical database has been developed, first in Switzerland and recently in Indonesia and Malaysia. The focus is on sustainable entrepreneurship, thereby adopting the so-called triple bottom line approach, meaning that sustainability-oriented entrepreneurs may not pursue only economic but also ecological and/or social goals. The three aspects of sustainability are usually not covered to the same extent.

The data that have been gathered in Malaysia and Indonesia are compared. Then a possible match with the data that have been gathered in Switzerland is explored, based on the previous research (cf. Milow, 2021).

The Data

The data that have been compiled by Milow (2021) have been derived from semi-structured interviews. Participants of the Swiss Innovation Challenge included start-ups and innovations from existing companies that have been selected by the jury for the second pitch. In the 2020 cohort, all 25 participants who agreed to have the sustainability interviews were start-ups. Data have been compiled by face-to-face interviews that have been transliterated. The participants are based in different regions all over Switzerland, a few are from neighboring countries (cf. Milow, 2021). Different industries are represented, the SIC applies a wide definition of innovation that includes not only product innovations, but also process and business model innovations.

For the data gathering in Malaysia and Indonesia, the same questionnaire has been used as a basis. It has been shortened and adapted to the data compilation

method, which was a distribution to the participants via e-mail rather than personal interviews. The participants in Indonesia and Malaysia had similar characteristics as the batch of interview partners in Switzerland. In Malaysia, 29 SIC participants answered in early 2022, in Indonesia 64 participants filled in the questionnaire in summer 2021.

Limitations

Participation in the survey was voluntary. However, as participants have been still in the competition, some participants may have felt obliged to fill in the questionnaire. Also, a bias of participants with a greater interest in sustainability cannot be ruled out. A further impact on the results may derive from the marketing channels that are used for the recruitment of SIC participants in the three countries. Many of the participants in Indonesia and Malaysia are more or less closely attached to the universities organizing the competitions locally, whereas in Switzerland marketing channels focus more on participants who already founded a company, resulting in fewer university-based projects. In addition, differences in the methods of data generation in the countries may have an impact on the results. Also, the distribution of industries among the batches is different in the three countries.

For those reasons, and in view of the statistically not significant number of participants conclusions for the whole population cannot be drawn. However, statements can be made about the groups of participants in the three countries. In line with the nature of an exploratory study insights for future directions of the studies in this emerging field can be gained.

Research Findings

Profile of Survey Participants by Company Development Stage

Start-up businesses may be classified by their development stage in the following three stages:

1. *Seed Stage (ideation and concept development): Start-up company is still in the concept development stage. No users acquired or revenues generated yet.*
2. *Start-up Stage (validation, proof of concept): Product or service is ready for the market. First users have been recruited and first revenues have been generated.*
3. *Growth Stage (scaling): The start-up company has strong growth in users or revenues (or both).*

The profiles of survey participants across Indonesia, Malaysia, and Switzerland were relatively similar (Fig. 7.1). The majority of participants (61% / 70% / 54%,

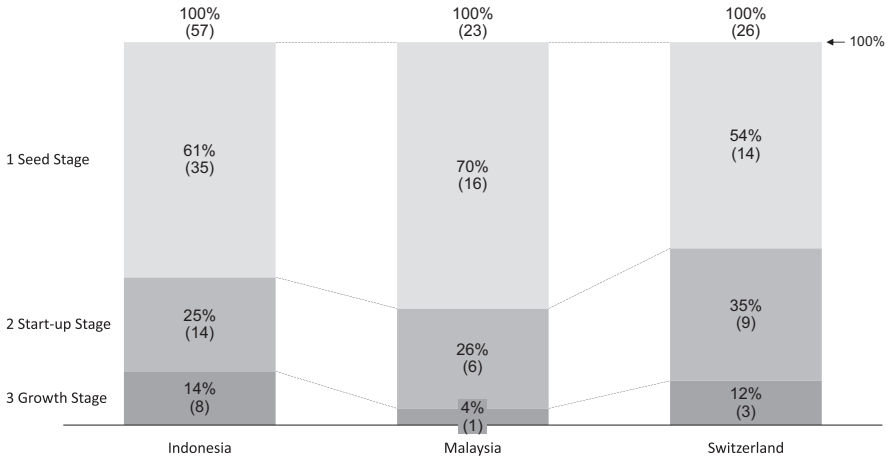

Fig. 7.1 Profile of survey participants by development stage

respectively) were still in their Seed Stage. Only a few participants (14% / 4% / 12%, respectively) had matured to the Growth Stage. Therefore, the survey in Switzerland contained slightly more mature participants, while the Malaysian sample consisted of relatively earlier-stage businesses, in comparison.

Profit Orientation of the Companies

Some differences across the three countries were observed when asking participants for their profit orientation (Fig. 7.2): While 58% of participants in Switzerland identified themselves as purely profit oriented, this category was significantly smaller in Indonesia and Malaysia with 6% / 21%, respectively. Malaysia had the largest share of non-profit companies (24%) compared to Indonesia (13%) and Switzerland (16%) with significantly smaller shares. In turn, this means that for the large majority of participants profit generation is the main focus, with 87% in Indonesia, 76% in Malaysia, and 84% in Switzerland.

Sustainability Contribution

When asked whether their company's business concept takes into account aspects of sustainability, either in terms of social or ecological contributions, significant differences between the three countries surfaced (Fig. 7.3): Among participants from Indonesia, 86% of participating companies were found to feature sustainability contributions that were either largely recognizable or fully comprehensive and built into

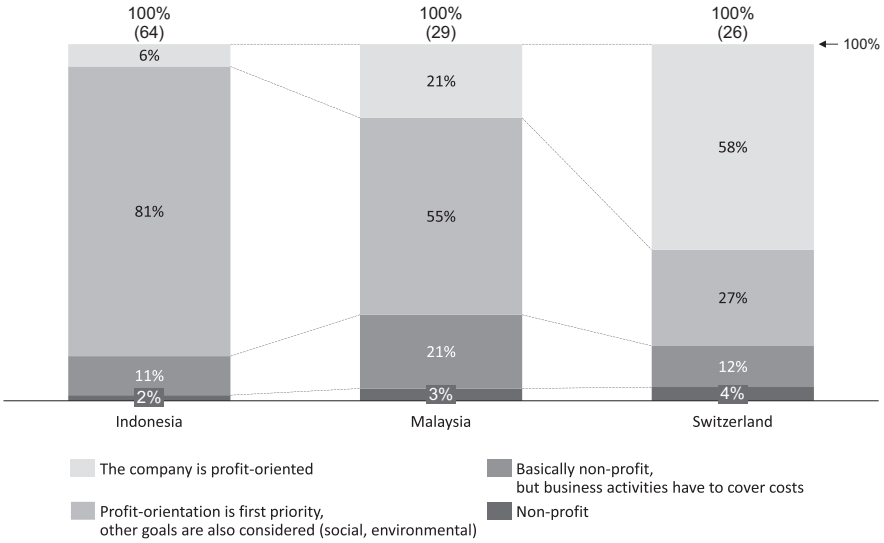

Fig. 7.2 Profit orientation of the company

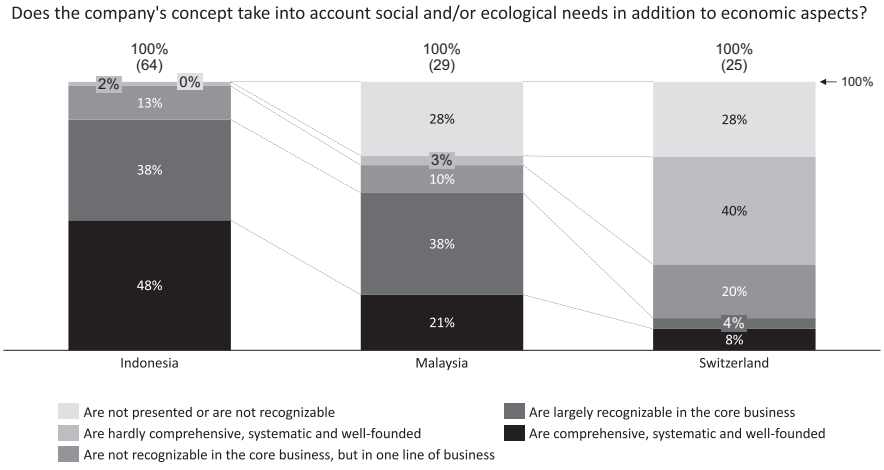

Fig. 7.3 Sustainability contribution

the business concept as core elements of the business. In Malaysia, that portion was slightly smaller but with 59% still a significant share of participants. In Switzerland, on the other hand, the share of businesses with significant sustainability contributions was 12%, while 68% of business concepts were found to have either no or just hardly recognizable social contributions.

Going into further details of ecological and social contributions made by survey participants' businesses revealed a similar picture (Fig. 7.4): The share of business models representing the model of a linear economy was 35% in Switzerland

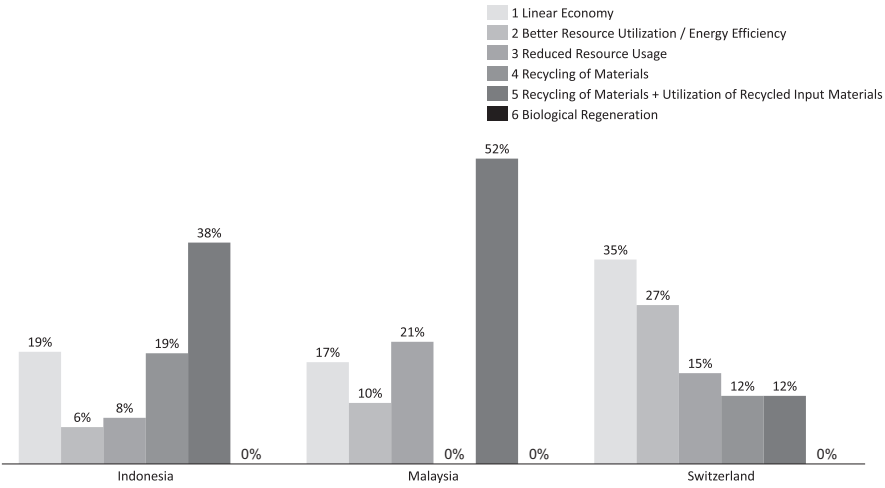

Fig. 7.4 Circular economy

compared to 19% and 17% in Indonesia and Malaysia, respectively—and while none of the businesses in either country was found to have a fully circular regenerative business model, 38% / 52% of businesses in Indonesia / Malaysia were found to have both recyclable end-products as well as utilizing recycled input materials.

A similar picture was found when examining the purchasing of CO_2-neutral electricity (Fig. 7.5): While the usage profile of energy from sustainable sources in Indonesia and Malaysia is fairly similar, with 56% / 59% of respondents stating that they either already do purchase CO_2-neutral electricity or are planning to do so for their business, that share is basically almost half in Switzerland, with 29%.

Even more significant are the gaps across the countries when looking at the establishment of family-friendly working conditions as an example of a social sustainability measure. The share of survey participants from Indonesia stating that they were either already have in place family-friendly working conditions or planning to do so in the future, was 94% much higher than in Malaysia (79%), but leaving a particularly large gap to Switzerland, where only 36% stated that they were having or planning to have family-friendly working conditions (Fig. 7.6).

Overall, across all sustainability criteria examined in the research, Indonesia and Malaysia seemed to score relatively close to each other, while sustainability scores from Swiss participants were found to be quite significantly lower.

Sustainability Impact Management

Unsurprisingly then, the difference in sustainability focus between the two Southeast Asian nations and Switzerland also showed in the impact management of the entrepreneurs in the different countries (Fig. 7.7): While 67% / 62% of participants from

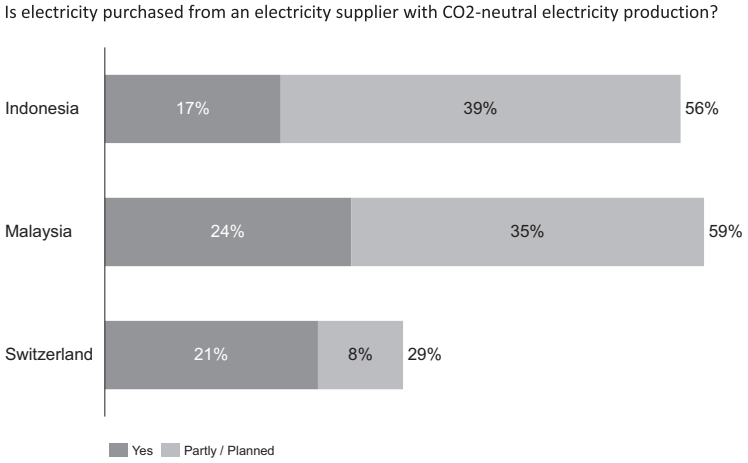

Fig. 7.5 CO2-neutral electricity production

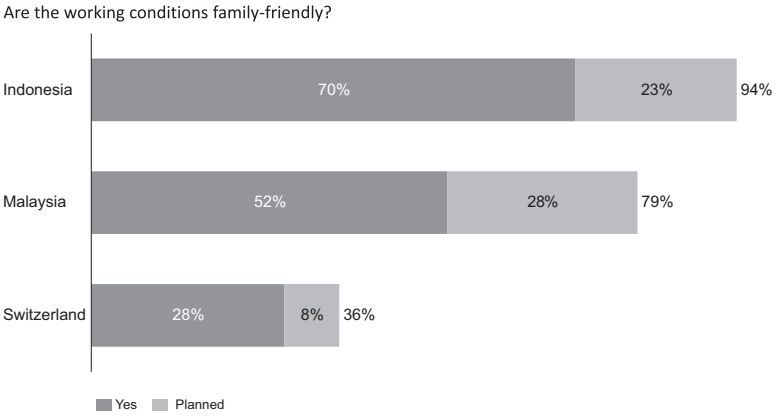

Fig. 7.6 Family-friendly working conditions

Indonesia / Malaysia had a comprehensive, systematic, and well-founded impact management system in place, this share was only 8% among participants from Switzerland.

Analysis and Insights

In interpreting the outcomes and findings, it is important to note that the cross-country comparison of the survey and interview data delivered some quite surprising results, which were at least from our perspective rather unexpected in several aspects.

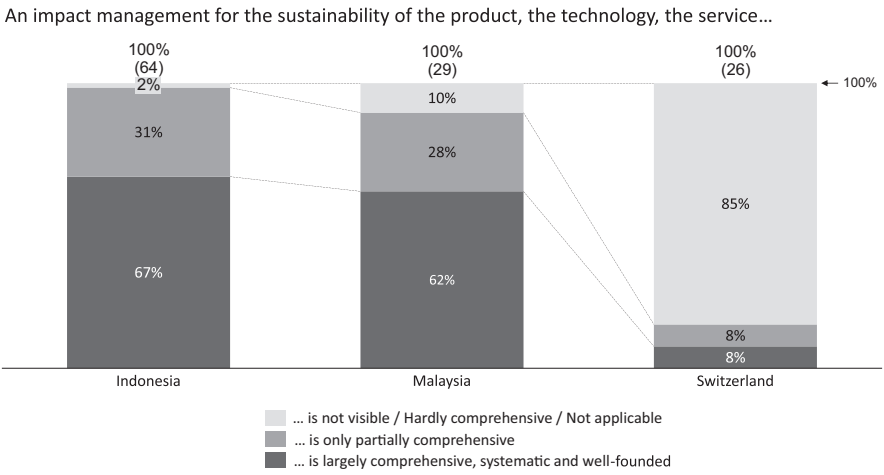

Fig. 7.7 Impact management

Firstly, it was our ingoing thesis (Expected Outcome #1) that there should be significant differences between Switzerland, Malaysia, and Indonesia with regard to the sustainability focus of entrepreneurs in each respective country. We had expected that Indonesia and Malaysia would show some similarities, given their geographic and cultural proximity, while we expected results from Switzerland to be quite different from the two Southeast Asian nations.

Research results indeed seem to support and confirm this thesis. Across all dimensions of sustainability, social and ecological contribution, the country profiles of Indonesia and Malaysia turned out to show strong similarities, while results from Switzerland showed quite a different profile. For example, in both Indonesia and Malaysia, the percentage of business concepts incorporating aspects of CO_2-neutral energy purchase was in the high fifties, while in Switzerland less than 30% of concepts took practiced (or were planning to practice) CO_2-neutral energy purchases. Similarly, family-friendly working conditions were found in the majority of companies in Indonesia and Malaysia, while representing only a minority in Switzerland.

Hence, we see evidence in the research results that lead us to conclude that Expected Outcome #1 can be confirmed.

However, the direction of the outcomes was actually completely reversed to what we had expected. Our ingoing expectation had been that the Swiss economy as a very advanced European economy with significantly larger overall wealth, systematic environmental education from pre-school levels onward, relatively stricter environmental laws, and labor protection laws would foster the development of sustainable business concepts. In Indonesia and Malaysia on the other side, we expected awareness around environmental and social issues to be relatively lower when compared to Switzerland, and therefore led us to expect that there would be relatively less focus on ESG-related matters in those two countries (Expected Outcome #2). The research outcomes, however, did not support this thesis. On the

contrary, basically all indicators of sustainable entrepreneurship tested here suggest that the focus on social and ecological aspects of the business is significantly higher in both Southeast Asian nations when compared to Switzerland.

Therefore, from the data collected here, Expected Outcome #2 is not supported and we come to the conclusion that this thesis would have to be rejected.

The same is to be said about our assumption that environmental and ecological aspects are more frequently found among business models from entrepreneurs in Switzerland when compared to Indonesia and Malaysia (Expected Outcome #3). Results from the questions related to this aspect (Circular Economy & CO_2-neutral energy purchases) suggest that the focus on these issues among entrepreneurs from Indonesia and Malaysia is actually higher than in Switzerland.

Interview results suggest that a lack of focus on sustainable concepts among start-ups may be that the main concern in the early stages is about the (financial) viability and the establishment in the market. Other ESG matters may become a priority only at a later stage. Even if the awareness is there, the lack of human resources contributes to this pattern. This is with the exception of those start-ups that feature other sustainability criteria (e.g., environment and green energy) as a core of their business model.

Another explanation for the unexpected results may be the differences in data collection and the compilation of the participants, as stated above.

Conclusion

Sustainability in business as a topic is currently highly relevant and attracts significant attention from all types of stakeholders—and it is very likely to remain of high relevance for the years to come. Our research has shown that entrepreneurs in all three countries examined here show an interest in aspects of sustainability, but that the degree to which start-up companies actually engage in these topics varies quite significantly across countries.

It was particularly surprising to us how much focus is put on sustainability matters by entrepreneurs in emerging markets (Indonesia, Malaysia) when compared to Switzerland. While there are several limitations to the generalization of our research findings (as pointed out above), the research results still can give an indication that sustainability is not purely a concept pushed forward by Western (USA/European) companies and their stakeholders, but that Asian entrepreneurs display their passion for ESG matters and indeed see significant value and/or potential in focusing on and driving sustainability initiatives.

As for sustainable entrepreneurship, in particular, there are still many aspects that need to be researched in more detail to fully understand the drivers and motivations behind the actions taken, as well as explain some of the evident differences across countries. Particularly, additional research would have to be done to properly understand the reasons behind ESG being of such high focus for Indonesian and Malaysian entrepreneurs when compared to their Swiss counterparts. In-depth interviews may be the appropriate method for this purpose.

Furthermore, it would be interesting to understand whether such patterns of differences and similarities between countries extend to other countries in the same geography as well—i.e., how does sustainable entrepreneurship in other Southeast Asian countries such as Thailand and Vietnam compared to Indonesia and Malaysia? What patterns can be observed in other European countries (e.g., France, Germany, and Italy)? Are there generally observable regional patterns? Are those patterns industry-specific?

Finally, the longer-term impact of sustainable business practices for start-ups would be of particular interest: Does the focus on sustainability / ESG matters pay off for start-up entrepreneurs in the long term? Will those businesses not only survive but also thrive as a direct or indirect consequence of their sustainability focus? Or will the alternative route (i.e., financial and economic focus first, sustainability second) deliver better long-term business resilience, more sustainable financials and therefore also more room to focus on sustainability later, once financial stability is achieved? These questions would be among many others that could be subject to future research in this area.

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Chapter 8
Emigration and Start-up Setting. New Russian and Ukrainian Intelligentsia in a Historical Perspective

Volker Schulte and Andreas Hinz

Abstract This chapter describes the current situation of Russian entrepreneurs, on the one hand, and Ukrainian entrepreneurs, on the other hand, who have emigrated to a safe third country due to the warlike conflict and the increasingly repressive attitude of the Russian regime. Four Ukrainian and four Russian entrepreneurs were interviewed in addition to extensive source research. These findings are incorporated into the interpretation. Individual statements are quoted. Due to the delicate nature of statements and at the request of the interviewees, they have been anonymized. The new waves of migration are analyzed and classified in this chapter in a historical context with earlier waves of migration.

Since the Russian Federation's invasion of Ukraine, some 700,000 Russians and 8 million Ukrainians have fled to third countries (United Nations High Commissioner for Refugees, 2023a).

According to this source, about 18 million people have left Ukraine of which around 10 million have returned to the country in the meantime. The Russians and Ukrainians are mostly people with good education and corresponding skills in service professions. In this chapter, we present the results of eight interviews, four with Russian emigrants and four with Ukrainian emigrants, and explore the motivations, opportunities, and barriers to building start-ups in exile. The study also describes the integration achievements of previous European migrant flows, as well as the advantages and disadvantages for the respective home countries and for the receiving countries. From this, conclusions can be drawn for the current crisis (United Nations High Commissioner for Refugees, 2023b).

Key findings: Both Russians and Ukrainians form networks. It is striking that these networks hardly mingle. "We don't want to have anything to do with the Russians," says Tatjana, an exiled Ukrainian in Switzerland. The intention, the rejection of war, and the fear of military service are common to both exile groups. The opportunities and risks of starting a business in the respective foreign countries are also comparable. Russian exiles, on the other hand, tend to be driven to neutral

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A. H. Verkuil (ed.), *Start-up Cultures in Times of Global Crises*, Sustainable Business Development, https://doi.org/10.1007/978-3-031-53942-8_8

or Russia-friendly countries. Ukrainians, on the other hand, prefer Western countries that condemn the invasion and provide significant financial support to Ukrainians in the form of asylum and refugee status. It is true that the host countries have to bear a heavy burden in the first phase, as accepting so many refugees requires great financial and social efforts. In the medium term, however, it is a significant advantage for the host countries because the admission alleviates the demographically induced shortage of skilled workers and thus promotes economic development. Among the four Ukrainians interviewed who have been granted the right to stay in Switzerland, gratitude toward the host country is very high and is expressed throughout.

Keywords Russian entrepreneurs · Ukrainian entrepreneurs · Networking in emigration · Assimilation and entrepreneurship

The War in Ukraine

The integration of Russian and Ukrainian entrepreneurs must be analyzed against the background of the horrors and traumas caused by the war. Given what has happened so far, it is remarkable that people find the strength to pursue productive independent work and do not fall into a depressive attitude.

The Ukraine war has a long history. Since 2014, Vladimir Putin has claimed the Donbass region for Russia and prepared the takeover. The Crimean Peninsula was annexed in a coup d'état in 2014. All diplomatic efforts since then have failed, as was the case in the years before with the Minsk agreements or the meetings in the "Normandy format" (Dauda et al., 2023).

Apart from human suffering, the Russian war of aggression also entails massive costs. The World Bank and the International Monetary Fund currently put the cost of rebuilding buildings and infrastructure in Ukraine at the equivalent of USD 411 billion and this is considered a conservative estimate (World Bank, 2023). This is roughly twice the cost of Ukraine's 2021 GDP before the war started (International Monetary Fund, 2022).

Western countries have so far supported Ukraine with the equivalent of around EUR 113 billion. According to calculations by the Kiel Institute for the World Economy (D), the EU countries provided nearly EUR 52 billion in military, financial, and humanitarian aid by the end of 2022. The pledges made by the USA amount to just under EUR 48 billion. Other states provided EUR 13.5 billion. Switzerland provided EUR 300 million for humanitarian aid (Kiel Institute, 2023).

Switzerland has taken in 81,000 Ukrainian refugees. This puts Switzerland in 15th place out of 41 European countries in terms of the number of refugees admitted relative to the population. If these figures are compared to the conflict-related European immigration waves of the 1950s, 1960s, and 1990s, it is the second-largest intake of refugees since the Yugoslav crisis in the 1990s (United Nations High Commissioner for Refugees, 2023b).

The war damage and casualties, wounded and killed compatriots, leave a great trauma. In a bulletin dated June 13, 2023, the Ukrainian General Staff speaks of nearly 217,000 Russian soldiers liquidated or incapacitated (The Kyiv Independent, 2022). According to Western sources, approximately 120,000 Ukrainians are also considered dead or wounded (Washington Post, 2023b).

A more or less reliable and neutral balance is provided by the Norwegian army chief Eirik Kristoffersen: He speaks of 180,000 dead and wounded on the side of the Russian army and 100,000 dead and wounded Ukrainian army personnel. In addition, 30,000 civilians have been killed. According to the Ukrainian government, around 13,000 children and young people aged between 4 months and 17 years had been abducted by the end of 2022 (ntv, 2023).

Neutral observers confirm the abduction. Abducted children are placed in Russian re-education camps where they are subjected to Russia-centered academic, cultural, patriotic, and/or military education (Humanitarian Research Lab, 2023).

While the Western world is united behind Ukraine, Russia has lost many sympathies. Only just four countries officially support the invasion: Belarus, from where Russian troops attack Ukraine. Secondly, Iran, which supplies the Russians with kamikaze drones; thirdly, Syria, whose government stands by Moscow in the civil war; and finally, Venezuela, whose far-left president Nicolás Maduro had supported Putin. Thus, for lack of an alternative, Russia allies itself with Felt States and rogue states.

Russian Intelligentsia: a Tradition of Exodus

Since the beginning of the Ukraine war, Russia has been experiencing the largest wave of emigration since the October Revolution of 1917. A mass exodus, especially of intellectuals, is taking place. People who are culturally and ideologically oriented toward the West and who support a democratic ideology are, for the most part, trying to leave the Russian Federation while abandoning their livelihoods. Exact numbers are not available, but estimates range from several hundred thousand, and some sources even cite the number of 700,000 to over a million people (Washington Post, 2023a).

It is very difficult to give more precise figures, since the most important destination countries, Georgia, Kazakhstan, and Armenia, do not require Russians to have an entry visa. However, Georgia alone expects well over 100,000 fugitives from Russia, and a similar number can be heard from Armenia. Other destination countries include Azerbaijan, Dubai, Turkey, Greece, Bulgaria, Serbia, Kyrgyzstan, Uzbekistan, Tajikistan, Mongolia, and Latin America. The traditionally large Russian expat regions in Montenegro, Cyprus, and the Baltic states, especially Latvia, are also seeing massive growth.

“We are experiencing the biggest brain drain in recent history,” says Russian journalist and blogger Andrei Loshak (Deutsche Welle, 2022).

They are scientists and IT specialists, journalists, bloggers, and cultural workers from all fields and genres. Russia has lost tens of thousands of highly qualified IT specialists. They were virtually driven out of the country, regardless of the economic consequences. These tech experts, once they can demonstrate language skills, usually have no difficulty finding well-paid jobs with international companies. Historical experience shows that the longer emigration lasts, the fewer of them go back to their home country.

Russia's liberal-democratic opening lasted only a decade. This must be seen against the background that it was only after the fall of the Soviet Union that a broad urban middle class began to develop, transforming the country into a modern, communications technology-based service society. The social transformation was thus short-lived and became more and more curtailed in the 2010s. But it was not until the invasion on February 24, 2022, that this brain drain began.

Meanwhile, the current regime has reintroduced post-Stalinist patterns of domination that suppress any kind of entrepreneurship. This is also expressed in the contemptuous threat of the Russian dictator Putin voiced in the media:

"Any people, and especially the Russian people, will always be able to distinguish the true patriots from the scum and the traitors, to simply spit them out like a mosquito that has accidentally flown into their mouths" (Tagesspiegel, 2022). Russia has a sad tradition of emigration of its intellectual base. Since the tsarist era, when one speaks of the Russian intellectual elite, one speaks of the "intelligentsia." The term has traditionally been applied only to a Russian intellectual setting and has often been met with opposition and led to emigration. This broad stratum of educated people, which emerged toward the end of the nineteenth century and sought to engage with the "oppressed people" regardless of their original social lineage, was seen as a symbol of liberal thought in Russia. Thus, this intellectual stratum was eminently political. Until World War I, large sections of the Russian intelligentsia strove to democratize the state order of the time. It defined itself as an intellectual phalanx in order to participate in shaping Russia's destiny. This movement was driven by the moral postulate of rejecting all forms of tyranny. It always saw itself—even in the current context—as a liberal, Western-oriented social grouping (Beyrau, 1991).

Entrepreneurship Cultures in Russia

Even before 2022, entrepreneurship and the creation of start-ups have had a hard time in Russia. In 2014, only 4.7% of working-age adults were designated as early-stage entrepreneurs. Entrepreneurship continues to play only a minor role in the economy. This refers to the BRICS countries (Brazil, Russia, India, China, South Africa) in comparison (Global Entrepreneurship Report, 2021). "In Russia, there is not only a small number of early-stage entrepreneurs. Most companies do not manage to get beyond the very first stage of development" (Igor, 16.06.2022).

With the increasing control of the state, the general lack of interest in society and, last but not least, the strong economic isolation due to the embargo measures of the West, no significant growth of the Russian business sector can be expected in the coming years. Therefore, active entrepreneurs are faced with the Sword of Damocles of failure and bankruptcy. This fear of uncertainty is also reflected in a deteriorating investment climate, which began even before the invasion of the Ukrainian heartland in February 2022 (Dekoder, 2019).

There is also a lack of transparent rules and a logic of interaction between companies and the state. "The lack of legal certainty in Russia means that few people dare to make an entrepreneurial start" (Sergey, IT Consultant). Lack of funding for new and growing businesses is one of the most acute problems for Russian companies. Access to finance for new businesses is difficult due to high-interest rates on loans.

According to the Investment Climate Report (ICS) of the International Trade Administration, an institution of the US Department of Commerce, further investments in Russia are not recommended. The analysis is based on parameters of the political environment, labor law, human rights, responsible business conduct, and anticorruption. In concrete terms, this involves issues such as investment security, protection against interference in investments to be made, a reliable legal system, the protection of intellectual property and, in general, responsible business conduct and the generally rampant nepotism (International Trade Administration, 2022).

Russia's initial success in technology entrepreneurship, as measured by output, compares favorably with benchmark countries has been completely wiped out: "Before 2014, there was a start-up and entrepreneurial culture, a great motivation to invest in the future. This culture has now been erased" (Natacha, IT entrepreneur). Previously, there was also great support in the State Duma for the creation of start-ups.

The trend toward greater start-up density, entrepreneurial growth expectations, job creation expectations, and the contribution of knowledge sectors to the economy that began in the noughties has now been completely eclipsed in favor of state actors.

Russia was the world's 12th largest economy in 2018, with a GDP of USD1.65 trillion, and was highly dependent on natural resources such as oil and gas (Country Economy, 2018).

Several sectors of the economy are dominated by large, crypto-state companies, according to Russian interviewees Sergei and Simon, with the contribution of SMEs vanishingly small. Recent economic challenges from Western sanctions have narrowed the market and deprived entrepreneurs of opportunities to grow. Russia's current path to tech entrepreneurship began with Prime Minister Dmitry Medvedev's "Go Russia!" article in 2009, which outlined a national program for tech entrepreneurship and encouraged massive investment in technology and related infrastructure. Large-scale government efforts to promote tech entrepreneurship include the Skolkovo Integrated Free Zone, the Russian Venture Company's Innovation Fund, the quasi-government Internet Initiatives Development Fund (IIDF) early-stage accelerator, and the FAISE grant-based innovation foundation. This top-down government approach to foster innovation has resulted in a strong physical innovation

infrastructure, techno-parks have been established, and funds have been launched. "The entire entrepreneurial ecosystem is orchestrated by the state, leaving virtually no room for entrepreneurial initiatives" (Sergey, 16.06.2022). Russian consultant Simon goes even further when he says that the loss of freedom is detrimental to free enterprise, "because freedom is the key prerequisite for entrepreneurship. This was also the main reason for my departure. It is true that it will be difficult for me professionally. I now live in Serbia. I will probably have fewer career opportunities than before. With the invasion of Ukraine, the sanctions against Russia are getting stricter. This also makes life in my home country more difficult. I don't see a future for my wife, and certainly not for my children. Economic activity is slowing down, so the step to self-employment is almost impossible. Another important point for emigration is that I do not want to participate in this unjust war. This is exactly what could happen if I stayed in the country with my family" (Simon, 16.06.2022).

Simon adds that much of Russia's private sector is highly concentrated, with a small number of large companies that have neither the goal of cultivating tech entrepreneurship nor the understanding of what it takes to do so. For the most part, he said, they are apparatchiks. In his observation, this reduces the chances of success for young technology companies in terms of market entry, partnerships and exit options, investments, and acquisitions (Simon, 16.06.2022).

Entrepreneurship Cultures in Ukraine

Ukraine has developed a dynamic start-up ecosystem with the opening of the country during the "Maidan," which was abruptly interrupted or limited by the start of the war. Nevertheless, the start-up ecosystem in Ukraine still produces a number of top start-ups, although the ecosystem has dropped 16 places in the global ranking to 50th place (World Bank, 2017).

Venture capital VC funding grew steadily in Ukraine before the war, and there are more than 50 VC firms operating in the country. In 2021, before the outbreak of war, Ukrainian start-ups raised USD 832 million in VC funding. Companies are still investing in Ukraine, but the drafting of founders to defend against Russia and infrastructure problems are making some companies wary of further investment. 91% of Ukrainian start-ups needed financial support to survive the war (GTAI, 2023).

Currently, the amount of support flowing into Ukraine is helping to keep the ecosystem buoyant. For example, Google has given a grant to 25 start-ups in Ukraine so they can continue to operate and grow. The Ukrainian government is also doing its best to support start-ups, despite being forced to operate a war economy and struggling with the damage and destruction of key infrastructure. A number of non-repayable grants and other support measures are offered to companies in the technology industry and key sectors (Sokil et al., 2022).

Ukrainian Entrepreneurs in Western Europe

As mentioned at the beginning, the support of European countries toward the citizens of Ukraine is enormous. This also refers to the support of entrepreneurs and start-up representatives who have found a home in Western countries. Ludmilla, an accounting expert says: "My colleagues and I can continue our jobs here in Western Europe almost seamlessly and additionally find new business partners. The support here is enormous. Only the language barrier makes communication difficult at times." Numerous grassroot initiatives have sprung up to help them integrate into the labor and service market. For example, Deruny is a start-up that serves the recruitment of Ukrainian IT specialists and software developers in Switzerland. The company recruits new employees on behalf of employers to fill their vacancies. It undertakes the search and suggests suitable candidates to the company. "The IT sector in Ukraine is large and growing at a fast pace," said one of the company's founders (84xo, 2023).

The European Commission launched the call "Erasmus for Young Entrepreneurs" (EYE) at the beginning with relatively modest additional funds of EUR 3 million in 2022. This call aims to give Ukrainian entrepreneurs the opportunity to get acquainted with the business mentality and culture in European countries (Erasmus Entrepreneurs, 2023). So far, EYE has provided networking opportunities and business connections to more than 22,000 entrepreneurs from all over Europe. In 2022, 154 Ukrainian entrepreneurs participated in the program. (Erasmus Entrepreneurs, 2023; European Commission, 2023). A new bilateral program was launched by Ukraine and the European Commission on February 2, 2023, with a budget of EUR 4.5 million (European Commission, 2023). Here, the focus was on quite concrete support measures, such as access to trade fairs and services in the European Union. The project is organized by business support organizations such as the Enterprise Europe Network (EEN) as well as the European Cluster Network and others.

In the medium term, the program aims to support up to 1500 growth- and sustainability-oriented Ukrainian SMEs, even if the starting sum is rather modest at a maximum of EUR 2500. This contribution can be used, for example, to conduct market research to identify potential European partners. The funds are also used to provide legal and financial advice on setting up a new company (European Commission, 2023).

This European business bridge is also intended to get access to market alternatives also for European companies that lost Russian and Belarusian markets (angels4ukraine, 2023).

Emigration Patterns, Destinations, and Integration Strategies

The interviews, which do not permit any generally valid statements but do reveal trends, show that both Russians and Ukrainians form networks. It is striking that an overlap of these networks is rather the exception. The intention, the rejection of war and the fear of military service, is common to both exile groups. The opportunities and risks of starting a business in the respective foreign countries are also comparable.

Russian exiles tend to be driven to neutral or Russia-friendly countries. Ukrainians, on the other hand, prefer Western countries that condemn the invasion and provide significant financial support to Ukrainians in the form of asylum and refugee status.

Today's Perspectives from Experiences of the Twentieth-Century Migration Waves

Integration Experiences Using the Example of Switzerland, Hungary, Czechoslovakia, and Yugoslavia

From a historical perspective, the Swiss immigration story is also a success story. In particular, the first two waves of Central Eastern European immigration, from Hungary in 1956 and Czechoslovakia in 1968, created virtually no integration problems. The emigrants were mostly well educated, the cultures not dissimilar to those of Switzerland and—like today—a great wave of solidarity and sympathy could be observed in Switzerland.

Case study Hungary

In October 1956, the people of Hungary took to the streets in a demonstration. On October 23, 1956, the popular uprising in Hungary began. The one-party regime quickly collapsed. A new government under the reformist communist Imre Nagy included representatives of the small farmers', social democrats', and peasants' parties that had been suppressed in the late 1940s, declared Hungary's withdrawal from the Warsaw Pact, which had been formed the previous year, and the country's neutrality, and called on Soviet troops to leave. On the contrary, however, additional Red Army troops marched into Hungary in early November and installed a pro-Soviet government under János Kádár on November 4. New fighting broke out, which lasted a week in Budapest, but much longer elsewhere. After the suppression of the uprising, hundreds were executed, among them Imre Nagy in the summer of 1958. Tens of thousands were imprisoned. Non-communist parties and workers' councils formed in the wake of the uprising were again suppressed, and only after years of repression did Hungary find its way to so-called "goulash communism," which granted its citizens minor freedoms.

The Soviet invasion that followed shortly thereafter led to 200,000 Hungarians fleeing to Western European countries. As in other countries, they were welcomed with open arms in Switzerland. Since most Hungarian refugees had a solid education and shared the cultural values of the host country, they integrated very quickly and easily. Solidarity also played out among the Western countries. Although Austria was a neutral country at the time and did not belong to a Western military alliance, Austria's Western neighbors were eager to help and welcome a steady stream of refugees (Red Cross, 2023).

The integration of about 20,000 Hungarians in Switzerland was largely successful, especially since Switzerland, like its northern neighbor Germany, benefited from the "economic miracle" years, so that the Hungarian refugees could be integrated into the labor market very quickly. Language barriers were also overcome in a relatively short time. Large parts of the Hungarian educated class were proficient in German due to the long historical tradition with Austria; moreover, the refugees were already well educated (Garamvölgyi, 2014).

Prague Spring 1968

Twelve years after accepting Hungarian refugees fleeing Soviet oppression, Switzerland opened its borders to people from Eastern Europe for the second time.

Calls for reform were heard both inside and outside the CSSR Communist Party. In 1963, under the leadership of economist Ota Šik, head of the Institute of Economics at the Prague Academy of Sciences and a member of the Central Committee of the Communist Party, a reform movement was formed that urged a fundamental renewal of the bureaucratic-centralist planned economy. Šik proposed a "socialist market economy" with worker self-management in state-owned enterprises, private small businesses, and an end to state-administered pricing. A civic intellectual stratum also emerged that called for a democratic departure from one-party socialism in addition to a technocratic one. Similar to the situation in Western countries, student protests broke out in October 1967 and were violently met. In January 1968, sharp disputes took place in the Central Committee of the Communist Party of Czechoslovakia between the orthodox wing around state and party leader Antonín Novotný and the reformers. Novotný was replaced as party leader by the reformist First Secretary of the Communist Party of Slovakia, Alexander Dubček, and retained only the de facto insignificant post of state president. Dubček initiated a reform policy that was initially quite cautious out of deference to criticism from the other Eastern bloc countries, but which soon gained momentum and was given the label "Prague Spring" by the Western media. Ota Šik, who later taught at the University of St. Gallen, became head of the Economic Committee, and at the same time Dubček sought a reform of the federal constitution and more self-government rights for Slovakia. The action program presented on April 5, 1968, announced economic reforms, freedom of expression, information, and travel, a reappraisal of the Stalinist past, especially the show trials of the early 1950s, and a general reorientation of the Communist Party's role in society. In the West, these projects were summed up in the formula "socialism with a human face." The Soviet leadership

viewed this development as a counterrevolutionary platform and massively increased its pressure on the Czechoslovak reform Communists in July 1968 (Red Cross, 2023).

On the night of August 21, 1968, about half a million soldiers from the Soviet Union, Poland, Hungary, and Bulgaria marched into Czechoslovakia and occupied all of the country's strategically important positions within a few hours. East Germany, whose government had earlier urged the Soviet leadership to take military action, held back so as not to bring up memories of the German occupation between 1938 and 1945. Of the Warsaw Pact members, Romania strongly condemned the intervention, and Albania declared its withdrawal from the military alliance on September 5. There were 98 civilian casualties in the invasion; in addition, about 50 soldiers of the invading forces died. The Communist Party of Czechoslovakia decided not to oppose the invasion militarily and called on the population to remain calm. Nevertheless, there were sporadic clashes between the civilian population and the invaders. More important, however, was nonviolent resistance: place-name signs and street signs were dismantled or twisted to mislead the invading troops, railroad workers directed Red Army supply trains onto sidings, and thousands of improvised posters in the cities called for passive resistance and mocked the invaders. In addition to the official radio, which remained on the air, various pirate radio stations as well as Austrian radio informed the population about the events (Wessel, 2018).

Dubček and other high-ranking members of the government were arrested and taken to Moscow. However, due to the united resistance of the population, the Soviet plan to present the invasion as a response to a call for help from the Communist Party and to present a new government of orthodox Communists could not be implemented. During the first days of the occupation, an extraordinary session of the National Assembly of Czechoslovakia even took place, which condemned the invasion and confirmed the Dubček government in office. On August 23, President Ludvík Svoboda was officially summoned to Moscow for negotiations, which, at his request, included the members of the government around Dubček who were being held in custody. The Moscow Protocol, adopted 3 days later, contained a repeal of almost all reforms. Dubček was left in his posts for the time being and allowed to return to Prague, where he was enthusiastically welcomed. Soon, however, it became clear that the Prague Spring was over. On January 16, 1969, student Jan Palach burned himself to death in protest in Prague's Wenceslas Square. A month later, Jan Zají followed suit. Because of the crushing of the Prague Spring, tens of thousands left Czechoslovakia. Some 96,000 people fled to Austria alone, and another 66,000 holidaymakers abroad did not return to Czechoslovakia for the time being. 50,000 to 60,000 remained permanently in the West. The suppression of the democratic movement in Czechoslovakia was less brutal than in Hungary, but many Czechoslovakians were completely disillusioned and decided to leave their country (Wessel, 2018).

Like the Hungarians at that time, the Czechoslovakians were welcomed with open arms by the Swiss authorities and the population. Thanks to their generally good professional qualifications and the positive economic climate, the Czechs and Slovaks were also able to integrate quickly. Switzerland accepted a contingent of 12,000 Czechoslovak refugees. They were welcome during the economic boom for

economic reasons, since most of them had a qualified education: 56% had a university degree, 17% had a baccalaureate and 26% had completed an apprenticeship (Red Cross, 2023).

Migration from former Yugoslavia

While migrants from Hungary and Czechoslovakia were still relatively easy to integrate, this was no longer quite so easy with the migration wave of the 1990s of people from the Western Balkans. These first so-called foreign workers from Yugoslavia before the Yugoslav war came mainly from the northern, more developed parts of the country, especially Croatia. In terms of mentality, they had hardly any integration problems, due to similar cultural and religious roots. The Croats had always been open to German culture and the older generation in particular had a good knowledge of German.

The integration of this first generation of foreign workers went smoothly overall. The growing Swiss labor market easily absorbed the often well-qualified and motivated workers. This first generation of ex-Yugoslavs primarily wanted to work, earn money and save, and return in the foreseeable future. Well integrated in Switzerland, most of them quickly learned Swiss German. For their children, they wanted the highest possible education. Educational awareness was a prominent trait of this generation of emigrants (Boskovska, 2000).

The 1980s brought a quantitative leap in the Yugoslav population in Switzerland. The number of Yugoslavs tripled within 10 years to 177,000, although the composition of this migrant group was completely different from that of the first wave of migration mentioned above. Catholics, the group closest to the Swiss culture and way of life, have shrunk in proportion from a third in 1980 to less than a quarter (40,000 persons, 22.7% compared to 34% in 1980). Orthodox Christians are now present in greater numbers (46,511 = 27%). With 55,453 or 32%, Muslims are now clearly the strongest group. Ten years earlier, in 1980, their share had been 17.4%. The Albanian-speaking population, mainly from Kosovo, now accounts for 21%, compared to 6% in 1980 (Sharani & Sharani, 2010). In 1970, they had no statistical relevance at all. At the same time, they form a large part of the Muslim group.

This has caused changes with 54% of those in paid work in 1990 being unskilled blue- and white-collar workers, whereas in the 1960s and 1970s it was mainly skilled workers who immigrated. Meanwhile, the proportion of children was now 22.7%. Switzerland was now seeing the arrival of primarily unskilled workers from rural areas and thus people who had to overcome greater hurdles in integrating into an urban, postmodern living environment. These changes across the Yugoslav population in Switzerland were increasingly apparent at the end of the 1980s due to rising tensions in Kosovo. With the forced immigration to Switzerland due to the Yugoslav war, the ex-Yugoslavs became one of the largest immigration groups, with 31,600 persons almost as large as the Italian migrants (Boskovska, 2008).

In terms of lifestyle and values, the almost entirely Muslim Albanians differ far more from the Swiss population than the other "ex-Yugoslavs." However, religion is of secondary importance. What is more important is that the Albanian-populated, predominantly rural areas have preserved a way of life in which the extended family and overlapping family groups are the decisive frame of reference and not the state.

There, life takes place according to customary laws. There are clear rules about what is to be done in certain situations. The prerogative of the state is often seen as interference and paternalism. Instead, people are often guided by traditional values and prescribed behavior. For Kosovars, personal responsibility for themselves and their families comes before civic and citizenship concerns (Boskovska, 2008).

Prospects for Ukrainian Migrants and Refugees

According to Aumüller (2010), full integration into a new society usually spans three generations. The first generation, depending on the difference between the migrant and recipient country cultures, experiences a "culture shock" to which it is exposed to a completely new environment. The second generation, in turn, finds itself in a situation "between cultures." On the one hand, the previous parental cultures play a major role; on the other hand, they learn social self-responsibility in the external social world. This leads to ambivalences and mental antagonisms. Only in the third generation do the ties to the culture of origin loosen and the individuals find their orientation in the culture of the host country (Aumüller, 2010).

However, from the experience of the various waves of migration over the past 50 years, it can be concluded that successful integration into society and the labor market can be achieved within one generation. This is all the more important because the Western European labor markets are suffering from a massive shortage of skilled workers. This also and especially applies to Ukrainian migrants, because they are culturally very similar to Western European societies.

Among Ukrainian migrants, the following demographic peculiarity should also be noted. Around 35% of Ukrainian refugees are children. Among the adult population, almost 80% are women. The social integration of Ukrainian refugees will therefore primarily require investments in education and childcare facilities in the short term. Thus, there is a very high positive potential for integration. According to official data, the population in Ukraine is highly qualified generally. On average, Ukrainian women have a higher level of education than men. For example, the International Labor Organization (ILO) reports the share of women with tertiary education at 63% in 2020 (Hauptmann et al., 2022).

Conclusion

At the time of writing of this chapter in June 2023, the war in Ukraine is ongoing and an outcome is hard to foresee. For both the Ukrainian and Russian diasporas, new assimilations are likely to occur, similar to the examples of political migration waves from Eastern Europe and the Balkans since the 1950s. The extent to which these two nations maintain a cultural and economic exchange with their former homeland will depend on the degree of democratization and civil society freedoms in these countries.

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Chapter 9
The Role of Public Funding Agencies for Startup Promotion: An International Comparison

Volker Schulte and Beat Birkenmeier

Abstract The chapter analyses the political and economic conditions for the establishment of state-financed funding agencies to support startups. Both the advantages and disadvantages of state intervention are analyzed. When receiving government funding, the risk of inefficiently designing processes and value chains increases. It may lead to less diligent evaluation and decisions about costs and questions about the best use of spending public money. This can severely impact the profitability or even the viability of business. Further, there is a risk that government funding will demand public documentation or influence on the company.

Keywords Public funding for startups · Startup ecosystem · Government innovation support programs

Hard Landing of Startup Funding in 2022

The following analysis is based on the latest observations of startup development in OECD countries. These are those countries that feel they belong to the Western democratic community of values and coordinate their economic, trade, and development policies together. Both in terms of investment culture and the financing of startups, these countries follow similar paths because they have similar problems.

Global startup funding has to look for new solutions because the conditions for sufficient access to venture capital have changed dramatically in 2022. Funding, which is vital for the initial growth phases of a company, decreased to 415 B $US, indicating a 35% drop from 2021 about half of the same period last year (CBinsights, 2023). Even in Silicon Valley as a hotspot for investment in startup innovation, investments fell to the lowest level since the fourth quarter of 2019, when the coronavirus pandemic spread out (CBinsights, 2023).

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A. H. Verkuil (ed.), *Start-up Cultures in Times of Global Crises*, Sustainable Business Development, https://doi.org/10.1007/978-3-031-53942-8_9

However, it must be conceded here that as recently as 2021, the flood of money from venture capital firms, hedge funds, and other capital providers had taken on absurd features. For example, a company that specializes in raising money for start-ups had received a completely unrealistic valuation of $80 million in previous rounds of funding (CNBC, 2022). In another case, a tiny software company with just $50,000 in revenue was valued at $35 million (CNBC, 2022).

During the pandemic, new players also jumped into funding adventures. Blank checks were issued for many startups without conducting serious due diligence. As a result, the valuations of the companies tripled within a few months. In the USA alone, more private US companies reached valuations of at least $1 billion last year than in the previous half decade combined (CNBC, 2022).

In 2022, the overheated market cooled abruptly, investors dropped out in the middle of funding rounds, leaving founders at risk of bankruptcy without any funding options. Today, we have valuations back that are roughly in line with what we encountered before the pandemic began. This makes such valuations realistic, which are about 40%–50% below the recent peak (Glassner, 2023).

Financial support for founders thus depends on timing—or in other words, luck. Investments were also generously spoken because cheap money was abundant with the low-interest rate policy of the national banks. Now, since 2022, prices began to fall as investors anticipated the start of interest rate climbs by national banks, led by the Federal Reserve (Vedantam, 2023).

For founders, this means having to accept tougher conditions in future financing rounds. On the other hand, a look at history shows that investments can pay off, especially in downturns. As valuations have generally been revised sharply downward, getting into the right startup can be rewarding. Global companies operating today, such as Airbnb, Slack, and Uber, were founded during the 2008 financial crisis. So, an investment at that time had paid off handsomely to date (CNBC, 2022).

The Importance of Startups for Economic Development

Startups are nowadays regarded as triggers of economic innovation. With their research-based, innovation-focused, and growth-driven business models, startups are an important factor in industrialized countries when it comes to keeping a nation productive, innovative, and competitive in the medium and long term. Startups are seen as a beacon of hope for sustaining productivity growth, as they are often believed to help economic innovations and breakthroughs more quickly and to deploy human capital more productively than is the case in established companies. Although there is little validated or not very up-to-date data on how strong the actual economic performance of startups is, there are indications that can be used to estimate the market potential. In Germany, for example, 537,000 founders realized their first steps into entrepreneurial independence in 2020 and created 454,000 new full-time jobs (BMWK, 2022).

The importance of startups can be seen above all in the use of venture capital. According to the OECD, although only about 1% of startups in the OECD area were provided with venture capital averaging more than USD 2 million in 2016, investments increased by double-digit percentages every year (OECD, 2017). The question is whether this investment momentum will be matched once the current global crisis, triggered by the Ukraine war, Taiwan conflict, and supply chain adjustments, ends.

The promotion of innovative startups, whether with private or public funds, is therefore of great economic policy importance. It therefore makes sense to analyze which measures can be used to lead startups into a secure economic future, specifically how to ensure sustainable financial security for these new companies. While funding measures are mostly in place up to the startup phase, a gap has been diagnosed in recent years for the scale-up phase, in which a much higher financial requirement is registered in order to be able to scale up the business model (Quas et al., 2021).

For some years now, numerous states have begun to engage in extensive state-orchestrated or wholly state-funded innovation support. In this article, we will examine which forms of financing can be found among startups. We will then analyze the advantages and disadvantages of state financial support for startups and, in a third part, take a closer look at individual country cases that have already established public startup support.

Specifics of Startups Compared to Traditional SME

However, before we get into the discussion of startup funding, we should first define what a startup is or which companies are not startups. As always in the social sciences, a variety of definitions are possible. Especially the temporal and structural classification in which a company finds itself makes positioning difficult here. We prefer the following categorization, which is based on the think tank BAK (BAK Economic Intelligence, 2021):

- Startups are younger than 5 years.
- They have planned annual employee or revenue growth, which is typically higher than established companies.
- The companies are highly innovative in their products, services, business models, or technologies.

Another characteristic of startups is that they have flat hierarchies and work in a quasi-expert ecosystem. The entrepreneurial spirit is strongly pronounced. These characteristics are elementary, as the company's employees have to face new challenges, problems, and areas of responsibility every day. This is a significant difference from established companies.

Startups are foundations with innovative business ideas, high growth potential, and a scalable business model. They are in the first phase of the life cycle of a

company—the seed phase, meaning the preparation of the foundation and the development of a business plan, has been completed. The duration of the startup phase varies significantly according to technology field and industry, rather 2–3 years for startups in the IT sector, 8–10 years in the life sciences. The same applies to capital requirements and the time-to-market breakthrough. Growth-oriented startups aim for rapid expansion with rapid market penetration and international presence, expansion of their service offerings, and expansion of organizational structures (Stam & Schutjens, 2004).

Raising Capital in the Startup Ecosystem

Startup ecosystem refers to groups of organizations such as universities, venture capitalists, public institutions, and companies that influence the success of startups. This also includes, for example, political frameworks and regulations, university networks, and venture capital organizations, which not only secure or support financing, but also engage in pronounced network promotion and bundle innovations. For startups, easy access to funding is a key factor in the success or failure of their business model (Spender et al., 2017).

Own Funds

Many successful founders have implemented their business ideas with their own funds alone. The term "bootstrapping" has become established for this. This type of financing is suitable for startups that can be implemented with manageable funds, based on sums between EUR 5000 and EUR 50,000 (Dec & Masiukiewicz, 2017).

The disadvantage of this type of financing is not only the modest means, but also the more difficult connection or even exclusion from networks that venture capital investors bring with them. In the event of economic failure, one is liable with one's own assets.

The biggest advantage of bootstrapping is the independence of business development. There are no investors to talk into a business model. Also, one does not have to share possible profits with lenders. Moreover, one is not exposed to high interest payments.

Loan

In legal terms, loans are credits. In practice, however, higher sums lent over a longer period (of more than 3 years) are often referred to as loans. Loans are often provided by private investors or from within the family circle. Interest payments are also often waived (Dec & Masiukiewicz, 2017).

A special form of loan is mezzanine capital. This is a hybrid form of equity capital (as in the case of a participation agreement) and debt capital (as in the case of a bank loan). This has the advantage that the creditors have no right of co-determination but are still subordinated in the event of insolvency: The claims of all other creditors take precedence. As a rule, therefore, raising capital in this way is relatively expensive and therefore not very attractive (Nomoz & Mexriddin, 2023).

Bank Loans

Bank loans are rather unusual in the startup sector. Exceptions are special credit lines that traditional banking houses have built up for financing startups. Here, we are talking about sums between EUR 25,000 and EUR 300,000 (Dec & Masiukiewicz, 2017).

An important advantage is the planning security, because the credit line, the time periods as well as the interest rates are fixed. In addition, the bank usually receives neither shares nor co-determination rights. But for these very reasons, banks are also risk averse. Traditionally, banks look more closely at collateral and prefer business models that are already established in the market. In addition to a solid business plan, banks often require a guarantee or collateral, for example, in the form of real estate, for higher sums.

Crowdfunding

Crowdfunding is like a swarm effect An idea is presented on a crowdfunding platform. Depending on how well the business idea is received by people, a very large number of participants can provide support with small contributions. In this way, a significant sum can be raised. The focus of the donors is not profit, but the support of the idea. In return, the participants—depending on the amount invested, the product brought to the market or options to receive this quasi first (Sterblich et al., 2015).

Crowdinvesting

This is a crowdfunding variant that has established itself as a serious financing option. The sums raised are in some cases up to several million euros. In this variant, investors receive financial compensation, such as a percentage share in future profits, but usually no say in the matter (Beck, 2017). However, in this case you also have to publish your business model for the campaign. This can lead to competitors profiting from the information. A further minus point is given in case of failure because alternative investors can be deterred by the public handling. Another disadvantage is having too many crowd investors on board in later financing rounds. One solution is to bundle the crowd investors by means of contracts.

Venture Capital

By means of venture capital, a company participates in the startup with money from a fund. Sums of up to several million EUR are involved here. In return, the investors expect company shares, rights of co-determination, information, and control. The goal of the investment is to achieve the highest possible profit. As a rule, the influence on the startup is enormous (Janeway et al., 2021).

Business Angels

Business angels are people who invest in startups. They are often active or former entrepreneurs or managers. Typical investments range from EUR 25,000 to several EUR 100,000. Unlike venture capital, investments are not primarily about maximizing profit as quickly as possible, but are based on sympathy and interest (Grilli, 2019). That is why they usually not only invest money but also support the startup with their expertise and access to their network.

Active Industrial Policy Through Government Innovation Support Programs

Startup momentum is essential for developed economies to sustain economic growth and prosperity. This is because a weakness in productivity growth is observed in the euro area in particular. For the euro area as a whole, a noticeable slowdown in productivity progress is evident between 1999 and 2019, regardless of the measurement concept for labor input (Deutsche Bundesbank, 2021). This is also the reason why more and more developed countries are developing state-orchestrated startup

funding. It is, therefore, important to take a closer look at the advantages and disadvantages of state financial support for startups below.

In general, observers assume that state innovation funds make the venture capital market more resilient by strengthening its resilience and can thus improve the attractiveness of an economy as a location.

Many governments in developed countries are showing interest in specifically promoting startups to increase innovation, employment, and productivity. This trend has increased significantly, especially since the COVID-19 crisis. In particular, government participation in venture capital, as practiced in Europe, is fully in line with the trend.

However, some demands are exorbitant. For example, the director of the German government's Leap Innovation Agency is calling for the German government alone to grow from 10 billion to 10 trillion euros over the next 20–30 years in the "Future Fund" launched in 2021 to finance startups (Zukunftsfonds., 2023). This is the only way, he said, that Germany can master the energy transition, absorb the consequences of war, and avoid falling even further behind in innovation.

For him, the role models are the sovereign wealth funds in Norway, Singapore, or Saudi Arabia, which invest privately for the long term. A German sovereign wealth fund could initiate major projects in Europe and invest in wind power, hydrogen, and laser fusion, for example, if possible with "several hundred million per project," says Laguna. In contrast to private investors, sovereign wealth funds could even be profitable because they have a long-term strategic orientation. Similar experiences have already been made in France, China, Scandinavia, and Saudi Arabia (Handelsblatt, 2022).

Venture capital is an important part of the financial ecosystem and a major driver of job creation and innovation. It has an enormous impact on how we will all live in the future. It plays a critical first role in the investment chain, supporting the next generation of business leaders and leading companies around the world and financing innovation to drive technological solutions to solve major problems such as resource conservation, energy generation, and biodiversity (Janeway et al., 2021).

However, venture capital investments also have the potential to severely disrupt the economy and society in general, which can have significant negative consequences.

In the area of financing opportunities for the early growth phase of startups ("scale-up phase"), many developed countries have identified potential for improvement. Corresponding country cases are discussed later in this chapter. Here, it can be seen that many countries are more active in shaping their government innovation policies to support startups.

This is primarily related to the high private investment risk in entrepreneurial startups. The antecedents for the establishment of such institutionalized startup funding are rooted in these high risk financing conditions. The goal is always to alleviate or completely avoid undercapitalization of promising startups. The hope is to use state-subsidized financing to attract additional venture capital and at the same time prevent the migration of lucrative startup companies abroad (Swiss Economics, 2022).

Private investment in startups is highly risky. On the one hand, there is a fundamental business risk as to whether the business plan will work out. This is because even in the scale-up phase, the startup in question still has to develop the product or service further, scale it up, and then market it successfully. The startup phase of a break-even is also unpredictable. In extreme cases, there is a total loss of the invested funds.

When investing in startups—or in funds that invest in startups—there are no guaranteed returns and it often takes several years until the respective startups increase in value and the shares once acquired can be sold. Therefore, as an investor, you need staying power and a lot of willingness to take risks until the capital shares of a company are listed on a stock exchange and regular trading of the corresponding equity securities takes place. In addition, the influence of the individual investor can diminish if new investors appear in further financing rounds, possibly with higher capital sums.

Finally, it always remains difficult to realistically assess the value of a startup, as there is normally no objectively negotiated market price. The startup company as the issuer of further shares sets the issue price for new financing rounds—investors thereby run the risk of paying too much for their acquired shares compared to other investment opportunities. The investment would no longer be lucrative (Trautwein, 2021; Sherman, 1999).

Even if a startup is able to achieve further revenue growth within the planned period, the management must be able to absorb this revenue growth organizationally. Success in this challenge is by no means guaranteed, even with good growth rates.

Basic Types of Government-Orchestrated Startup Funding

Three basic types of government or government-orchestrated startup funding can be manifested in the literature (Swiss Economics, 2022; OECD, 2017; IWSB, 2022; Cumming et al., 2017; Colombo et al., 2016; Brander et al., 2010):

Variant 1: State-dominated institution or authority

In this variant, the management of the state fund is directly managed by a state institution.

Variant 2: Private company with state participation or full ownership

In this variant, the investor intervenes in the invested company with a loan or also with any ownership shares.

Variant 3:

In this variant, the allocation of funds is delegated to someone else, an organization is mandated to allocate funds.

Advantages and Disadvantages of Public Startup Funds

As explained above, the purpose of public subsidies is to prevent successful startups from being underfunded because the hurdles for private financing are too high. However, the fundamental question is whether government-funded startups actually perform better economically than those funded by private venture capital. Or even more provocatively, can government intervention programs even have a counterproductive effect, because under certain circumstances startups are financed that would have fewer financing opportunities on the private capital market? Therefore, we take a look at the advantages and disadvantages of public financing in the following.

Advantages

Government funds can be a signal to other financiers to also invest in this company. However, the prerequisite is that the selection and award criteria of the respective innovation fund are transparent.

The state can plan and intervene strategically over the long term because it pursues macroeconomic and social goals. This is often not the case with private investors because of their short-term profit expectations. A state-financed innovation fund can also steer larger investments in certain directions with political motivation. Accents can be set, for example, to promote sustainable products or services.

In the private venture capital sector, the inclusion of ESG standards is only slowly beginning to emerge. The venture capital industry has some catching up to do, particularly in the areas of diversity, equity, and inclusion. This is where sovereign wealth funds can take a guiding role (PRI, 2022).

Disadvantages and Risks

Observers and analysts assume that publicly financed companies perform worse than privately financed ones. Whereas according to their findings, financial hybrids of public and private capital showed no significant differences (Cumming et al., 2017; Colombo et al., 2016; Brander et al., 2010).

Young companies with high growth potential face considerable information problems. There are not yet many "hard facts" available. Consequently, allocating capital efficiently and precisely to such companies can be difficult for the public sector. Private investors, too, often must make investment decisions on the basis of incomplete data. This is likely to be even more difficult for public institutions because they are handling taxpayers' money. A higher loss or even total loss of an investment can have political consequences.

Furthermore, there is scientific evidence that startups that are exclusively publicly funded would have had little or no chance of investment in a private funding environment. This means, that investments from public agencies will not attain the same efficiency and results as from private investors. On the other hand, the country cases also show that there are other reasons for the financial commitment than maximizing the return achieved. Accordingly, this also has direct implications for further financing rounds, in which the state-funded startups either receive significantly smaller amounts or a stock exchange listing becomes less likely (Breschi et al., 2021).

Another problem is the risk of distortion of competition because the public investor is triggered by the political goal of faster and more frequent financing.

Selected Cases

When selecting the examples, we were guided by the venture capital investment per capita. Therefore, we present the TEMASEK Fund of Singapore and the Yozma Fund of Israel. On the other hand, we pay special attention to the European Investment Fund, as it is endowed with a high financial volume and holds a dominant position as a startup investor in European countries.

Singapore

Together with Hong Kong, Singapore is one of the economic leaders in Southeast Asia. Therefore, Singapore has also developed a broad-based macro policy strategy that promotes a long-term growing startup scene (TEMASEK, 2023). The startup policy is embedded in the city-state's entrepreneur-friendly culture and free movement of capital.

The Singapore government has allocated a special payment of $300 million in 2020 for the so-called Startup SG Equity Initiative (StartupSG, 2023). The aim is to invest in DeepTech sectors and encourage entrepreneurship in these markets such as AI, robotics, biotechnology, and others. The funds will be used to encourage private sector investment in Singapore-based startups. The prerequisite is innovation potential with global impact.

The Startup SG Equity program is an incentive program to attract private investors. The idea is to motivate them for larger investments in high potential startups. It seems to be, that the program is very much focused on those companies, which have a real global potential. Thus, it is a co-investment modality with specific investment parameters for general tech and deep tech startups. Thus, the investment focus is on early-stage tech startups based in Singapore, related to advanced manufacturing, pharma and biotech, medtech, and agri-food tech. The minimum funding size is $21 million (StartupSG, 2023). Eligible startups are those that are registered with the Singapore Companies Registry, have been operating for less than 10 years, have a minimum capital of USD 35,000 (StartupSG, 2023). In addition, the business model and the professionalism of the management must be convincing; an already confirmed patent is also advantageous. The core premise is a high growth potential with scaling prospects in international markets.

Enterprise Financing Scheme

The Enterprise Financing Scheme (EFS) was established in October 2019 as an all-encompassing program that combines several policy programs into one. The

centralized EFS was created to support startups and companies at various stages of growth. Among other things, the program provides risk sharing for loans of up to 70%, which addresses the financing difficulties of startups, provided they are high growth companies (EFS, 2023).

Israel

Yozma invests mainly in companies in the fields of communications, IT and medical technologies, and life sciences. The focus is on companies developing infrastructure and enabling technologies. Yozma has got a worldwide echo in media and in expert circles as the founder of the Israeli venture capital industry. The focus is on high potential companies operating globally. Yozma invests in all stages of a company's development, with a focus on the early stages. Initial individual investments typically range from $1 million to $6 million (YOZMA, 2023). Additional capital is earmarked for follow-on investments.

Yozma I grew out of a government program to promote venture capital investment in Israel and fundamentally changed the Israeli private equity landscape. The Israeli model has since served as a blueprint for other government-organized funds. The launch of this amazingly successful program began in 1993. Today, it is the main trigger for a strategic and publicly managed venture capital market.

In the meanwhile, two further programs were launched, the so-called Yozma II and III (YOZMA, 2023). Generally, the two updates did not change the intention and strategy. However, the program is adopted based on market needs. Currently, when this manuscript is being completed, we do not know the political impact of the strong turmoil of the new government.

The big takeaway with the Israeli program is that the financial investment policy, aligned with government strategic objectives, serves as a trigger for further private investment. For example, market and investment corrections can be made to realize sustainable tech projects. In this regard, the system is based on three pillars, government-led policy, strong financial intervention, and associated private capital involvement in terms of crowd-in of private investment (Wonglimpiyarat, 2015; Avnimelech, 2009).

EIF European Investment Fund

The EIF is a specialized provider of venture financing designed to benefit small and medium-sized enterprises (SMEs) across Europe. The program is backed by the European Investment Bank (EIB), the European Commission, and a broad range of public and private financial institutions. That is, the aforementioned players, namely the European Investment Bank EIB with 59.4%, the European Commission with

30%, and financial institutions from the Member States of the European Union, the United Kingdom, and Turkey with 10.6% (EIF, 2023).

The aim is to support SMEs in particular—and this primarily means startups—through intermediaries. These are usually banks, guarantee and leasing companies, and providers of private equity funds. The program thus follows a typical public-private partnership approach, with the EIB acting as the main investor.

The risks of the initial financing of SMEs are cushioned. Nevertheless, an appropriate return and a balanced ratio of fee-based and risk-based income are to be achieved for investors through a commercially oriented pricing policy.

The strength of the program lies in its applied breadth and the enormous amount of capital available. More than 1 million SMEs have benefited from improved access to finance through the financial instruments managed by the EIF. In 2021, the fund had a capital of €7.37 billion (EIF, 2023). Thematically, one does not find a strong focus at the EIF. This is certainly due to the different interests of the member countries. New and emerging areas are mentioned alongside those of air space, blue economy, life sciences, healthcare, fintech, and water treatment. Beyond that, however, the thematic focus blurs as additional funding opportunities are mentioned in the skills and education, creative, and cultural sectors. It is hoped that this will promote projects with social impact, sustainability, and social influence. However, this threatens to overlap with the many subsidy programs of the European Commission, which are already available for individual sectors and thematic areas (Mertens & Thiemann, 2019; Clifton et al., 2020).

Conclusion

The benefits of state-orchestrated financial support for startups are double edged. The 2022 anthology by Karl Wennberg and Christian Sandström describes a very negative picture of government investment. Government funding, they argue, is a blunt instrument, fraught with politics, bureaucracy, and unintended consequences. It is also an inefficient means for the intended goals. The effort required to apply is disproportionate to the return, i.e., the amount of financial support (Wennberg & Sandsröm, 2022).

An analysis of recent studies suggests that startups that received support from private financiers in their first phase of investment are less likely to survive a second round of financing. In contrast, even lower-performing startups are more likely to successfully complete additional rounds of financing if they receive matching funds through SWFs. survive the next round to obtain refinancing, compared to companies that were supported solely by PVCs. This suggests that the support criteria are softer defined than for pure private investments. On the other hand, the state, with funds appropriately orchestrated by it, can realize an active industrial policy to support socially relevant investments. In some cases, academic criticism even goes so far as to claim that financial support via startup funds alone even has little or no impact on innovation. Depending on whether private donors are directly involved in

the financing rounds, an innovative impact can be assumed. Thanks to the signaling effect of government investments, they can have a positive crowding-in effect on the development of privately oriented venture capital markets (Colombo et al., 2016; Zhang, 2018; Bertoni & Tykvová, 2015).

The assessment of Mariana Mazzucato, a professor at University College London, is much more positive. She sees the government as a precursor to entrepreneurship. Government support, she says, is crucial to fostering economic growth. If there were no government investment in innovation, there would be little or no growth (Mazuccato, 2018).

The reflections so far have focused primarily on the economic significance and the impact on market access of government intervention. However, there is also an economic downside, which has a direct impact on the entrepreneurship-based culture of a startup. What does government support mean for the individual entrepreneur? The question is, to what extent does a financial commitment lead to the government funder intervening in business policy? Josh Lerner of Harvard University argues that the track record is rather dismal. No evidence exists as to whether they actually help the company succeed and really mean an impact.

The goal of entrepreneurship is to create value for the customer. When focusing on public funding, there is a risk of losing sight of the company's actual mission. In the worst case, there is a risk of changing the business idea or value proposition to fit the funding criteria of a funding program.

When receiving government funding, the risk of inefficiently designing processes and value chains increases. You become less diligent about cutting costs and making the best use of necessary spending. This can severely impact the profitability or even the viability of your business. On the other hand, there is a risk that government funding will demand public documentation or influence on the company. Reporting and controlling then misses the original goal of entrepreneurship and frustrates the workforce (Bylund, 2022).

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Chapter 10
Malaysia: The Effects of Attitude, Subjective Norms, and Social Entrepreneurship Awareness Toward Social Entrepreneurship Intention Among Public University Students

Roselina Ahmad Saufi and Tan Wai Hong

Abstract Social entrepreneurship plays a pivotal role in the economic well-being of a country. It promotes job creation, instigates innovation, as well as brings about community development and collaboration. Therefore, it is crucial to identify the key factors of Social Entrepreneurship Intention. In this study, we investigated how the factors of Attitude, Subjective Norms, and Social Entrepreneurship Awareness stimulate such intention among public university students in Malaysia. The study aims to determine the gap in empirical research results, thereby offering solutions to overcome the different levels of social entrepreneurship engagement among target respondents. A total of 172 responses were collected and analyzed using IBM SPSS Statistics 26. An ordinal logistic regression approach was used, where the results suggest that all the factors considered affect Social Entrepreneurship Intention at varying intensity, with Subjective Norms being the most dominant factor. The findings of this study can benefit policymakers and ensure the sustainability of social entrepreneurship ecosystem in higher education.

Keywords Effects of attitude · Subjective norms · Social entrepreneurship

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Introduction

Today, the world is facing social inefficiencies, and fighting against these inequalities is a major challenge (Marginson, 2018). In response to these inefficiencies, social entrepreneurs are driven by a variety of motives to address major social inefficiencies such as poverty alleviation, illiteracy or hunger, social reparation, inequality, and the preservation of the environment for future generations through innovative ideas. The increase of new streams of social entrepreneurship concepts increasingly attracts the attention of both academics and practitioners (Canestrino et al., 2020) to fill gaps in the necessity of new theoretical and practical contributions (Ahuja et al., 2019). Thus, social entrepreneurs play a pivotal role in the economic and social development of the communities in which they operate (Chien-Chi et al., 2020; Hossain et al., 2021). Given the relevance of social entrepreneurs in providing solutions to social inefficiencies, many private or public institutions are starting to encourage more students to participate in social entrepreneurial initiatives. Moreover, the institution initiated further action embedded in a well-designed entrepreneurship curriculum in improving students' entrepreneurial competencies and boost their enthusiasm to become entrepreneurs (Bazan et al., 2020; Bazan et al., 2019). This penetration is in line with the Malaysian Education Blueprint 2015–2025 (Higher Education) where the first out of 10 shifts had been outlined as the key factors for the Malaysian higher education system as a "Holistic, Entrepreneurial and Balanced Graduates" (Abd Rahman & Zakariyah, 2021).

Thus, there is a need for effective approaches to assess the factors of various impacts related to the university's entrepreneurial ecosystem that could shape the Social Entrepreneurship Intention of students. There is evidence in the literature that Attitude and Subjective Norms, affect Social Entrepreneurship Intention by influencing the antecedents of intention (Ajzen, 1987; Tubbs & Ekeberg, 1991; Krueger & Carsrud, 1993; Linan & Kurczewska, 2017; Zaremohzzabieh et al., 2019). Meanwhile, Social Entrepreneurship Awareness leads the student's intention to choose social entrepreneurship as the younger generations tend to be e more entrepreneurial and environmentally conscious. The more Social Entrepreneurship Intention rises, the more social entrepreneurs appear in our country, especially the young generation (Dickel & Eckardt, 2021; Rambe & Ndofirepi, 2021). Thus, this indicates that the young generation has immense potential for social entrepreneurship, which if appropriately realized can accelerate the socio-economic developments in the country. Accordingly, Social Entrepreneurship Intentions are key to understanding social entrepreneurship, since the desire for social transformation is described through these. To date, the aim of the younger generation, particularly the millennials in our nation toward Social Entrepreneurship Intention is still not yet fully explored and understood. Furthermore, the previous studies focus more on entrepreneurial intention among students or the younger generation, but there is only a small number of studies conducted on Social Entrepreneurship Intention (Tiwari et al., 2017; Saebi et al., 2019; Zakaria & Bahrein, 2018). Therefore, this

study sheds light by bridging the gap by determining the Attitude, Subjective Norms, and Social Entrepreneurship Awareness toward Social Entrepreneurship Intention in the Malaysian context.

Literature Review

The Theory of Planned Behavior

The theory of planned behavior (TPB) is a social psychological theory that can be applied to understanding the formation of intentions and behaviors related to social entrepreneurship. TPB posits that behavior is a function of three determinants: Attitudes toward the behavior, Subjective Norms, and perceived behavioral control. Teixeira (2015) and Anderson and Jack (2011) apply TPB to examine the impact of Attitudes, Subjective Norms, and perceived behavioral control on Social Entrepreneurship Intention among university students. The same goes with Chen and Christiansen (2015) but they apply TPB to Social Entrepreneurship Intention among individuals in emerging markets. In addition, TPB has been applied by Kuratko et al. (2010) to examine the impact of Attitudes, Subjective Norms, and perceived behavioral control on corporate entrepreneurship intention among employees in established firms. These demonstrate that TPB can be applied to the study of Social Entrepreneurship Intention by examining the impact of Attitudes, Subjective Norms, and perceived behavioral control on the formation of Social Entrepreneurship Intentions. The findings from these studies suggest that TPB can be a useful framework for understanding the determinants of Social Entrepreneurship Intention and designing interventions to promote social entrepreneurship.

Social Entrepreneurship Intention

Social entrepreneurship intention is the readiness and motivation of an individual to start a new venture with the primary aim of creating a positive social or environmental impact. (Bosma & Wennekers, 2009). In addition, Nguyen and Nguyen (2017) define Social Entrepreneurship Intention as the willingness and motivation of individuals to start a new venture with the primary aim of creating social and/or environmental impact in their study. Furthermore, Social Entrepreneurship Intention can be defined as the intention of individuals to engage in a new venture aimed at creating a positive impact on society and/or the environment (Singh & Kaur, 2017) and an activity that creates value for society, often through innovative and/or socially responsible means (Mair & Marti, 2006).

These definitions highlight the primary aim of Social Entrepreneurship Intention, which is to create a positive social and/or environmental impact through the creation

of a new venture. The definitions also emphasize the willingness and motivation of individuals to engage in such activities. In other words, Social Entrepreneurship Intention refers to an individual's motivation and willingness to start and run a social enterprise to address a social or environmental issue while generating financial returns. The concept of Social Entrepreneurship Intention is influenced by various factors, such as Attitudes, Subjective Norms, and perceived behavioral control, and can be understood through the lens of the theory of planned behavior.

The intention of students to pursue social entrepreneurship has been a growing topic of interest among researchers and educators in recent years. Many students are motivated by a desire to make a positive impact on the world and to address pressing social and environmental challenges, and see social entrepreneurship as a way to achieve these goals. According to Urbano et al. (2015), there are several factors have been identified as contributing to the formation of Social Entrepreneurship Intentions among students, including:

1. Personal values and beliefs: Students who are passionate about making a difference in the world and who possess a strong sense of purpose are more likely to have a high intention to become involved in social entrepreneurship.
2. Exposure to social entrepreneurship: Students who are exposed to the concept of social entrepreneurship and have the opportunity to learn about successful social ventures are more likely to develop an interest in this field.
3. Role models and mentors: Students who have access to successful social entrepreneurs and have the opportunity to learn from their experiences are more likely to develop a strong intention to pursue social entrepreneurship.
4. Education and training: Programs and courses that focus on social entrepreneurship and provide students with the knowledge, skills, and resources needed to launch and scale social ventures can have a positive impact on their intention to become involved in this field.
5. Social and environmental awareness: Students who have a strong awareness of social and environmental issues and are motivated to address these challenges are more likely to have a high intention to pursue social entrepreneurship.

Overall, the intention of students to pursue social entrepreneurship is shaped by a complex interplay of personal, environmental, and educational factors. By understanding these factors, educators and program developers can create initiatives and programs that support and encourage students to pursue social entrepreneurship.

Social Entrepreneurship Awareness

Social entrepreneurship awareness refers to an individual's understanding and knowledge of the concept of social entrepreneurship including its definition, purpose, and potential impact (Kuratko et al., 2010; Anderson & Jack, 2011; Chen & Christiansen, 2015; Teixeira, 2015). It is emphasized that Social Entrepreneurship Awareness is crucial in shaping individuals' intentions to engage in social

entrepreneurship activities. Moreover, social entrepreneurship involves starting and running a business with the primary aim of addressing a social or environmental issue, while also generating financial returns. Besides, awareness of social entrepreneurship encompasses an individual's understanding of the principles and objectives of social entrepreneurship, as well as their knowledge of the resources and support available for such activities. Individuals who are aware of social entrepreneurship are able to understand its importance and viability and are more likely to consider it as a viable option for addressing social and environmental issues.

Furthermore, several studies have investigated the impact of Social Entrepreneurship Awareness on an individual's intention to engage in such activities (Kuratko et al., 2010; Anderson & Jack, 2011; Chen & Christiansen, 2015; Teixeira, 2015). The research has shown that individuals with a high level of Social Entrepreneurship Awareness are more likely to have a positive attitude toward social entrepreneurship and to see it as a viable option. Furthermore, they are more likely to believe in their ability to start and run a successful social enterprise and to have a higher intention to engage in such activities. An example of Social Entrepreneurship Awareness:

1. Social entrepreneurship education programs: Social entrepreneurship education programs aim to increase awareness of social entrepreneurship by providing individuals with the knowledge and skills necessary to start and run a social enterprise. These programs may be offered at universities or through non-profit organizations, and typically include courses and workshops on social entrepreneurship, as well as mentorship and networking opportunities (Kuratko et al., 2010; Anderson & Jack, 2011; Chen & Christiansen, 2015).
2. Social entrepreneurship competitions: Social entrepreneurship competitions provide a platform for individuals to showcase their social enterprise ideas and to receive feedback and support from experts in the field. These competitions aim to increase awareness of social entrepreneurship by highlighting the impact and potential of such activities (Kuratko et al., 2010; Anderson & Jack, 2011; Chen & Christiansen, 2015).
3. Social entrepreneurship events and conferences: Social entrepreneurship events and conferences aim to bring together individuals and organizations involved in social entrepreneurship to network, share best practices, and learn from each other. These events and conferences provide an opportunity for individuals to learn about social entrepreneurship and to connect with others in the field (Teixeira, 2015).
4. Social entrepreneurship media coverage: Social entrepreneurship media coverage, such as articles, podcasts, and videos, can increase awareness of social entrepreneurship by showcasing the impact and potential of such activities. By highlighting successful social enterprises and their positive impact on society, media coverage can inspire individuals to consider social entrepreneurship as a viable option (Kuratko et al., 2010; Anderson & Jack, 2011; Chen & Christiansen, 2015).

It has been demonstrated that Social Entrepreneurship Awareness initiatives can take various forms, including educational programs, awareness-raising campaigns, social entrepreneurship competitions, and conferences. These initiatives aim to raise awareness about the concept of social entrepreneurship and its potential impact, and to educate individuals about the goals and purpose of social entrepreneurship.

The Effect of Attitude Toward Social Entrepreneurship Intention

Liang and Wang (2015) find that positive attitudes toward entrepreneurship have a positive effect on entrepreneurial intention, while negative attitudes have a negative effect. The study also highlights the importance of considering attitudes when studying entrepreneurial behavior. However, Nguyen and Nguyen (2017) have developed a theoretical model of Social Entrepreneurship Intention and examine its determinants, including attitudes toward social entrepreneurship. They found that positive attitudes toward social entrepreneurship have a significant positive impact on Social Entrepreneurship Intention.

According to Bosma et al. (2009), positive attitudes toward entrepreneurship have a positive impact on entrepreneurial intention, and those negative attitudes have a negative impact on university students. They also highlight the importance of considering attitudes when studying entrepreneurial behavior. The importance of attitudes in shaping Social Entrepreneurship Intention. Positive attitudes toward social entrepreneurship have been shown to have a positive impact on intention, while negative attitudes have a negative impact. The studies also highlight the importance of considering attitudes when studying social entrepreneurship behavior.

H1: There is a significant effect between Attitude and Social Entrepreneurship Intention.

The Effect of Subjective Norms Toward Social Entrepreneurship Intention

In the study of Liang and Wang (2015), they realized that Subjective Norms have a significant impact on entrepreneurial intention and that individuals are more likely to engage in entrepreneurship if they perceive that their peers and significant others approve of such behavior. Besides, Nguyen and Nguyen (2017) found that Subjective Norms have a significant positive impact on Social Entrepreneurship Intention. The Subjective Norms have a significant impact on entrepreneurial intention, and those individuals are more likely to engage in entrepreneurship if they perceive that their peers and significant others approve of such behavior among university students (Bosma et al., 2009; Singh & Kaur, 2017). These studies demonstrate the importance of Subjective Norms in shaping Social Entrepreneurship Intention. The perception of approval or disapproval from peers and significant others has been shown

to have a significant impact on Social Entrepreneurship Intention. These findings highlight the importance of considering Subjective Norms when studying social entrepreneurship behavior.

H2: There is a significant effect between Subjective Norms and Social Entrepreneurship Intention.

The Effect of Social Entrepreneurship Awareness Toward Social Entrepreneurship Intention

Social entrepreneurship awareness refers to an individual's understanding and knowledge of the concept of social entrepreneurship. According to Reichert and Peitz (2015), in this study, individuals who are more aware of social entrepreneurship are more likely to engage in social entrepreneurship themselves. Consequently, Social Entrepreneurship Awareness has a positive impact on Social Entrepreneurship Intention. Besides, exposure to entrepreneurial education, including education on social entrepreneurship, positively impacts entrepreneurial intention (Li & Wong-On-Wing, 2015).

However, Teixeira (2015) discusses the role of education and awareness in promoting social entrepreneurship. The author argues that education and awareness are crucial for promoting social entrepreneurship and increasing the number of individuals who engage in social entrepreneurship activities. In addition, in the study of the impact of entrepreneurship education on entrepreneurial intention, including education on social entrepreneurship, researchers found that exposure to entrepreneurship education, including education on social entrepreneurship, has a positive impact on entrepreneurial intention (Anderson & Jack, 2011).

Individuals who are more aware of social entrepreneurship are more likely to engage in social entrepreneurship themselves, and exposure to education and awareness of social entrepreneurship has been shown to have a positive impact on Social Entrepreneurship Intention. These findings highlight the importance of promoting Social Entrepreneurship Awareness in order to encourage individuals to engage in social entrepreneurship activities (Fig. 10.1).

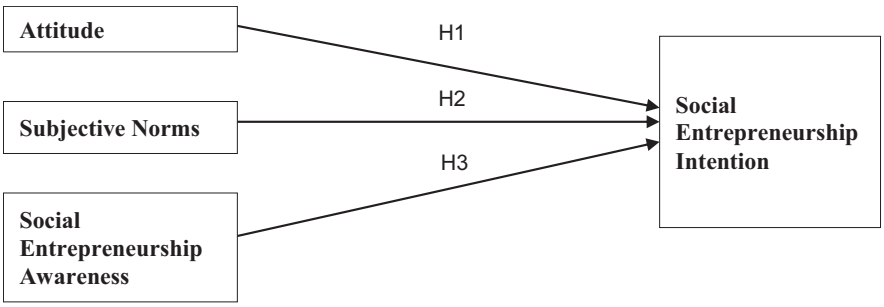

Fig. 10.1 Conceptual framework

H3: There is a significant effect between Social Entrepreneurship Awareness and Social Entrepreneurship Intention.

Research Methodology

Research Design

The cross-sectional research design was employed to examine the Social Entrepreneurship Intention of students in Higher Education in Malaysia context. The data were collected from 172 students through an online survey from March 2022 to May 2022. All the respondents were selected from the Entrepreneurship course in the second semester. These respondents are believed to have strong entrepreneurial activity involvement and it is important to continually study and refine their entrepreneurial profile. Participants were assured that all information was kept confidential and their participation was voluntary. This study used SPSS 26 to analyze the effect between independent variables and dependent variables.

Survey Instrument

The structured questionnaire used in this study was adopted from earlier studies with minor modifications. In this study, a five-point Likert scale was employed to measure the variables, which include strongly disagree, disagree, neutral, agree, and strongly agree. For the Attitude variable, there are six items were adopted from Liñán and Chen (2009). Attitude refers to an individual's overall evaluation of social entrepreneurship as a concept and as a career option. This construct is important because it can influence an individual's intention to pursue social entrepreneurship (Krueger & Brazeal, 1994). The items in the survey instrument ask participants to rate their level of agreement with statements about social entrepreneurship and to provide an explanation of their overall attitude toward social entrepreneurship. While Subjective Norms refer to a person's impression of the support or opposition of significant others regarding engaging in social entrepreneurship. This construct is significant because it may have an impact on a person's decision to engage in social entrepreneurship (Ajzen & Driver, 1991). The survey's questions ask respondents to rate how much their perceptions of the level of support or opposition from significant figures in their lives have an impact on their decision to pursue social entrepreneurship. To measure the Subjective Norms, six items were adopted from Liñán and Chen (2009), Liñán et al. (2011), Heuer and Kolvereid (2014), Solesvik et al. (2012), and Souitaris et al. (2007). Five items for Social Entrepreneurship Awareness were derived from Krueger Jr et al. (2000). Social Entrepreneurship Awareness refers to an individual's knowledge and understanding of social entrepreneurship as a concept and as a career option. This construct is important because it can influence an individual's intention to pursue social entrepreneurship (Bosma & Wennekers, 2009). The survey's items ask respondents to rank their

acquaintance with social entrepreneurship and select the definition that most closely reflects their understanding of the idea. Finally, five items were extracted from Krueger Jr et al. (2000) to measure Social Entrepreneurship Intention. Social Entrepreneurship Intention, which describes a person's propensity and drives to pursue social entrepreneurship as a vocation. This construct is crucial because it has the ability to foretell whether a person would actually engage in social entrepreneurship (Kolvereid & Isaksen, 2006). The survey's questions ask respondents to rank the elements that would most likely affect their decision to pursue social entrepreneurship and to rate their chance of doing so.

Findings

Demographic Profile

Table 10.1 reveals the details characteristics of the respondents in this study. As for the field of study, the survey was dominated by Entrepreneurship courses (51.2%), followed by Art (18.0%), Business Admin (17.4%), and other courses indicate that 10% and below were respondents' choice (Banking, Economics, Education, Geography, Heritage, Islamic Banking and Finance, Logistics, Computer Science, and Technology). Meanwhile, the majority of the respondents were represented by 91.9%, aged between 21 and 24 years old, 6.8% were aged between 25 and 28 years old, and 6% were aged 29 years and above. However, only 1.2% of the respondents were aged 20 years and below. Furthermore, there are more females (72.7%) than males (27.3%) who participate in this survey. As for the working experience, most of the respondents agree that they have experience (75.6%), while the remaining percentage have no working experience. In addition, about 38.4% of the respondent's parents' occupations were self-employed, and the remaining respondents (29.7%, 23.3%, 4%, and 1.2%) were in private, government, others, and unemployed, respectively. However, only 2.9% of the parents were retired. The respondents who had not completed the Entrepreneurship courses were represented by 44.8%, while 55.2% of the respondents did not complete the Entrepreneurship courses. Regarding CGPA, the majority of the students who achieved an excellent result of 3.00–3.49 was at 58.7%, while 32.6% achieved 3.50 and above. The remaining students achieved 2.99 and below.

Reliability Test

Before conducting the main analysis, a reliability test was performed with all the items tapping into the independent variables and dependent variables that were included in the study. The reliability test for this study is executed with the analysis of Cronbach alpha as displayed in Table 10.2. The results for the reliability of

Table 10.1 Demographic Profile

Background	Information	Frequency	Percentage (%)
Field of study	Art	31	18.0
	Banking	1	0.6
	Business admin	30	17.4
	Economics	1	0.6
	Education	10	5.8
	Entrepreneurship	88	51.2
	Geography	1	0.6
	Heritage	4	2.3
	Islamic banking and finance	1	0.6
	Logistics	2	1.2
	Computer science	2	1.2
	Technology	1	0.6
Age (years)	20 years and below	2	1.2
	21–24	158	91.9
	25–28	11	6.4
	29 years and above	1	6
Gender	Female	125	72.7
	Male	47	27.3
Work experience	No	42	42
	Yes	130	75.6
Parents occupation	Government	40	23.3
	Private	51	29.7
	Self-employed	66	38.4
	Unemployed	2	1.2
	Retired	5	2.9
	Others	8	4.7
Complete entrepreneurship course	Yes	77	44.8
	No	95	55.2
CGPA	2.99 and below	15	8.7
	3.00–3.49	101	58.7
	3.50 and above	56	32.6

Table 10.2 Reliability construct

Cronbach's	Alpha (α)
Attitude	0.922
Subjective norms	0.877
Social entrepreneurship awareness	0.920
Social entrepreneurship intention	0.952

the item measurement indicate that each construct is satisfied since the values exceeded the recommended threshold, which is above 0.70 (Taber, 2018). The Cronbach alpha value for Attitude is 0.922, Subjective Norms is 0.877, Social Entrepreneurship Awareness is 0.920, and Social Entrepreneurship Intention is 0.952. Therefore, it can be concluded that each of the constructs is acceptable for this study.

Regression Analysis

Before we proceed to further discuss the results of analysis which showcase outputs based on (ordinal) logistic regression models, it is worth noting that this study considers three different independent variables, which include Attitude, Subjective Norms, and Social Entrepreneurship Awareness. All these independent variables are assumed to have some impact on the dependent variable, which is Social Entrepreneurship Intention. We further note that all the variables (both independent and dependent) are measured in the form of Likert scales, which are essentially ordinal variables. Since Likert scales are ordinal data, the most appropriate measure of central tendency is the median, which represents the middle value of the data. This is attributable to the fact that the median is less affected by extreme values than the mean, and is appropriate for data which are not normally distributed, common with Likert scales.

As an indicative example, under the independent variable Attitude, we have six questions under the section that aim to estimate this variable (intuitively labeled as At1, At2, …, and At6). All these Likert items can be summarized by a single median value (for each individual) to best showcase that particular individual's Attitude. As our dependent variable is ordinal (consisting of ordered categories with 1 denoting strong disagreement and 5 denoting strong agreement), we have opted to use an ordinal logistic regression approach to model the relationships between this dependent variable and three other independent variables mentioned. This is due to that an ordinal logistic regression is specifically designed for modeling the relationship between an ordinal outcome variable and one or more predictor variables.

Furthermore, throughout the procedures of analyses based on the ordinal logistic regression approach, we have used the Logit link function as it converts the predicted probabilities of ordinal outcomes into log odds, which is the natural logarithm of the odds, and permits a linear relationship between the predictor variables and the outcome variable (that is, the link function takes the natural logarithm of the odds of being in a higher outcome category compared to the current category).

A1. To examine the effect of *Attitude* toward *Social Entrepreneurship Intention*
A2. To examine the effect of *Subjective Norms* toward *Social Entrepreneurship Intention*
A3. To examine the effect of *Social Entrepreneurship Awareness* toward *Social Entrepreneurship Intention*

In this section, three variables were analyzed to examine the effects of independent variables on the dependent variable:

Regression Analysis for A1

Under this part, we shall examine the effect of Attitude toward Social Entrepreneurship Intention, based on an ordinal logistic regression approach. Note again that the link function used is a Logit link function, for its desirable properties. We can observe, based on the model fitting information (Table 10.3), that the −2 Log Likelihood with intercept only comes at the value of 177.526 while the final model considered comes at the value of 54.337. We note here that a lower value implies a better fit of the model, and the −2 Log Likelihood measures how well the model fits the data collected. It is a powerful goodness-of-fit statistic that compares the observed data with predictions made by the model.

Under the outputs of parameter estimates generated by SPSS (see, for example, Table 10.4), we can see the expected change in the log odds of moving to a higher

Table 10.3 Model fitting information

Model	−2 Log Likelihood	Chi-square	df	Sig.
Intercept only	177.526			
Final	54.337	123.189	7	0.000

Link function: Logit

Table 10.4 Parameter Estimates

		Estimate	Std. error	Wald	df	Sig.	95% Confidence interval	
							Lower bound	Upper bound
Threshold	[SocEntIntention = 1.00]	−8.192	0.830	97.388	1	0.000	−9.819	−6.565
	[SocEntIntention = 2.00]	−6.367	0.592	115.497	1	0.000	−7.529	−5.206
	[SocEntIntention = 3.00]	−3.456	0.445	60.382	1	0.000	−4.328	−2.584
	[SocEntIntention = 4.00]	−0.676	0.300	5.067	1	0.024	−1.265	−0.087
Location	[attitude = 1.50]	−7.280	1.958	13.825	1	0.000	−11.117	−3.442
	[attitude = 2.00]	−6.830	1.028	44.156	1	0.000	−8.844	−4.815
	[attitude = 2.50]	−3.467	1.414	6.014	1	0.014	−6.239	−0.696
	[attitude = 3.00]	−4.812	0.607	62.888	1	0.000	−6.001	−3.623
	[attitude = 3.50]	−4.664	0.740	39.679	1	0.000	−6.115	−3.212
	[attitude = 4.00]	−2.779	0.453	37.581	1	0.000	−3.667	−1.890
	[attitude = 4.50]	0.273	0.891	0.094	1	0.759	−1.474	2.020
	[attitude = 5.00]	0[a]	.	.	0	.	.	.

Link function: Logit

[a]*This parameter is set to zero because it is redundant*

outcome category for a one-unit increase in the predictor variable, while holding all other variables constant. The sign of the coefficient estimate may first be inspected for interpretation, where in general a positive estimate implies that as the predictor variable increases, the log-odds of moving to a higher outcome category increase and contrariwise for a negative estimate. We further note that a larger coefficient, in its absolute value, indicates a stronger relationship between the predictor variable and the outcome variable. In addition, a smaller standard error and a *p*-value less than the proposed level of significance (say 0.05) suggest a more statistically significant estimate.

Based on the outputs in Table 10.4, all but the category of Attitude = 4.50 has negative estimates, which comes at the value of 0.273, with a *p*-value of 0.759. This is also the only category with an odds ratio greater than one, as Exp (0.273) = 1.3139. This implies that for each one-unit increase in the predictor variable, the odds of moving to a higher outcome category are about 1.3 times greater, while holding all other variables constant.

If we, for example, consider a more significant location parameter based on the *p*-value, say at Attitude = 4.00, we can see that it comes at the value of −2.779 with a statistically significant *p*-value and a much smaller standard error as compared to when Attitude = 4.50. The odds ratio at the value of Exp (−2.779) = 0.0621, which is less than one, implies that as the predictor variable increases, the odds of moving to a higher outcome category decrease, by around 0.06 times. It can be concluded that the impact is there, although by a weak intensity.

Regression Analysis for A2

We can observe, based on the model fitting information for Subjective Norms toward Social Entrepreneurship Intention in Table 10.5, that the −2 Log Likelihood with intercept only comes at the value of 166.798 while the final model considered comes at the value of 81.455, implying a good model fit. All the location parameters also appear to be statistically significant, and come at negative signs, with different magnitudes as shown in Table 10.6.

A notable location parameter is when Subjective Norms = 4.50 as it has a *p*-value of 0.015 and an estimate of −1.619 which, when converted to odds ratio, comes at the value of Exp (−1.619) = 0.1981. This implies that as the predictor variable increases, the odds of moving to a higher outcome category decrease, by around 0.2 times. The influence is considerably greater compared to what we have for Attitude toward Social Entrepreneurship Intention.

Table 10.5 Model fitting information

Model	−2 Log likelihood	Chi-square	df	Sig.
Intercept only	166.798			
Final	81.455	85.344	7	0.000

Link function: Logit

Table 10.6 Parameter estimates

		Estimate	Std. error	Wald	df	Sig.	95% Confidence interval	
							Lower bound	Upper bound
Threshold	[SocEntIntention = 1.00]	−7.784	0.811	92.053	1	0.000	−9.374	−6.194
	[SocEntIntention = 2.00]	−6.021	0.616	95.606	1	0.000	−7.228	−4.814
	[SocEntIntention = 3.00]	−3.434	0.512	44.992	1	0.000	−4.438	−2.431
	[SocEntIntention = 4.00]	−1.196	0.446	7.194	1	0.007	−2.070	−0.322
Location	[SubjectiveNorms = 1.00]	−3.946	1.076	13.446	1	0.000	−6.056	−1.837
	[SubjectiveNorms = 2.00]	−5.943	1.025	33.635	1	0.000	−7.951	−3.934
	[SubjectiveNorms = 2.50]	−6.136	1.027	35.691	1	0.000	−8.149	−4.123
	[SubjectiveNorms = 3.00]	−4.382	0.631	48.150	1	0.000	−5.619	−3.144
	[SubjectiveNorms = 3.50]	−3.629	0.621	34.176	1	0.000	−4.846	−2.412
	[SubjectiveNorms = 4.00]	−2.313	0.522	19.614	1	0.000	−3.336	−1.289
	[SubjectiveNorms = 4.50]	−1.619	0.664	5.936	1	0.015	−2.921	−0.317
	[SubjectiveNorms = 5.00]	0[a]	.	.	0	.	.	.

Link function: Logit
[a]*This parameter is set to zero because it is redundant*

Table 10.7 Model fitting information

Model	−2 Log likelihood	Chi-square	df	Sig.
Intercept only	163.632			
Final	45.698	117.934	4	0.000

Link function: Logit

Regression Analysis for A3

Based on the model fitting information for Social Entrepreneurship Awareness toward Social Entrepreneurship Intention in Table 10.7, the −2 Log Likelihood with intercept only comes at the value of 163.632 while the final model considered comes at the value of 45.698, implying a substantially better model fit. All the location parameters also appear to be statistically significant, and come at negative signs, with different magnitudes as shown in Table 10.8.

The most notable location parameter is when Social Entrepreneurship Awareness = 4.00 as it has a *p*-value of less than 0.05 and an odds ratio of Exp (−2.599) = 0.0743. This implies that as the predictor variable increases, the odds of moving to a higher outcome category decrease, by around 0.07 times. The effect is considerably less noticeable compared to the one indicated by Subjective Norms and Social Entrepreneurship Intention.

Table 10.8 Parameter estimates

		Estimate	Std. error	Wald	df	Sig.	95% Confidence interval	
							Lower bound	Upper bound
Threshold	[SocEntIntention = 1.00]	−8.096	0.791	104.804	1	0.000	−9.646	−6.546
	[SocEntIntention = 2.00]	−6.390	0.578	122.167	1	0.000	−7.523	−5.257
	[SocEntIntention = 3.00]	−3.544	0.439	65.045	1	0.000	−4.405	−2.683
	[SocEntIntention = 4.00]	−0.868	0.315	7.596	1	0.006	−1.485	−0.251
Location	[SocEntAwareness = 1.00]	−3.735	1.180	10.021	1	0.002	−6.047	−1.422
	[SocEntAwareness = 2.00]	−6.503	0.949	46.914	1	0.000	−8.364	−4.642
	[SocEntAwareness = 3.00]	−4.817	0.550	76.564	1	0.000	−5.896	−3.738
	[SocEntAwareness = 4.00]	−2.599	0.437	35.324	1	0.000	−3.457	−1.742
	[SocEntAwareness = 5.00]	0[a]	.	.	0	.	.	.

Link function: Logit

[a]*This parameter is set to zero because it is redundant*

Discussion

This study's objective is to determine the effect of attitude, Subjective Norms, and Social Entrepreneurship Awareness on Social Entrepreneurship Intention based on hypothesized relationships. Findings on specific Social Entrepreneurship Intentions are further discussed below. Young generations are the future leaders of the country in providing solutions to social issues in innovative ways through social entrepreneurial initiatives (Jemari et al., 2017; Shahverdi et al., 2018). Thus, this study reveals that students in Higher Education are pivotal in comprehending Social Entrepreneurship Intention among their generation. The findings that Attitude affects Social Entrepreneurship Intention are consistent with previous research (Jadmiko, 2021; Luc, 2018; Rambe & Ndofirepi, 2021). This study found that positive attitudes among students increase optimism, in terms of their choice and plan to become social entrepreneurs or engage in social entrepreneurial activities. This positivism led them to start a business in the social area through experience and personal characteristics. Hence, Attitude has been proven to be an essential factor in possessing Social Entrepreneurship Intention with a positive impact.

Subjective Norms show a different dimension of students, in terms of beliefs from their friends, parents, or other family members to performing or not toward Social Entrepreneurship Intention (Ajzen & Driver, 1991). This indicates that social pressure from family or important people influenced their decision to involve or not in social entrepreneurship activities or act as a social entrepreneur. Besides, those important people play an important role in supporting their

decision and action to become social entrepreneurs (De Jorge-Moreno et al., 2012). They feel comfortable and safe because they have someone who supports and stands by his/her side in making something of value in their life, study, or career. Furthermore, the findings are in agreement with the extant literature that verifies the significant positive of Subjective Norms on Social Entrepreneurship Intention (Ahuja et al., 2019). However, Cavazos-Arroyo et al., (2017) mention their argument that Subjective Norms and intention have been inconclusive in findings and disclosed inconsistent results. For this study, students need support or someone who can guide or help them in making reasonable decisions. Therefore, it becomes crucial to examine Subjective Norms in predicting Social Entrepreneurship Intention.

For H3, the findings indicate that Social Entrepreneurship Awareness significantly affects Social Entrepreneurship Intention among students. These findings could be associated with the university ecosystem toward social entrepreneurship in increasing students' awareness and knowledge of social problems solution. By increasing students' awareness, universities will be better equipped to escalate the desirability toward Social Entrepreneurship Intention, thus increasing students' perceptions of opportunity (Usman et al., 2022). Social problems in this globalized era are not limited to an individual or community but affect everyone globally (Gandhi & Raina, 2018; Premkumar et al., 2022). These problems can only be mitigated when all the people have social awareness. Regarding this alarming social issue, social awareness among the young generation is important in reflecting those issues (Hockerts, 2018). Not only can they provide solutions to social problems, but also, they may overcome economic recession (Tran et al., 2016). Therefore, social awareness can be implanted into young generations' interests to improve their society and country. The youth should be encouraged to engage passionately in social entrepreneurship and inspired to become social entrepreneurs or adapt social entrepreneurship elements in decision-making (Jemari et al., 2017; Bazan et al., 2020).

Implications

This study further contributes to the literature by determining the Social Entrepreneurship Intention focusing on three variables, which are Attitude, Subjective Norms, and Social Entrepreneurship Awareness. Besides, it also little research has been conducted on Social Entrepreneurship Intention among students, employing Social Entrepreneurship Awareness. This study also can expand in proposing a measurement scale for students' intention toward Social Entrepreneurship Intention and the evaluation in considering that the students apply social entrepreneurial elements.

This study's findings help decision makers to consider this component in policy implementation. This initiative is in line with the government's effort to support social entrepreneurship in the country as a means to increase the socio-economic

and reduce social issues. Accordingly, the institution can collaborate with industries and agencies to train or prepare the next generation of social entrepreneur leaders who are committed to social practices and sustainability. Thus, there is a need for support mechanisms to help the students transform into the social entrepreneurial mindset that affects their interest in becoming social entrepreneurs (Shahverdi et al., 2018; Peng et al., 2019). As a result, the institution creates a social entrepreneurial ecosystem with support from the people around them, at the same time providing value to society.

Limitation and Future Research

The study aims to provide an approach to comprehend how Social Entrepreneurship Intention is affected by Attitudes, Subjective Norms, and Social Entrepreneurship Awareness. However, there are limitations that must be discussed and issues that are still open for future research. The study limitations include the flaw of cross-sectional studies that refer to the cause-and-effect relationship. Furthermore, the study framework is a relatively straightforward effect relationship with only three independent variables and a dependent variable. Thus, future research supposedly employed longitudinal studies to investigate the environmental and economic perspectives toward Social Entrepreneurship Intention. A more comprehensive model should be used by considering other dimensions such as institutions, experience, and support to provide a better understanding related to Social Entrepreneurship Intention. Moreover, researchers may also expand the study by adding another moderator or mediator to increase the robust result. However, this study provides useful information where social entrepreneurship context is dramatically increased at a tremendous speed but research in this field is still struggling to provide answers to the researchers. Future studies could take into account other perspectives or factors such as culture and regulation between developed and developing countries.

Secondly, the limitation is that this study was targeted at students from an entrepreneurship course and it may not be generalized to students from non-entrepreneurial courses. Also, the students were selected as a respondent in three public universities only in Malaysia due to time and resource constraints. In addition, university lecturers and other staff were not engaged in this study, who can contribute insights into this study otherwise. This limitation also affects the sample size of this study which limits the observation to a particular time. The proposed model in this research study also offers room for further improvement. Therefore, future studies should consider broadening the scope to engage the private university that may contribute to the new findings according to different courses and governance. The future respondents may consist of non-entrepreneurship students to see the different perspectives and understanding among university students. Lecturers and staff engagement will play an important role to ensure they provide a supportive ecosystem in institutions to encourage students toward Social Entrepreneurship Intention (Kim et al., 2020).

Conclusion

Social entrepreneurs have become increasingly important to our contemporary society as we march toward sustainability and prosperity. Such objects can be achieved by the proposition of scalable solutions applicable in numerous contexts. Due to their significant contributions in addressing various social and environmental challenges, the field of social entrepreneurship has attracted considerable attention and support from the governments, philanthropists, and investors in recent years. Therefore, it comes as no surprise that students in Malaysian public universities are aware of the existence and importance of social entrepreneurship, although the majority of them are still oblivious to how it can be practiced. Such phenomenon can stem from their lack of knowledge and motivation, which can be combated by motivating them to initiate social entrepreneurial activities through the identification of key components associated with social entrepreneurial attributes. Our statistical analysis reveals that Attitude, Subjective Norms, and Social Entrepreneurship Awareness all affect Social Entrepreneurship Intention at varying intensity, with Subjective Norms being the most dominant factor. By inculcating social entrepreneurs who actively innovate, foster partnerships, and empower communities, the sustainable development goals (SDGs) can, without a doubt, be achieved.

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Chapter 11
Vietnam: Why are there Only few Innovations in Vietnamese Startups and SMEs? An Analysis from an Entrepreneurship and Management Perspective

Minh Chương Truong

Abstract Entrepreneurship and Innovation (E&I) is the theme of much interest in recent years. E&I is expected to develop economies, particularly, emerging economies such as Vietnam. Vietnamese government has made a lot of efforts and policies to develop E&I and achieved some good results, but, not as high as expected. The innovations in Vietnamese startups and SMEs are still limited. This chapter aims to explain the reasons for this fact. A review of data published by the World Bank, OECD, and GMI were collected to understand the whole picture of Vietnamese innovation. Then, two studies on Vietnamese startups and SMEs innovation were presented. Results of the studies show that Vietnamese startups with innovations just cover a small part of total startups, e.g., Vietnamese entrepreneurs are just a few among people starting businesses. The creativity is the main difference between the entrepreneurs and the others. Vietnamese entrepreneurs have a shortage of entrepreneurial and managerial competencies, hence, most SMEs do not follow entrepreneurial orientation to continuously make innovations. As such, their market competition, and development are also constrained. Some implications to overcome this innovation limitation are proposed.

Keywords Innovation in Vietnam · Managerial shortages · Innovation limitation

Introduction

With the Renovation Policy launched in 1986, Vietnam Economy has changed from a centrally planned economy to a market economy and the private sector has been recognized as a component of the economy. Vietnamese people were encouraged to

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A. H. Verkuil (ed.), *Start-up Cultures in Times of Global Crises*, Sustainable Business Development, https://doi.org/10.1007/978-3-031-53942-8_11

start a private business to increase their income. The development of the private businesses were great from then on. Vietnam's economy has grown and Vietnam has got over the group of poor countries to become a member of middle-income country group.

The fourth Industrial revolution has opened many opportunities to make innovations to develop the Economy. From then on, the term "startup and innovation" has become popular all over the World and the economies have competed with each other basing on innovations and startups. In an effort to exploit these opportunities to develop the economy, the Vietnamese government has set the year 2016 as "the national innovation year" and set the national strategy to exploit this revolution to develop.

As a result, with Vietnamese government policies and encouragement, innovations, and startups have been established and contributed to the development of the Vietnamese economy and job generation.

However, when compared with expectations, the number of Vietnamese startups and SMEs with successful innovations and the impact of the innovations on the economy are still limited. An innovation is successful when it is created in the form of a product offered to the market through a startup and the development of the startup to become an SME contributing to the economy. Hence, a study to find out the reasons for this is in need. This is the objective of this study. To achieve the study objective, there are two research questions of concern: (1) Why are there few Vietnamese entrepreneurs among people starting businesses? (2) Why are there few innovations in Vietnamese SMEs?

Previous studies in innovation, startups, and SMEs often focus separately on entrepreneurial perspective or on managerial perspective. But, a successful innovation is explained by the combination of both perspectives. Hence, a study combining both perspectives is promising to understand more of the situation. This study follows this combination perspective.

Literature Review

Entrepreneurship is a field that seeks to understand how opportunities to bring into existence "future" good and services are discovered, created, and exploited, by whom, and with what consequences (Venkataraman, 1997). This definition of entrepreneurship emphasizes two main study objects: The opportunity and the person who discovers, creates, and exploits it.

Innovation is a new or improved product or process (or combination thereof) that differs significantly from the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process) (OECD, 2018). This definition differentiates between innovation as the outcome (product) and innovation as an activity (process), hence, very general. For the ease of business managers in classifying innovations, OECD proposed four types of innovation: Product, process, marketing, and organizational method (OECD, 2005).

An entrepreneur is a person with the vision to see an innovation and the ability to bring it to the market (Zoltán et al., 2018). Thus, the entrepreneur should have the ability to make innovations.

However, innovation is just the base of the startup. The introducing an innovative product into the market and the growing of the startup are the key points to justify that the innovation is successful or not. The existence of a SME in the market is a proof that the innovative product is accepted, having the market and contributing to the economy development - the final expectation of an innovation.

Entrepreneurship studies first by economic scientists pioneered by Schumpeter. They focused on the change of the economy system with the emergence of organizations established by entrepreneurs to commercialize their innovations and get profit via the production and distribution of their goods or services (Landstroem, 2005). After the Second World War, behavioral scientists started to study entrepreneurship by finding the answer to the question "Why do some people start their own business but not the others?" To answer that question, they tried to use personality traits to differentiate the entrepreneur with the others and answer the question "Who is an entrepreneur?" (Landstroem, 2005). Their studies have shown that there are more than 20 personality traits identified, namely, need for achievement, risk tolerance, self-belief, locus of control, autonomy, and flexibility to name a few (Carland et al., 1984). Each entrepreneur could possess some of these traits. This kind of study could not give common results in the identification of an entrepreneur because there were so many combinations of these traits and different combinations brought different results.

In order to explain more of the entrepreneurship, the behavioral scientists have tried to answer the question "Why does an entrepreneur act?" In this perspective, the entrepreneur is the person who recognizes opportunity, makes innovation, and starts the business to commercialize this innovation (Landstroem, 2005). The results of these studies have shown that the innovation generation is impacted by several factors of entrepreneurs, such as awareness, opportunity identification, assessement ability, education level, professional experience, and social network…of an entrepreneur (Garcia-Morales & Llorens-Montes., 2006; Mendoza-Silva, 2020; Shane, 2000; Shane & Venkataraman, 2000).

As such, in order to understand the innovation status quo in startups or SMEs, the understanding of the entrepreneur's personality traits, education, professional experience, and management practices among others is required since it helps to answer the question of whether all people start a business with innovation or not and what is the difference between an entrepreneur and a normal businessman without innovation.

Moreover, an entrepreneur's behavior in operating her/his business has an impact on its innovation status quo resulting in the entrepreneur's work performance. Concerning with the entrepreneur's work performance, competency is another concept often studied. Competency was introduced by McClelland to replace intelligence in test building and has got the attention of researchers from then on (McClelland, 1973). Competencies are the characteristics that a person must have in order to achieve a higher performance when compared with others (Amstrong,

1998). This definition has shown the relation between competencies and the work performance of a person. The theory of performance, particularly, the contingency theory, is the basis for competency theory (Boyatzis, 1982) and explains this relation.

The competency concept concerns two sides: The area of work a person can perform and the set of behaviors that she/he must display to perform (Woodruff, 1991). The entrepreneur has to perform the work of an innovation creator and startup owner/manager. As such, an entrepreneur should have entrepreneurial competencies and managerial competencies and the understanding of these two competencies of an entrepreneur will help to explain the innovation status quo of the entrepreneur's business.

The entrepreneurial competencies are formed by characteristics, namely, personality traits, knowledge, skills, motives and social roles that drive a person to pursue an opportunity to establish a business, survive it and grow it (Bird, 1995; Boyatzis, 1982; Wani & Butt, 2017).

Managerial competencies are characteristics that relate to effective job performance (Boyatzis, 1982). The managerial competencies include activity coordination, resource reallocation, enlargement to produce a product, and human resource management in communicating and encouraging employees to work (Chandler & Hanks, 1994).

The opportunity identification and decision to exploit it depend on the entrepreneurial competencies. The managerial competencies will manage resources to produce the product to exploit that opportunity and expand the market to grow the business.

In reverse, the business resources will have impact on the entrepreneur to select an opportunity among available opportunities. This is because the entrepreneur cannot select an opportunity that requires a lot of changes in her/his current resources. Therefore, there are interrelations among the entrepreneur's competencies, resources of a business, and the opportunity selected (Penrose, 1959). The current resources of a business could provide evidence for the exhibition of the entrepreneur's competencies and business orientation.

If an entrepreneur continues to develop her/his business basing on innovation, her/his business will have an entrepreneurial orientation (Miller, 1983). In this case, using the entrepreneurial competencies, the entrepreneur becomes proactive to market, customer change, accepts risks to take initiatives, innovation, and competes strongly with the competitors (Lumpkin & Dess, 1996). The entrepreneur will scan the business environment continuously to recognize the change, then, reallocate or enlarge the resources to produce innovative products (Covin & Slevin, 1991). In so doing, the entrepreneur uses the managerial competencies. The business will have a high level of knowledge and competency resources supporting the innovation.

If an entrepreneur does not want to follow entrepreneurial orientation she/he does not need to make innovations and decides not to reallocate or enlarge the resources. The managerial competencies, in this case, will focus on the improvement of the market share, productivity, and profit generation by applying best practices suitable for enterprises in the industry in which her/his startup is in. These

startups are profit oriented (Zacca & Dayan, 2018). The enlargement of knowledge, competency resources supporting innovation is not focused.

Thus, to understand the fact that an entrepreneur continues to make innovations and follow entrepreneurial orientation or not, it should be done that the observation of the resources and the exhibition of the entrepreneur's entrepreneurial and managerial competencies in shaping these resources in the business is conducted.

Among the resources, knowledge and competencies of the human resource are of great importance. The human resource's knowledge in market and marketing will make the business more easily identify opportunities. The human resource's technology knowledge, the innovative, and design competencies will help the business create an innovative product to launch into the market and create a competitive advantage for the businesses (M. Porter, 1998).

Thus, to explain more of the innovation status quo of SMEs, a study of the business resources and the relation between entrepreneur's competencies and their business resources is of interest. Such a study contributes to the study of SME innovation capacity because most of the studies in this field focus separately on leadership, culture, human resource innovative capability, dynamic capability, the entrepreneur's competencies, and business resources and rarely on the combination of business resources and entrepreneurs' competencies (Mary & Crossan, 2010; Mendoza-Silva, 2020), particularly, for SMEs in emerging economies as Vietnam.

Research Method

In order to understand the innovation status quo of Vietnamese startups and SMEs a combination of desk research and empirical research have been applied. In desk research, secondary data from the World Bank, Global Innovation Index, and Intellectual Property Organization reports will be collected to present the whole picture of innovation in Vietnamese startups and SMEs. Then, two empirical studies with primary data were presented. First, a cluster analysis was proceeded with Vietnamese startups to identify the groups of entrepreneurs, their group characteristics in relation to innovation and their performance to explain the innovation in Vietnamese startups (Truong, 2015). This study aimed to answer the question—Why are there few Vietnamese entrepreneurs among people starting businesses? Second, in-depth interviews with some SME entrepreneurs who have passed the survival of the startup to become SMEs for their business resources, innovations, particularly, the innovation orientation were performed. This study answers the second question—Why are there few innovations in Vietnamese SMEs? This study in accompany with the first one will explain the status quo of Vietnamese startup and SME innovation as exhibited by results in desk research.

Results

Whole Picture of Vietnamese Startup and SME Innovation

Vietnamese have a business spirit. From the stone age to feudal times, there were typical business persons whose achievements have been recorded in Vietnamese history (Nguyen & Pham, 2019). The development of Vietnamese business persons started strongly with some Vietnamese business persons working with foreign business persons from Europe, China, and Japan in eighteenth century. This development has continued but been limited to French colony and the American war of Vietnam (Nguyen & Pham, 2019). Thus, from 1986, with the renovation policy of the Vietnamese Government, the Vietnamese entrepreneurial spirit has been uncovered and encouraged to develop. The entrepreneurial intention index is ranked nineteenth, the Vietnamese business startup rate is 24.7%, in the top three of highest rate countries and the new business ownership rate is 1st/54 (GEM, 2018). However, Vietnamese entrepreneurs have the fear of failure index of 10th/54. This is controversial with the spirit of startups. Besides personality traits such as flexibility, need of achievement, locus of control...recognized in other studies, Vietnamese entrepreneurs have high level of determination, perseverance and the commiment (Truong, 2017).

The Vietnamese entrepreneurship spirit index—a combination index showing three factors entrepreneurial awareness, opportunity recognition, and self-efficacy—was ranked 15th/54 (GEM, 2018). This index is lower than Indonesia (ranked 3rd) and higher than Malaysia and Thailand. The other indexes like perceived opportunity, perceived capability, and entrepreneur intention are ranked 23rd, 19th, 19th, respectively. These indexes show that Vietnamese entrepreneurs have good characteristics in personality traits and opportunity recognition. These are promising bases for success of innovation and startups. As such, the two indexes "high status to entrepreneur" and "entrepreneurhisp a good career choice" are ranked at 15th and 27th (GEM, 2018).

The Global Innovation Index (GII) of Vietnam increased greatly from 2016 to 2018 ranking 59 to 45, and not much increased from then, and, decreased from 2020 to 2021 as presented in Table 11.1. The innovation inputs also increased from 2016 to 2021 (from 79 to 60) but the innovation outputs increased not much (42 to 38). This is a sign of the low increasing rate of innovation efficiency. As compared with

Table 11.1 GII of Vietnam

Year	GII	Innovation inputs	Innovation outputs
2021	44	60	38
2020	42	62	38
2019	42	63	37
2018	45	65	41
2017	47	71	38
2016	59	79	42

Source: Collected from GII Global reports 2019, 2021

other countries in the South East Asian region, the GII index of Vietnam is lower than Singapore (8th), Malaysia (36th), Thailand (43rd), and, just higher than Indonesia (87th), Laos (117th), and Myanmar (127th). The Vietnamese entrepreneurial impact index of innovation was ranked 48th/54 (GEM, 2018). This shows that the Vietnamese innovation is not as high as expected and the impact of innovation is still limited.

In addition, the outputs of the innovation are also not high. Some typical outputs of Vietnam Innovation are presented in Table 11.2. Knowledge creation is the base of innovation and knowledge-intensive employment shows the impact of innovation on the economy. Table 11.2 shows that these two indexes of Vietnam are lower when compared with Singapore, Malaysia, Thailand, and just higher than Indonesia.

In view of technology identification, invention, and adaptation, Vietnamese entrepreneurs were still weak as presented in Table 11.3. Table 11.3 exhibits that Vietnam has low scores in technology identification, invention, and adaptation, hence, has low productive capability, low product diversification, and is short of technology-based innovation. The product competition is, hence, low.

This could explain, partly, the reason for having very few innovations in Vietnamese startups and SMEs in the market. The resources to create knowledge and innovation are human resource quality, R&D, and infrastructure for R&D among others. The Indexes for these Vietnamese resources are also low and can explain the low level of knowledge creation, intensive employment and innovation. Table 11.4 shows these indexes.

Table 11.4 shows that the Vietnamese percentage of graduates in science and engineering is very low when compared with Malaysia, Singapore, and Thailand. Thus, Vietnam is short of human resource for R&D shown by low index in human resources and research. The investment for R&D and infrastructure is also lower than the countries in the region, except Indonesia.

The Vietnamese University–Industry collaboration is also low causing a shortage of knowledge, innovation transferring from university to industry and universities could not support industries.

After startup, Vietnamese entrepreneurs face management challenges and they are weak in management capability. The comparison of management capability of Vietnamese SMEs and SMEs in other regional countries is presented in Table 11.5.

Table 11.2 Vietnam Innovation and intellectual properties

Country/ Economy	Overall GII	Knowledge-intensive employment %	Knowledge creation	Patents
Singapore	8	2	28	26
Hong Kong China	14	29	40	72
Malaysia	36	55	69	61
Thailand	43	98	47	75
Indonesia	87	106	81	65
Vietnam	44	100	79	73

Source: Collected from GII Global Report 2021

Table 11.3 Score of technology identification, invention, and adaptation

Country	GII 2015–2016 rank (in 140)	Score (1–7)
Malaysia	18	5.23
Thailand	32	4.64
Vietnam	56	4.3

Source: World Economic Forum 2015

Table 11.4 Indexes for resources of knowledge creation, innovation

Country/ economy	Overall GII	Human capital and research	Research and development	Infrastructure	Graduate in science and engineering %	University–Industry collaboration
Singapore	8	9	15	15	10	8
Hong Kong China	14	25	30	6		21
Malaysia	36	39	40	51	5	25
Thailand	43	63	47	61	25	30
Indonesia	87	91	57	68	76	27
Vietnam	44	79	68	79	54	34

Source: Collected from GII Global Report 2021

Table 11.5 shows that Vietnamese SMEs are weak when compared with Singapore. The target setting for long-term development is as weak as operation management and to be the lowest score in management capability. In detail, Vietnam SMEs are strong in monitoring, but weak in best practice operations, new technology adoption, and human resource quality (World Bank Group, 2016). Hence, the development of Vietnamese SMEs in the future is very limited.

The previous results and reports exhibit that Vietnamese entrepreneurs have favorable characteristics to start a business, namely, entrepreneurial spirit, personality traits, high intention to start a business, and high capability in opportunity perception. Hence, the number of startups increases greatly. But, the innovation indexes disclose that innovation in these startups is limited and their impact is low. This could be explained by the fact that very few innovation created among startups and very few startups with innovation could penetrate into the market and survive. Vietnamese SMEs are low in management practice, technology adoption, long-term planning, thus, innovation making is also low.

In order to find out the reasons for very few innovations created by Vietnamese startups and SMEs, empirical studies have been performed to understand the roles of the entrepreneurs and their impacts on the innovation status quo.

Table 11.5 Comparison of management capability among Vietnamese and regional SMEs

Country	Management	Operation	Monitoring	Target	People
Singapore	2.86	2.74	3.07	2.79	2.79
Myanmar	2.37	2.05	2.47	2.08	2.64
Vietnam	2.66	2.55	2.82	2.58	2.62

Source World Bank Group 2016

Innovation in Vietnamese startups

The objective of the study was to answer the first question—Why are there few Vietnamese entrepreneurs among people starting businesses? To achieve the objective, a classification of the Vietnamese entrepreneurs basing on their demographics, personality traits, management competencies, business environment, and startup performance was conducted. The conceptual framework is that the entrepreneurs' demographics and personality traits have impacts on the entrepreneurs' selection of the business environment to work, their management of the startups and startup performance. The observed personality traits were risk acceptance level (V1), the need for achievement (V2), locus of control (V3), self-belief (V4), creativity (V5), and autonomy (V6). Their management ability was studied through variables like strategic management (V7) and functional organizational structure (V8). The dynamics of the environment and startup performance were expressed in variables V9 and V10, respectively.

The hierarchal cluster analysis, group development and Ward method were applied (Everitt et al., 2011). Squared Euclidean distance and K means were used to measure distance between objects and to classify objects into group. ANOVA to measure the differences among the groups were conducted (Everitt et al., 2011).

A sample of 240 startups in Ho Chi Minh City—the most innovative city in Vietnam—were collected and surveyed using a questionnaire with close questions. The entrepreneurs in the sample include mostly males (80%) with the age range from 25 to 60, educated in management professions (49%) and other professions, particularly, engineering (51%), experienced in output management (37.5%), internal management (32.5%), and technical/engineering (30%) from 5 to more than 20 years, and having families with business tradition (32.5%), business relatives (29.6%), and no business relatives (37.9%).

The result of the cluster exhibited that the startups could be classified into three groups with the following characteristics as presented in Fig. 11.1:

Group 1: 30% of sampled startups were formed by entrepreneurs mostly, aged 40–50 years, graduating from technical/engineering university, having no management experience, no business families or relatives, and experience working for more than 10 years. They had the lowest level of personality traits (V1–V6), hence, lowest level of entrepreneurship. They did not set a strategy to develop (low V7 value) and did not establish a functional organizational structure (low V8 value). Thus, they had low managerial competency. They were selected to work in a low dynamic environment and achieved the lowest performance level.

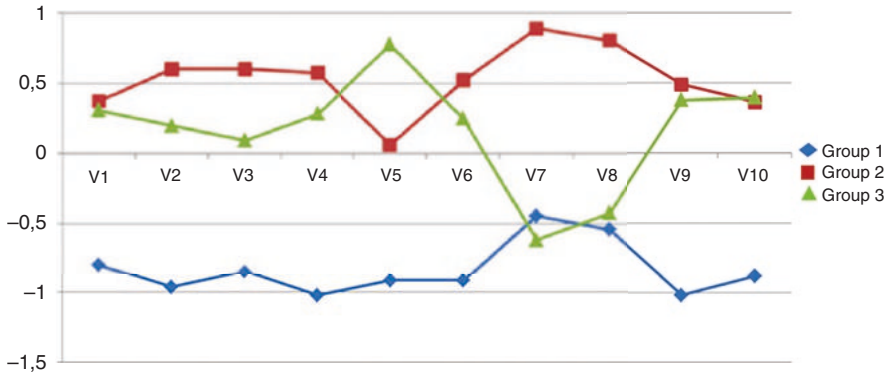

Fig. 11.1 Startup classification vs. entrepreneurs' personality traits, management ability, business environment, and startup performance

Group 2: 37.5% of sampled startups were formed by entrepreneurs, mostly, aged 30–50 years, university graduating in management professions, working experience of more than 5 years at input and output management jobs and not born in business families but having business relatives.

The entrepreneurs in this group had the highest level of personality traits (V1–V4 values), except the creativity (V5) which was higher than the entrepreneurs in Group 1 and lower than the entrepreneurs in group 3. Creativity—the key personality trait of an entrepreneur—was low in this group, therefore, their innovative competencies were low. They showed the highest management ability via setting the strategic management (V7) and building functional organizational structure (V8). These showed that the entrepreneurs in this group had high management ability. They worked in a dynamic environment (V9) and achieved performance as high as group 3.

Group 3–32.5% sample size—involved entrepreneurs, mostly, aged 30–50 years, graduating from universities of management (53%) and technology, engineering (47%), working experience of more than 5 years at output management jobs, born in business families (46%), having no business relatives and not born in business families (54%).

The entrepreneurs in this group had the highest level of creativity (V5) and the lower level of the remaining personality traits (V1–V4) as compared with group 2. They worked at output management jobs, hence, having market, customers knowledge, experience, and identifying opportunities easily. The high creativity level and the ease of opportunity identification made them have innovations and they had the entrepreneurial ability. But, they did not set strategic management (V7) and did not establish a functional organizational structure (V8). As such, they had low management ability. They worked in a dynamic environment (V9) and their startup had a performance as high as group 2.

The results of this study show that the entrepreneurs of groups 1 and 2, occupying 67.5% of the sample size, were not creative. They had personality traits to start

a business but they were believed not to have innovative products/services. Only the entrepreneurs in group 3, occupying 32.5% of the sample size, had creativity and were expected to have innovative products/services. This explains, partly, the fact that just a few innovations are created by Vietnamese startups. Also because of the shortage of entrepreneurs having creativity, when these startups survive and grow to become SMEs, the innovation in SMEs is low.

Only the entrepreneurs in group 3 had common personality traits of a potential entrepreneur (Carland et al., 1984), and, they could identify and exploit opportunities with innovative products/services to start a business. Hence, they had entrepreneurial competencies (Siwan Mitchelmore, 2010). The entrepreneurs in groups 1 and 2 did not have innovative products/services and they did not have entrepreneurial competencies.

The entrepreneurs in group 2 had set the functional organizational structure and applied strategic management. They could manage their startups survive and grow. Thus, they had managerial competencies (Boyatzis, 1982). The entrepreneurs in groups 1 and 3, occupying 62.5% of the sample size did not have managerial competencies, thus, could not grow their businesses up. These results explained, to some extent, the entrepreneurial and managerial competencies of Vietnamese entrepreneurs. The comparison of groups 2 and 3 exhibits the impact of managerial competencies on performance. Entrepreneurs in group 2 has a lower level of creativity, but higher level of strategic management, organizational structure, and achieve the same performance level as entrepreneurs in group 3 with higher level of creativity. In reverse, entrepreneurs in group 3 had a high level of creativity and a low level of management also achieved the same performance as entrepreneurs in group 2. These results emphasize the impact of entrepreneurial and managerial competencies on innovation and startup survival, growth as stated by Penrose (Penrose, 1959). Vietnamese entrepreneurs have preferred to use their entrepreneurial competencies to managerial competencies to make innovation and business performance, not much focus on management issues for growth.

Innovations in Vietnamese SMEs

In order to understand the innovation of businesses after startup and becoming SMEs, a study was conducted. This study was to answer the second question—Why are there few innovations in Vietnamese SMEs? This study was based on the concept presented in Sect. 2—the innovation of SMEs depending upon the entrepreneurial orientation of the SMEs, the business resources supporting innovation impacted by the entrepreneur's competencies.

For the business resources analysis, Porter's diamond model was applied. This model was used to assess the competitive advantage of a firm, an industry, and/or a nation (Porter, 1998). There are four components in this model, namely, (a) firm strategy, structure, rivalry, (b) factor conditions, (c) demand conditions, (d) related, supporting industries (Porter, 1980, 1990). The factor conditions are composed of

two subcomponents—factor conditions and advanced factor conditions. Factor conditions include basic inputs for an enterprise such as manufacturing system, marketing, and organizational knowledge. Advanced factor conditions involve capabilities, namely, human resource design capability, organizational innovation, dynamic capability, and product characteristics. The three components—factor conditions, demand conditions, firm strategy, structure, and rivalry concern the enterprise's resources for innovation making to satisfy customer's demands. These factors were detailed into statements showing the contents of the factor just like indicators of a measurement scale. Some indicators were qualitative and judged basing on three levels: High, medium, or low. The remaining indicators were quantitative and assessed by the respondents via percentage values. The respondents were required to select the level for each qualitative indicator corresponding to their enterprise status quo and give percentage values for quantitative indicators. The final value for each indicator is the average value of the values given by the respondents. A questionnaire involving these indicators was designed to collect data. Owing to the complexity of the questionnaire, in-depth interview approach was used to collect the data. Each indicator in the questionnaire was explained to the respondents for their subjective value judgment. Each interview was about 90 minutes long. A sample of 30 entrepreneurs in Ho Chi Minh City—7 for each IT, food and plastic industry, and 9 for mechanical industry—were invited to join the survey. Sixty percent of the enterprises in the sample is 1–5 years old and 40% is 5–10 years old. Figure 11.2 presents the results of the data treatment.

Figure 11.2 shows that the innovations of the SMEs in the sample were very low, particularly, product innovation (36%). The product added value and the product competition basing on product design were as low as 33% and 42%, respectively. The manufacturing system had a low level of full automation (13%), low productivity, and level of technology.

Thus, the manufacturing system contributed low to the product added value (28%) and caused limitations to product innovation. This brings to the logical understanding that the product innovations in these SMEs are mainly sustaining innovations—modifications of the current products. Because the domestic market was dominant (more than 75%), the entrepreneurs were easily updated market knowledge and full of market knowledge for business operations. Hence, they developed competition basing on price and promotion (58%). But, their marketing capability is low bringing low value on high marketing effectiveness (35%) and marketing activity performance (46%). This resulted in a medium level of market, customer change recognition and response (48.8%), and limited the opportunity identification capability to make innovations. This explains the low level of innovation, not only in product but also in marketing, process, and organizational structure. The human resource met the enterprises' requirements at a low level (45%) and was trained very often (52%). However, the training effectiveness was low (53%). Thus, the innovation capability of the human resource was low (highest level 37%, medium to low level 63%). The innovation capability for employees in units concerned with product innovation like product design and manufacturing units was also low (35%). The similar level for marketing, process, and organizational

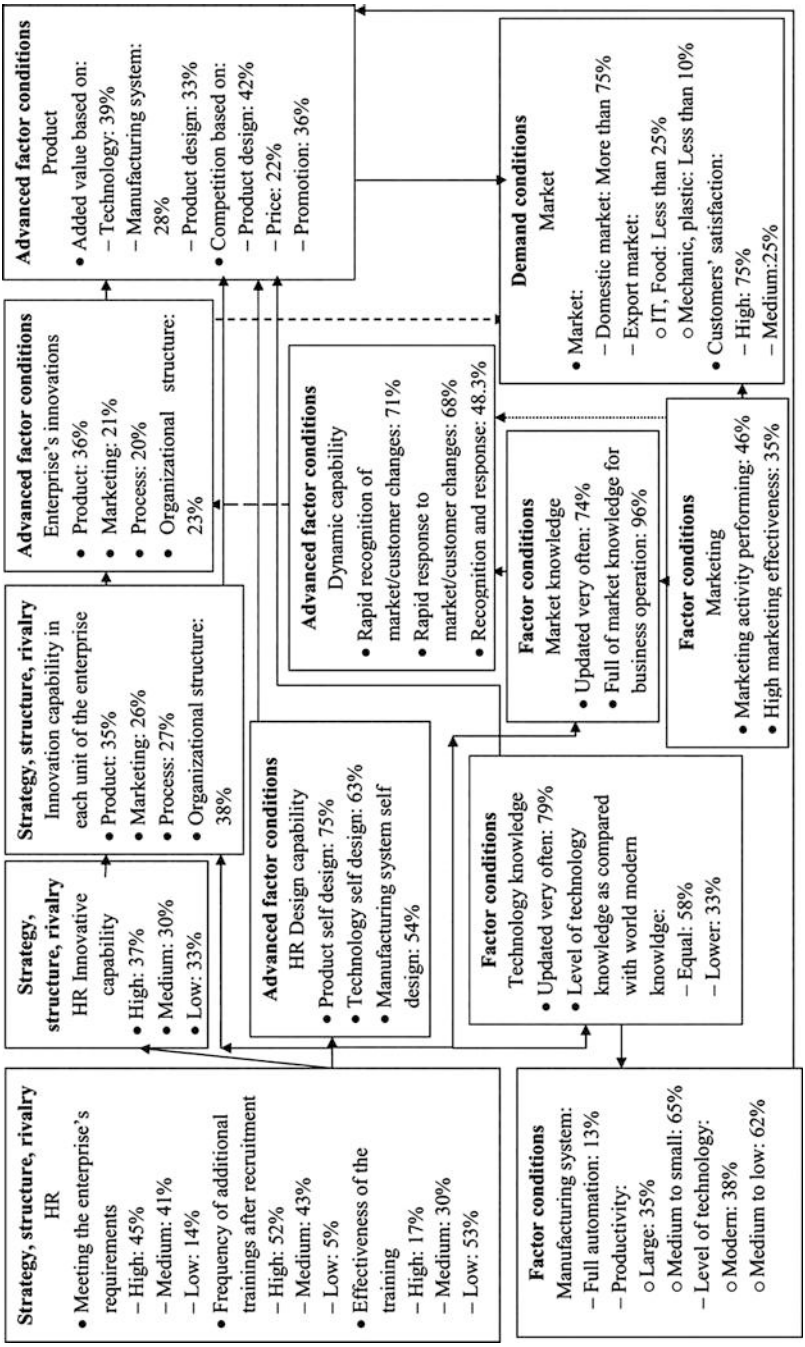

Fig. 11.2 Schematic presentation of the factors and their interrelations

innovation was 26%, 27%, and 38%, respectively. All of these low capabilities resulted in low levels of innovation. In addition, owing to the dominance of domestic market, the high level of customers satisfaction (75%), and low level of product innovation, it could be withdrawn that the high levels of product, technology, and manufacturing system self-design are the self-designs for modifications of the current products, not for product innovation. The human resource had high frequency of technology knowledge updating (79%) and high level of technology knowledge (58% equal to world modern knowledge), but, the enterprises had low levels of product innovation (36%) and the product added value based on technology (39%). This could be because their technology knowledge was absorbed by self-learning or being educated from higher institutions where the theoretical knowledge was provided and there is a gap between educated knowledge and working knowledge—the knowing that enterprise needs, has and uses to do something (Davenport & Prusak, 1998; Dilip Parajuli et al., 2020).

Discussion

In the startup phase, Vietnamese startups do not create many innovations because only a small number of the entrepreneurs have the innovation. The remaining entrepreneurs follow "me-too" strategy or do not have creativity. This is because they have the common traits of entrepreneurs, but, low in creativity. Hence, although the number of Vietnamese startups is high, but, the number of startups with innovations is not as high as the startup number. Entrepreneurs having high creativity follow flexibility in organizational structure, accept to work in dynamic environments and find innovative opportunities to exploit and make high performance. They show high entrepreneurial competencies and low managerial competencies. In addition, the low innovation in startups could be explained by outside factors such as education and social culture. Education in entrepreneurship has been just started since 2016 and designed for university level, not for school level. Then, it achieved the score of 4.3 lower than the average value of 4.8 (GEM, 2018). The entrepreneurial spirit is promoted but still not popularized. Being a white collar worker is more preferable than a business person with a lot of risks and challenges. Creativity thinking has not been well educated and developed in the educational system. Owing to low creativity, in SME phases, most of the entrepreneurs do not follow the entrepreneurial orientation and the employees have low innovation capability. Entrepreneurs of old ages graduating from technology engineering disciplines have not been trained in management knowledge as well as skills of market opportunity identification, business planning, competition… Thus, they do not want to face with problems in business management and when they start the business, they just want to keep their business small under their control and do not want to make innovations with risks, competitions. People in other disciplines who have creativity, learn management knowledge, and skills can define the opportunity and exploit it to make innovation and become entrepreneurs.

In the SME phase, the results exhibit that the resources of the enterprises have not supported product innovation. Their enterprises have not followed the entrepreneurial orientation, hence, not continuously created innovations. In reverse, the entrepreneurs have tried to use their competencies to develop innovations in marketing, process and organizational structure (64%), and built the competition based on price and promotion (58%). This could be explained by the fact that the product innovations must be based on technology or process changes and these changes require manufacturing systems change. This change cost a lot of investment while SMEs have limited financing sources (Jamai et al., 2021) and Vietnamese SMEs got the rank of 5th/54 in financial problems (GEM, 2018). Manufacturing system changes were just minor adjustments and/or modifications (Jamai et al., 2021). Therefore, the product-added value and competition were not based much on product design, but, on existing technology and manufacturing systems and some modifications of current products. Due to their low product innovation, their product competition was not high, they could not develop market, particularly, exportation. They focused on domestic market which they had much understanding and satisfied customers. They have updated market knowledge very often (74%) and were full of it for their enterprise operations. The Vietnamese internal market is dynamic (Vietnamese index of internal market dynamics at 6.9/9, GEM, 2018) and there were many domestic market opportunities emerging and available for SMEs to take. Owing to low product innovation, among the remaining innovation types, the SMEs made innovations in marketing and organization to meet these opportunities. These innovations also had high impacts on firm performance (Boachie-Mensah & Acquah, 2015). These results show that they managed to develop domestic market basing on marketing and making modified offerings to meet domestic market needs. Therefore, they followed a market expansion orientation (Petti et al., 2021). However, they had limited achievement in market expansion due to low levels of marketing, organization innovation, and low response to these opportunities. In addition, they could not recruit employees meeting their enterprises 'requirements, then, they had to organize additional training. The effectiveness of the training was low, causing low marketing effectiveness. The above analyses exhibit the fact, that after getting over the startup phase, the entrepreneurs focused on the development of the domestic market and not on innovation making to follow an entrepreneurial orientation. Their entrepreneurial competencies did not manifest as highly as managerial competencies and very few innovations were created in this phase. This issue could be explained more by the fact that Vietnamese entrepreneurs often take two roles: Owner and Manager, thus, perform two functions: Directing business development and managing daily operations (Trinh, 2020). Due to shortage of managerial competencies, they have to spend much of their working time on daily operations and less time for business development in order to survive the business.

Conclusion

The Vietnamese economy is on the way to development and needs innovations from startups and SMEs. Although, Vietnamese people have a high spirit of startup and entrepreneurial traits, Vietnamese innovations are just a few. Startups with innovations are limited and the SMEs do not follow entrepreneurial orientation, hence, create few innovations. The contribution of innovations to the economy is limited. This could be explained by the fact that Vietnamese entrepreneurs are short of entrepreneurial and managerial competencies. In startup phase, a few entrepreneurs could use entrepreneurial competencies to identify a market opportunity, make an innovative product, and build a startup. In the SME phase, the entrepreneurs have low level of entrepreneurial, managerial competencies to continue making innovations, developing innovation resources, and enlarging market with the innovative products. To increase innovations, Vietnamese entrepreneurs should follow entrepreneurial orientation, use both kinds of competencies to continuously identify opportunities and make innovative products. These competencies should be equipped for Vietnamese potential entrepreneurs to have more fruitful innovations. Vietnamese entrepreneurs should be trained more in entrepreneurship, creative thinking and working knowledge in management, technology.

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Chapter 12
Indonesia: How Effective Is Direct Storytelling in Enhancing Entrepreneurial Motivation for Visually Impaired People? An Experimental Study

Leo Aldianto and Grisna Anggadwita

Abstract People with visual impairment have limitations in carrying out socioeconomic activities. The entrepreneurial initiative is an attempt to encourage the active participation of visually impaired people in improving their socioeconomic status. Managing motivation is essential for increasing the self-confidence and potential of people with visual impairments. Storytelling is a method that is considered capable of providing cognitive stimulation to visually impaired persons to generate entrepreneurial motivation. Thus, this study aims to identify the effectiveness of the storytelling method in increasing the entrepreneurial motivation of visually impaired people. This study used a quasi-experimental design by comparing treatment and control groups. Statistical analysis was performed to test the results of the pre- and post-tests. This study was conducted at a social institution in Indonesia for the visually impaired. The results of this study show that direct storytelling is an effective method for increasing entrepreneurial motivation in people with visual impairments. Statistical tests showed a difference between the experimental and control groups after the storytelling intervention, significantly increasing entrepreneurial motivation. This study provides new insights into entrepreneurship by using a storytelling method. This study also presents policy implications for developing empowerment models for persons with disabilities, particularly the entrepreneurial approach for visually impaired people.

Keywords Direct storytelling · Entrepreneurship disability · Entrepreneurial motivation · Experimental method · Visual impairments

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A. H. Verkuil (ed.), *Start-up Cultures in Times of Global Crises*, Sustainable Business Development, https://doi.org/10.1007/978-3-031-53942-8_12

Introduction

The World Health Organization (WHO, 2017) defines disability as an umbrella word that incorporates limitations in activity, impairments, and participation restrictions. All nations face the burden of disability for two primary reasons: an aging global population and an escalating incidence of chronic diseases (WHO, 2011). One of the major societal effects of disability is its effect on the economy, specifically decreased labor force participation rates (Halabisky, 2014). People with disabilities have limitations in their daily activities; they are often socially isolated and face discrimination in public access and other services such as education and employment. This condition results in demotivation for people with disabilities to work because they feel stigmatized and receive different treatment from the surrounding community, which sometimes negatively impacts and worsens the situation.

A study by LPEM FEB UI (2017) revealed that 15% of the world's population had disabilities, and more than 70% were of working age. One in every ten people has disabilities, and four in every five people with disabilities live in developing countries (WHO, 2011; ILO, 2011). Indonesia still has a high unemployment rate across many regions, causing inequality, especially for marginalized and vulnerable people, including persons with disabilities. The unemployment rate in Indonesia is currently 6.87 million (Central Statistics Agency, 2018). Based on data from the National Labor Force Survey (2017), the working-age population of people with disabilities in Indonesia exceeds 21.9 million. The number of people with disabilities who are self-employed in Indonesia has reached 53.9%, and the most common disability is visual impairment. Visual impairment is a disability in which the sense of sight does not function normally as a channel for receiving information in daily activities (Scholl, 2000).

Entrepreneurship is becoming recognized as a means to promote the labor force participation of people with disabilities in several nations (Jones & Latreille, 2011; Gouskova, 2012; Halabisky, 2014; Hwang & Roulstone, 2015; Maritz & Laferriere, 2016). Entrepreneurship is the key to enhancing disability-related labor force participation, economic growth, and social inclusion (Maritz & Laferriere, 2016). Thus, these activities are usually regarded as unachievable or insurmountable obstacles to employment for impaired individuals. Entrepreneurship can provide persons with disabilities with the opportunity to better their economic standing, which is a primary objective for earning a livelihood and supporting their families (Handicap International, 2004). Empirical research has shown that the success rate of entrepreneurs with disabilities is the same as that of entrepreneurs without disabilities (Larsson, 2006). Entrepreneurship provides them with the simplest path to financial independence, community recognition, and independence. Starting a business is not simple, and it is considerably more challenging for disabled persons. In order to promote the entrepreneurship of people with disabilities, it is necessary to comprehend what inspires them to become entrepreneurs and what obstacles impede their entrepreneurial ambitions. The Indonesian government recognizes the significance

of entrepreneurship in reducing unemployment and poverty (Alifuddin & Razak, 2015).

Storytelling is one method to create actionable information absorption and attract students' attention (Rahayu & Pamelasari, 2015). Storytelling can increase entrepreneurial motivation because it can give an impression and help solve problems according to the storyteller's case. The concept of storytelling has emerged and has been increasingly used in social science over the past 20 years (Marti & Fallery, 2005). Therefore, a story occupies a significant place in social science because it is a method that gives meaning to a situation and packages information into a message. According to Rae (2000), storytellers try to compile stories about their lives in developing entrepreneurial careers, including their family background, early careers, struggles in building a business, and search for new opportunities. In addition, Sole and Wilson (2002) asserted that narratives can facilitate societal transformation as a means of conveying strong leadership visions and ideas. Several studies have proved the importance of storytelling to entrepreneurial success (Lounsbury & Glynn, 2001; Johansson, 2004).

Storytelling techniques are expected to be successful learning methods to increase entrepreneurial motivation. However, research on increasing entrepreneurial motivation among the visually impaired is limited. It impacts the lack of knowledge about the proper method for increasing entrepreneurial motivation among the visually impaired in Indonesia. The application of storytelling methods to increase entrepreneurial motivation in visually impaired people is still rarely carried out or developed. Several academic studies have examined the impact of entrepreneurs on their entrepreneurial intention (Laviolette et al., 2012). This study attempts to address this gap. This study aims to examine the effectiveness of the storytelling method in increasing the entrepreneurial motivation of persons with disabilities, focusing on persons with visual impairments. This study used a quasi-experimental method with pre -and post-test designs for the treatment and control groups. A t-test was also used to test independent and paired samples. This study is expected to provide solutions to social problems in the community, especially social services, by identifying the entrepreneurial motivations of the visually impaired.

The organizational structure of this study consists of several sections. The first section introduces this study. The second section presents a literature review of disabilities and entrepreneurial motivation. Meanwhile, the storytelling method is described in the second section. The third section is the research methodology used to explain the experimental method carried out in this study. The fourth and fifth sections are the results and discussion, respectively. The conclusion and recommendations from this study are provided in the sixth section, in which the study's limitations are also presented.

Literature Review

Disability and Entrepreneurship

The term disability has three components: impairment, activity limitations, and participation restrictions (WHO, 2011). Disabilities may vary in type, duration, stability, and severity. According to the World Health Organization (WHO, 2011), the definition of disability is called the International Classification of Functions, which includes people with mental and physical impairments influenced by the community in their environment. According to the United Nations Convention, persons with disabilities include those with long-term physical, mental, intellectual, or sensory impairments that create various barriers to their interaction and effective social participation based on equality (Muñoz et al., 2020). People with disabilities have limitations in daily activities and face internal and external obstacles. Internal restrictions are related to health conditions that make people unable to move freely, such as ordinary people. External barriers are social and environmental conditions in which persons with disabilities receive judgment and treatment from the community.

Visual impairment is a type of disability that causes limitations in the vision of someone who is classified into one of two categories: blind (total blindness) and low vision (Hallahan et al., 2013). Visual impairment in the Law of the Republic of Indonesia Number 8 of 2016 Concerning Persons with Disabilities includes persons with sensory disabilities with impaired sensory function. However, based on data from the LPEM FEB UI (2017), the highest number of people with disabilities who work are those with visual impairments. Thus, having a visual impairment is not a barrier for someone to work.

People with disabilities try to adjust their lives in the surrounding environment by adapting to the conditions created by the community (Renko et al., 2015), which impacts changes in perspectives related to aspects such as work and entrepreneurship. Entrepreneurship is often associated with activities that overcome social marginality or discrimination (Godley, 2005). According to Yamamoto et al. (2011), disability and entrepreneurship describe the activities leading to economic independence. Balcazar et al. (2014) proposed an entrepreneurial empowerment model for people with disabilities in the United States. People with disabilities are sometimes marginalized communities; therefore, an empowerment process must be carried out by encouraging them toward disabled community-based entrepreneurship.

Entrepreneurship is an economic activity emphasizing creation or innovation to bring something new to the market (Schumpeter, 2000). Entrepreneurs have the creativity and initiative to build businesses to produce something new in society (Chowdhury, 2017). Gupta et al. (2014) defined an entrepreneur as starting, managing, and controlling a business unit. Meanwhile, Dijkhuizen et al. (2016) defined an entrepreneur as a person who identifies gaps in the market environment and exploits them to fill those gaps. Based on the definition of entrepreneurship, it can be concluded that entrepreneurship is the activity of a person who has creativity and

innovation to create products that have added value, take risks, and manage. Control calculated actions to create a business. Entrepreneurial activities provide complete authorization and independence. Thus, entrepreneurship is a practical step for people with disabilities to participate in economic activities.

Entrepreneurship is an effort by people with disabilities to obtain job opportunities (Blanck et al., 2000; Boylan & Burchardt, 2003; Hagner & Davies, 2002; Schur, 2003; Zamore, 2014). According to Maritz and Laferriere (2016), barriers for people with disabilities are three main categories: financial, social, and personal. People with disabilities tend to have no economic activity; therefore, they do not have personal savings funds that can be used as capital to start their business ventures (Boylan & Burchardt, 2003; Halabisky, 2014; Renko et al., 2015). They also have limited access to financial institutions (Maritz & Laferriere, 2016), including low levels of education, discrimination by financial institutions, and the inability to acquire information about available funding sources (Kitching, 2014). According to Boylan and Burchardt (2003), people with disabilities from an early age tend to be disadvantaged in the education system, which causes them to have inadequate educational qualifications due to a lack of access to facilities. In addition, their ability to get employment is hindered by firms' discriminating practices. According to Mishra (2005), discrimination in the job market compels individuals with impairments to become entrepreneurs.

Social barriers can be seen from the perspective of the wider community as well as from the perspective of persons with disabilities. The forms of business support services have also been identified as social impediments to the entrepreneurship of individuals with impairments (Halabisky, 2014). In addition, there is a lack of connections between various support programs and the appropriate infrastructure for assisting those with disabilities engaged in entrepreneurial activity (Conroy et al., 2010; Yamamoto & Alverson, 2013). Moreover, personal obstacles include a lack of self-confidence and the inability to see entrepreneurial success (Halabisky, 2014; Rizzo, 2002). Lack of support from family and closest friends also has a negative impact on self-esteem (Halabisky, 2014) and has been noted as a particular issue for persons with mental health conditions (EMDA, 2009). On a personal level, a lack of business knowledge, experience, and abilities is another obstacle (Maritz & Laferriere, 2016). Thus, entrepreneurship is the most appropriate choice for disabled people.

Entrepreneurial Motivation

Entrepreneurial motivation is a driving force in the form of willingness and need to actively participate in organizing and managing activities to earn income independently (Pratama, 2017). According to Dhar and Farzana (2017), there are several reasons why someone chooses entrepreneurship, including the factors of need, seeking profit and opportunity, getting financial independence and autonomy in decision-making, improving the work-life balance, increasing income, or getting

material benefits. Omorede (2014) found that conditions such as widespread ignorance, unscientific beliefs, and intentional individual mindsets explain involvement in starting a social enterprise and social networks are a fundamental reason for maintaining entrepreneurship. Literature demonstrates that entrepreneurship is frequently related to the desire to overcome a state of social marginalization or discrimination (Godley, 2005), especially for people with disabilities. In general, employers refuse to employ persons with disabilities, either because of real discrimination or because their work capacity is insufficient (Beisland and Mersland 2017). This condition is the biggest motivation for them to get the opportunity to enter the labor market (Blanck et al., 2000; Boylan & Burchardt, 2003; Hagner & Davies, 2002; Schur, 2003; Zamore, 2014). Thus, they find entrepreneurship the only suitable choice.

Several studies have identified entrepreneurial motivation for persons with disabilities in terms of flexibility, work-life balance, and impaired work speed, hours, and work location (Callahan et al., 2002; Doyel, 2002; Halabisky, 2014; Jones & Latreille, 2011; Meager & Higgins, 2011; Pagán, 2009), flexibility in medical care, accessible workspaces, and other special needs (Cooney, 2008). The success of businesses built by people with disabilities can be a motivation to build self-confidence (Harper & Momm, 1989). Several studies have concluded that individuals with disabilities succeed at about the same level as non-disabled entrepreneurs (Roni & Baines, 2012) and are significantly more likely to face more significant challenges than other potential entrepreneurs (Uddin & Jamil, 2015). This research attempts to fill the gaps by offering a new method, namely the implementation of direct storytelling, to increase entrepreneurial motivation focused on people with visual impairments. Based on data from the LPEM FEB UI (2017), people with visual impairments are those with disabilities who have the most opportunities to work. Thus, increasing entrepreneurial motivation can encourage them to engage in entrepreneurial activities.

Storytelling Method

Storytelling is a form of communication that is simple, effective, and easy to understand (Parkin, 2006). According to Ayuni et al. (2013), storytelling is the activity of delivering stories from storytellers to listeners to provide information so that they can recognize their own emotions and others can also solve problems. Storytelling may transport listeners into the story and make them subconsciously identify with the characters based on their personal experiences (Morgan & Dennehy, 1997). Various organizations have widely implemented storytelling methods to motivate and deliver positive messages to employees to improve their performance (Prusak, 2001; Kaye, 1995). Message-sending and -receiving storytellers can inspire participants to forge stronger social bonds (Gustomo et al., 2019). Parkin (2006) argued that stories transmitted moral messages relating to transformation.

Storytelling is an old skill delivered in a new context (Snowden, 1999), especially in management. The concept of storytelling has emerged over the past two decades and has frequently been used in social science (Marti & Fallery, 2005). Storytelling can trigger social change and is recognized in various fields of social science as a way of communicating ideas and visions of leadership (Sole & Wilson, 2002). Lounsbury and Glynn (2001) discuss the role of storytelling in providing legitimacy to entrepreneurial initiatives.

Entrepreneurship education is a complex and dynamic experience that provides broad insights (Gartner, 1989). It has led to increased use of narrative analysis in entrepreneurial studies (Mallon & Cohen, 2001). Entrepreneurship stories are often adopted as effective teaching instruments to promote individual entrepreneurial intentions in entrepreneurship education (Liu et al., 2019). A study by Liu et al. (2019) showed that the intermediate variable of entrepreneurial passion, both success stories and failure stories, positively influences entrepreneurial intentions. However, successful role models have a greater influence than failure stories. A story of entrepreneurial success fuels entrepreneurial aspirations and promotes competitive procedures (Bouwen & Steyaert, 1997; Laviolette et al., 2012). Numerous research (Minniti & Bygrave, 2001; Lockwood et al., 2004) have claimed that success and failure tales encourage individual entrepreneurial goals, so long as these failures precede success. Some scholars have argued, however, that failure stories may be more successful when the objective is to prevent undesirable circumstances or results (Laviolette et al., 2012).

According to a study conducted by Rahayu and Pamelasari (2015), there is a positive relationship between storytelling methods and learning motivation. Based on a study by Dakoumi and Abdelwahed (2014), storytelling has positively affected entrepreneurial motivation. In addition, storytelling can act as a trigger and means of information in the field of entrepreneurship and as a starting point for creating new businesses (Dakoumi & Abdelwahed, 2014). Therefore, this study focused on the effects of storytelling on entrepreneurial motivation. The storytelling method has been implemented in various formal and informal organizations. However, based on previous literature, it has been found that the implementation of storytelling to increase entrepreneurial motivation in people with visual impairments in social institutions remains insufficient. This study seeks to fill this gap by analyzing the impact of storytelling on visually impaired people in a social institution in Indonesia.

Research Methodology

This research applied a quantitative method with an experimental approach. Based on its characteristics, this study used descriptive research to determine the effectiveness of the storytelling method in increasing the entrepreneurial motivation of students in one of the social institutions in West Java, Indonesia.

Research Design

This study employs a quantitative method with an experimental approach. The general purpose of experimental research is to evaluate the effect of a particular treatment on a group's symptoms to that of other treatments administered to a treatment group and a control group (Shadish et al., 2002). This study adopts the dimensions of entrepreneurial motivation according to Omorede (2014) and the perception of the importance of storytelling about entrepreneurial experiences adopted based on the dimensions of Eck (2006). This research used a quasi-experiment with a pretest and post-test design.

The pretest procedure was carried out by providing questionnaire questions which the researchers to 88 respondents directly guided. In the pretest stage, respondents were given 22 choice questions related to entrepreneurial motivation and their perception of the importance of storytelling about entrepreneurial experiences. Forty-five participants were to get intervention treatment in the form of direct storytelling, while 43 participants served as the control group and received no intervention. In this study, the intervention consisted of storytelling-based treatments. This storytelling intervention intends to assess changes in entrepreneurial motivation and the impact of the storytelling technique on entrepreneurial behavior. The storyteller consists of 3 people, 2 of whom are entrepreneurs with visual impairments, and one is an academic in the field of entrepreneurship. They met the criteria to be chosen as storytellers, expected to provide insight and stimulation in the form of storytelling effectively.

Direct storytelling was carried out in two different periods by three storytellers. Experts have validated the story to be told. The story's theme must be related to insights and experiences in entrepreneurship, contain dimensions of entrepreneurial motivation and perceptions of entrepreneurial activities through storytelling, and be able to motivate respondents. The last procedure is a post-test. At this stage, the experimental group of respondents who had received the direct storytelling intervention and the control group who did not receive the intervention treatment would be asked to fill out a questionnaire guided directly by the researchers.

Experimental Unit

The experimental unit in this study was all students in one of the social institutions in Bandung registered in the 2018/2019 period. The sampling technique used non-probability sampling with a purposive sampling approach, which is a sampling technique that does not provide equal opportunities for each population element selected as a sample member. The following characteristics had to be met by the sample members in this study:

1. They are active students with visual impairment or low vision in social institutions in Bandung.
2. They had participated in storytelling activities (at least once) (Table 12.1).

This study employed an experimental design by separating participants into two groups: 45 participants in the treatment group and 43 participants in the control group. Simple experimental study with tight experimental control is possible with sample sizes ranging from 10 to 20 participants (Roscoe et al., 1975). Better results can be obtained by adjusting the number of treatment and control samples used for comparison. Consequently, this study's sample size can be processed further.

Data Collection and Data Analysis

The data sources in this study consisted of primary data and secondary data. Primary data was obtained from the survey and observation, while secondary data was retrieved from literature sources that supported this study. The primary data collection was conducted by using questionnaires in a paper-based format. The questionnaires were given to the respondents manually.

The respondents were separated into two groups, with 45 participants assigned to the experimental group and 43 to the control group. The pretest measures the level of entrepreneurial motivation and respondents' perceptions of the importance of storytelling about entrepreneurial experiences before getting direct storytelling intervention. The respondents were guided directly by the researchers in the process of filling out the questionnaire.

One week after the pretest, respondents were invited to listen to the first storyteller at a specified location. Then, the respondents were invited back to listen to the second and third stories with different storytellers at the designated locations for the next 2 weeks. The social institution staff announced to the clients that they were required to attend the invitation to encourage respondents to come and take part in the series of studies. After getting three direct stories, both groups of respondents were asked to answer the same questionnaire when pretested as the post-test of this study.

The statistical analysis employed parametric techniques, including independent sample t-tests and paired sample t-tests. The objective of the Independent sample t-test is to compare the means of two unpaired or unrelated groups for two distinct samples. The paired sample t-test was employed as a comparison or differentiation

Table 12.1 Results of the purposive sampling

Sample criteria	Total
The total number of students in the social institution in the 2018/2019 period.	175
Sample reduction of criteria 1: The students of the social institution had just finished their studies and were no longer active in the teaching-learning process in the 2018/2019 period.	(44)
Sample reduction of criteria 2: The students of the social institution had never participated in previous storytelling activities.	(43)
Number of samples	88

test between the two sample groups. This investigation aims to examine the effectiveness of direct storytelling interventions in boosting entrepreneurial motivation, as well as the pre- and post-test effectiveness of the storytelling method. SPSS was used for data processing in this study. The result is a score and feedback regarding entrepreneurial motivation and views of entrepreneurial activities that can be utilized for coaching, mentoring, and counseling.

Key Findings

After knowing the respondent's responses to the variable of storytelling perception about the entrepreneurial activity (*X*) and entrepreneurial motivation (*Y*) from the initial (pretest) and final (post-test) stages, Table 12.2 is a recapitulation of respondents' responses to these two variables.

Based on the Table 12.2, it is known that the respondents' responses to the storytelling perception variable increased from the initial stage (pretest) with a percentage of 43.84% included in the poor category, and increased at the final stage (post-test) to 61.56% in the excellent category. In addition, it can also be seen that the respondents' responses to the entrepreneurship motivation variables also increased from the initial stage (pretest) with a percentage of 43.16% to an increase in the final stage (post-test), reaching 61.96%.

After conducting a paired t-test on each indicator, the average results of all the variables of the storytelling perception and entrepreneurial motivation in the experimental group and the control group at the initial stage (pretest) and the final stage (post-test) were recapitulated. Table 12.3 shows the recapitulation results in calculating paired sample t-tests.

Based on 12.4, it can be viewed that there are differences between the experimental group (EG) and the control group (CG). The experimental group (EG) experienced a change in scores in the storytelling perception variable. The average score in the pretest was 1.61 and increased to 3.03 after the post-test. In contrast, there was no significant change in the control group (CG), and it decreased from an average score of 1.91 when the pretest changed to 1.87 after the post-test. Similar to the entrepreneurial motivation variables, the experimental group (EG) experienced a change in the average score in the pretest from 1.57 to 3.07 after the post-test. In contrast, there was no significant change in the control group (CG), as it tended to decrease from an average score of 1.89 when the pretest changed to 1.86 after the post-test.

Table 12.2 Recapitulation of the Respondents' Responses Regarding the Storytelling Method and Entrepreneurial Motivation

No.	Variable	$\bar{X}$ Pretest	$\bar{X}$ Post-test
1	Storytelling method (X)	43.84%	61/56%
2	Entrepreneurial motivation (Y)	43.16%	61.96%
	Category	Poor	Good

Table 12.3 Recapitulation of the paired sample T-test results

No.	Indicators	Experimental group		Control group	
		$\bar{X}$ Pretest	$\bar{X}$ Post-test	$\bar{X}$ Pretest	$\bar{X}$ Post-test
1	Attention fixation	1.66	2.96	1.91	1.93
2	Visualization	1.63	3.02	1.88	1.95
3	Personal identification	1.58	3.08	1.91	1.85
4	Information transferability, among others	1.62	2.82	1.88	1.77
Total scores of the storytelling method (X)		**1.61**	**3.03**	**1.91**	**1.87**
1	Economic deficiency	1.62	2.98	1.91	1.88
2	Ignorance and unscientific beliefs	1.67	3.04	1.91	1.95
3	Inequalities	1.64	3.07	1.88	1.93
4	Awareness of the social cause	1.60	2.89	1.95	1.93
5	Religious conviction	1.64	3.38	1.91	1.84
6	Propensity to act	1.49	2.96	1.95	1.88
7	Moral judgment	1.53	2.93	1.88	1.86
8	Emotional attachment	1.51	3.00	1.95	1.88
9	Personal investment	1.56	2.93	1.84	1.84
10	Dissatisfaction	1.53	3.04	1.88	1.88
11	Satisfying feedback	1.49	3.09	1.79	1.84
12	Physical and emotional support	1.53	3.51	1.84	1.60
Total scores of entrepreneurial motivation (Y)		**1.57**	**3.07**	**1.89**	**1.86**

Discussion and Conclusion

Based on observations of the implementation of storytelling during three treatments, this study produced a number of conclusions concerning the storytelling approach in a Bandung social institution. The relationship between the first finding and the existence of the storytellers was close. The commonality between visually impaired storytellers is more attractive to listeners. Respondents find the storyteller's credibility to be attractive when listening to the storyteller. There are three components to the credibility of storytellers: competence, trustworthiness, and physical attractiveness (Ohanian, 1990). Meanwhile, intriguing storytellers are viewed via three lenses: proximity, equality, and favorability (McGuire, 1969). According to the credibility theory, the sender of a communication is considered "credible" if someone can be trusted (Mittelstaedt et al., 2000).

The struggles and success stories of storytellers with backgrounds as persons with visual impairments could attract the respondents' interest during the implementation of the storytelling method. Storytellers have a significant role in the successful implementation of storytelling. According to Keene et al. (2016), two critical aspects influence the success of storytelling: the involvement of storytellers and the confidentiality and ethics of storytellers. Storytellers actively interact with respondents during storytelling activities and create a relaxed and intimate atmosphere with respondents, making it easier to deliver the message in the story.

The second finding relates to the story's subject as portrayed in the narrative technique. The story is changed and tailored to the storyteller's own experience by using real instances of the storyteller's struggles and accomplishments to provide responses with a more tangible spirit. In general, narratives about respondents' experiences can generate a fresh spirit and a more emotional reaction in respondents who have had similar situations. The storyteller receives some appreciation from the respondents directly in the form of gratitude for bringing the story to the respondents' personal experiences.

The respondents shared their feelings and opinions after listening to the storytelling. Most respondents could capture more than one message in the story, namely the struggles and successes of storytellers in entrepreneurship, thereby increasing their entrepreneurial motivation. The respondents could identify and visualize their conditions when listening to the storytellers. This finding indicates that the storytelling method proved effective for people with visual impairments.

In addition, the storytelling method was established to increase entrepreneurial motivation in people with visual impairments. Several factors were identified that influenced the increase in the respondents' entrepreneurial motivation, including the respondents feeling they received physical and emotional support, religious conviction, dissatisfaction, and inequalities, which were also pointed out as significant indicators in increasing their entrepreneurial motivation (Omorede, 2014). According to Dhar and Farzana (2017), entrepreneurship is an opportunity to do something for others who bring self-satisfaction and offer respectable societal positions, including for people with disabilities. In addition, people with disabilities are also motivated to improve their economic situations through entrepreneurship. According to Ofuani (2011), disabled people are among the most economically disadvantaged individuals in the world. Economic empowerment helps individuals to make their own decisions, better their economic standing, and fully engage in their own lives (Dhar & Farzana, 2017).

Conclusion and Recommendations

The findings of this study indicate that storytelling can be a crucial point in stimulating entrepreneurial motivation for people with visual impairments. Storytelling can stimulate people with visual impairments to understand that they have the same opportunities in economic activities through entrepreneurship. Storytelling can inspire listeners and encourage them to do the same thing the storyteller does. The implementation of the storytelling method has a good impact on respondents. The closeness of the story to the respondent's personal experience can make the capture of the message in the story more touching for personal aspects (Gustomo et al., 2019). The storytelling method shows that the respondents succeeded in increasing their attention fixation, personal identification, visualization, and information transferability, among others, to the story conveyed by the storyteller. It demonstrates that the storytelling effectively conveys moral messages and learning to the

listeners. Meanwhile, storytelling also increases entrepreneurial motivation for people with visual impairments. Some indicators of entrepreneurial motivation include religious conviction, satisfaction, and emotional support.

The respondents acknowledged that the stories told were very close to their personal experiences, as they could evoke memories of the struggles, joys, and sad times they experienced with their status as people with visual impairments. Some respondents even showed emotional aspects with tears when listening to the stories from the storytellers. The social institution felt a positive impact from implementing the storytelling method. Hence, storytelling activities became a permanent program routinely carried out by the social institution in the upcoming agenda. The social institution hopes that in the future, all clients can become good storytellers by telling the stories of their struggles and successes to become independent entrepreneurs with their limitedness.

The results of this study provide new research directions in the context of entrepreneurship, particularly for disability entrepreneurship. This study responds to the recent call for contextualization of entrepreneurial research (Autio et al., 2014; Welter, 2011; Zahra et al., 2014). This study can be a reference for other social institutions to do the same method to increase entrepreneurial motivation. In addition, this research also provides new knowledge about the implementation of storytelling in entrepreneurship, especially for people with disabilities in the form of visual impairments. Some limitations of this study include the characteristics of the sample chosen to determine the level of study accuracy because it seems to have significantly influenced the results. According to Lüthje and Franke (2003), the belief in starting a new business is in part a function of personality structure, such as self-efficacy, risk-taking, the need for achievement, proactivity, attitudes toward entrepreneurship, behavioral control, and internal locus of control. Future research in entrepreneurial motivation and narratives can explore these relationships further and engage in more detailed, complex interactions between traits and stories in the human personality. In addition, a further evaluation of storytelling activities is needed to measure the effects on the motivation of persons with disabilities in entrepreneurship. Future research could also adopt a more psychological perspective on disabled individuals' experiences in entrepreneurship.

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Chapter 13
Germany: Urban Farming as an Innovation and Application Environment of an Agile Start-Up Mindset

Thomas Thiessen and Gerrit Neuhaus

Abstract Taking the future field of urban farming as an example, the chapter deals with the question of how start-ups and companies can open up new markets through innovative capability in the face of massive social challenges. The focus is on urban farming as an innovative business model for the food sector and possible criteria for sustainable urban development. On the basis of current practical examples, the urban farming market will be made tangible and the interface of the topic area with sustainability will be discussed. Thus, potentials for emerging markets will be made visible as well as the broad spectrum of stakeholders involved. At the same time, the challenges for sustainability-oriented innovations are described. The chapter gives an outlook on how the different stakeholders (clients, companies, initiatives, city administrations), driven by a specific "start-up mindset" and supported by the open innovation approach, can be involved in the development of sustainable urban farming.

Keywords Urban farming · Local business models · Sustainability and start-up mindset

Scenario 2025: The Development of an Urban Farm

Scenario 2026—A residential construction company in a major German city sees the need to utilize its space economically and conserve resources while developing innovations for urban food supply. The company publishes a project on a digital platform: A vegetable farm for regional consumption is to be created on the 1000-sqm-roof area of an apartment block. The housing company is networking on a digital platform with an urban farming start-up, a regionally based food retailer

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A. H. Verkuil (ed.), *Start-up Cultures in Times of Global Crises*, Sustainable Business Development, https://doi.org/10.1007/978-3-031-53942-8_13

and a university institute specializing in food technology. The project of the resulting consortium promotes a series of technical and logistical innovations, in the development of which the community of the platform (including restaurateurs, architects, other start-ups and companies) participates in individual competitions. The farm will be completed as early as 2025 and will become part of a local, cost-effective, and resource-saving food infrastructure.

The scenario exemplifies the project approach of an open innovation platform for the topic area of urban farming, which was developed in the context of the authors' work in the project Mittelstand—Digital Zentrum Zukunftskultur. The center is funded by the German Federal Ministry of Economics and Climate Protection to support small and medium-sized enterprises (SMEs) in their digital transformation. The thematic focus of the project relates to the corporate culture of a small and medium-sized enterprise (SME) as the basis for successful digitization. In its work with companies, the center addresses agility and leadership, communication, technology trust, and sustainability in particular as sub-aspects of corporate culture. These aspects are often an expression of a specific "start-up mindset" that promotes a company's willingness to innovate and thus its flexible competitiveness.

Against this background, this chapter focuses on the development of innovative business models through the concept of open and digitally supported innovation processes (open innovation), using urban farming as an example. Current urban farming approaches for the food sector and criteria for sustainable urban and market development are described. The interfaces between urban farming and sustainability are made tangible through current practical examples. The aim of the chapter is to show a way how possible potentials for urban farming markets can be unlocked via open innovation and how the challenges in designing sustainability-oriented innovations can be overcome. Special attention is given to the involvement of a diverse range of stakeholders involved, such as housing developers, architects, biologists, civil society initiatives, and city governments. It will be worked out to what extent the start-up mindset described above can develop a dynamic innovation and success effect as a basic attitude in companies when opening up the urban farming market, and what role the topics of *agility as* an organizational and process basis and *open innovation* as a technology platform play in this.

Background

Janine Seitz and Lena Papasabbas describe the emerging market opportunities of the urban farming trend as follows: "The city dweller's longing for rural life opens a market for products and services around the charm of the village and the natural […]" (Seitz & Papasabbas, n.d.). People in the city long for beautiful and livable environments, thriving neighborhoods with green buildings, clean air, and good drinking water (cf. Future Institute, n.d.).

The initial situation, against the background of which this chapter was written, is less romantic, however, but highly topical and creates pressure for action for

innovative care approaches. According to the German Federal Institute for Population Research, the world's population is expected to grow to almost 10 billion by 2050, with around two-thirds living in cities (see Global Population Development, 2021, p. 12 and p. 53). The succession of system-threatening crises (e.g., lack of wheat due to the war in Ukraine, the drought summer of 2022 in Europe) triggers an increasing need for self-sufficient supply systems with short distances and regional partners.

At the same time, states must ensure security of supply for their populations. In Germany, the Food Security Act (ESG) was enacted as part of the emergency legislation as early as 1965 in response to rising global political tensions and the increasing risk of an East-West conflict. It was not until 52 years later, in April 2017, that the ESG was superseded by the Act on Securing the Basic Supply of Food in a Supply Crisis and Measures to Prepare for a Supply Crisis, or the Food Security Provision Act (ESVG) (cf. Federal Agency for Agriculture and Food, n.d.).

The challenges already articulated at that time around the issue of security of supply and the associated global issues of sustainability in the food industry are more relevant today than ever before. Urban farming is seen as an important innovation approach that can contribute to overcoming these challenges. But this requires an integrated approach and definition of criteria. Regional production and utilization of foodstuffs alone, or the associated reduction in delivery routes, do not create sustainability in the narrower sense. What is needed is a scale of criteria that can be used to plausibly evaluate urban farming in terms of its sustainability impacts.

A Sustainable Urban Agriculture

Sustainability Using the Example of the Food Industry

Sustainable development was defined in the World Commission on Environment and Development's 1987 Brundtland report "Our Common Future" as "development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs" (United Nations—World Commission on Environment and Development, 1987, p. 37).

Following the classic definition of sustainability in the Brundland Report of 1987, there is now a consensus in science and business that preserving a future worth living for future generations is only possible if our society acts responsibly in the three dimensions of sustainability (ecology, economy, social affairs). The tasks involved can only be solved by society as a whole. The three dimensions of sustainability must be present in all areas of life. One particularly relevant area here is the food industry.

The desire of consumers for transparency in the food industry is high (cf. Verbraucherzentrale Bundesverband e.V. & Wittenberg, 2014). At the same time, food takes a long journey from production to the end consumer, which hardly any

consumer can fully comprehend in terms of its impact on the three levels of sustainability: *ecological, economic*, *and social.*

In the *ecological* dimension, the products interact with the basic environmental factors of classical agriculture. These factors are primarily land, energy, and resource consumption in production, processing and packaging, soil management (e.g., monoculture and crop rotation), weed and pest management (use of herbicides, fungicides, and pesticides), and logistics to transport produced goods to the customer (cf. Richie & Rosner, 2020).

The direct and indirect environmental impacts (e.g., the contribution to climate change, soil acidification, and water pollution) of different product life cycles are as varied as the cultivation methods used. Balancing these factors and comparing their environmental impacts is a complicated process that is initially based on many assumptions. However, within the framework of these assumptions, associated life cycle assessments and life cycle analyses provide greater transparency and deliver indications for efficiency and effectiveness improvements as well as environmentally conscious consumption decisions. In order to achieve these goals, relevant studies compare different processes used by food producers in terms of their ecological and economic effects and identify plausible optimization approaches. For example, an analysis of the production of 1 kg of tomatoes in heated greenhouses in Baden-Württemberg shows that the electricity and energy demand for electricity and heat accounts for the largest share of the total CO_2 equivalents of about 3 kg, while the transport factor has hardly any influence. Even tomatoes produced supraregionally in the same processes can thus have a lower CO_2 footprint depending on the operating and packaging materials used (Müller-Lindenlauf et al., 2013, p. 12).

The *social* dimension of food production is no less complex. The social function of (shared) eating has been fundamentally researched. All people need to eat and most people like to do so. Food brings people or social groups together. There is consensus in nutritional science that a balanced supply of nutrients in the form of a healthy diet promotes health and prevents disease. Differences exist at most in the assessment of the amount or type of proteins, vitamins, trace elements, or carbohydrates.

Access to affordable and nutritious food is a human right and can essentially be achieved through self-production, purchasing on the market by means of one's own income or through so-called transfer income. Even if access is strongly dependent on political and economic framework conditions (cf. Kuhlgatz, 2014), this fundamental social task is also closely linked to the operational or economic responsibility of the food industry.

If the food industry succeeds in ensuring fair financial conditions for agricultural or smallholder farms along the value chain, then the profile of a responsible company creates an additional purchasing attraction for consumers. One expression of this interaction is the increasing acceptance and marketing relevance of certifications, such as by Fair Trade Deutschland e.V. (cf. Lehmbeck, 2011, page 54 & Schwartz et al., 2021, p. 20).

Another key expression of social responsibility is transparency and the transfer of knowledge about the origin, production, and processing of food products to consumers.

In addition to the ecological and social perspectives, there is no sustainability without also looking at the *economic* dimension of food production. The value of food is defined by its price. Since the production of natural products takes place in comparatively long cycles on a seasonal basis and is also weather-dependent, there are often unpredictable fluctuations in yield. Many months often pass from the cultivation to the harvest to the consumption of food. At the same time, price formation is a volatile system that can react strongly to even small fluctuations in supply or demand. In addition, agricultural markets are particularly characterized by government intervention aimed at providing consumers with access to food at affordable prices while stabilizing or even increasing producers' incomes. This tension explains a highly differentiated system of subsidies (see von Braun, 2014).

These interactions of the three levels of sustainability already illustrate the complexity of the food sector. In this context, the three perspectives cannot be viewed in isolation from one another. The integrated view becomes particularly clear at the interfaces of the economy with society and ecology, as the following scenario exemplifies. Ecologically relevant events, such as soil erosion, can have an impact on production volumes and supply due to the decline in agricultural land that can be farmed. This can lead to a price shift in the markets. The price response, in turn, affects the sensitive relationship between prices and food security for populations that cannot afford high food prices.

The aim of sustainable food production should therefore be to weigh the social and ecological aspects of action in the value chain and at the same time ensure that prices are socially inclusive and not exclusionary. Against this background, urban farming concepts are examined in more detail below.

Urban Farming: An Attempt to Clarify the Terms

- There are a number of technical interpretations of the term urban farming, but no clear definition.
- The terms urban farming and urban gardening are often used synonymously. However, there is a clear distinction. Urban gardening usually arises from civil society initiatives in which amateur gardeners grow and care for plants. The focus is on social aspects (e.g., educational aspects in neighborhood communities). Urban farming, on the other hand, are semi-professional or professional agricultural activities that aim to make a relevant contribution to meeting the food needs of an urban environment (cf. Henkel, 2015).
- Vertical farming is a clear interface with urban farming. The idea of a "vertical farm" was first presented to a wider audience in 2010 by Dickson Despommier in his publication "The Vertical Farm—Feeding the world in the 21st century." In it, Despommier, a professor of microbiology and ecology at Columbia University,

describes the idea of vertically arranged plant breeding and cultivation systems that are integrated into buildings as completely controlled environments and do not require the use of chemical pesticides. In this way, Dickson Despommier hypothesizes, it would be possible to close urban loops, address the waste problem, or clean urban graywater, for example. A key advantage of such vertical systems is that more crops can be grown per hectare than in conventional agriculture. By increasing efficiency in this way, vertical farming can make a relevant contribution to the food supply in cities, which in turn can relieve the pressure on conventional agriculture (cf. Despommier & Carter, 2020, p. 3 ff).

- The terms Vertical Farming and Urban Farming have many intersections. However, since there are areas and needs for horizontal systems in cities in addition to vertical systems, vertical farming should be considered as part of urban farming.
- The term "urban" is defined, among other things, as "characteristic of urban life." In the context of food production, the focus is primarily on the logistics component of the food industry. Producing food where it is consumed and thus giving the urban population a direct link to their food is one of the main advantages of the approach. In view of the numerous cities/metropolises with millions of inhabitants and their surface area, the term "urban" already has to be considered in a differentiated way. The area of Beijing in China, for example, covers about half the area of Belgium. For this reason, some industry players argue that the term "local farming" would formulate the main concern of urban farming more precisely.
- Moreover, in the context of urban agricultural activities, a distinction can be made according to the placement of a farm. In this chapter, both indoor farming (e.g., growing plants indoors or in containers) and outdoor farming (e.g., growing plants on urban brownfields) are equally understood as part of the urban farming concept.
- In summary, the term urban farming can be defined as efficient crop cultivation integrated into urban structures that contribute to the food supply of the local population. Urban farming encompasses horizontal and vertical concepts, indoor and outdoor cultivation, as well as technological and ecological systems.

Urban Farming in Current Practice

As an extremely young market, urban farming is largely shaped by small and medium-sized companies and start-ups. Even though established groups such as Würth or Osram have already positioned themselves as system providers in the market segment, it is primarily start-ups that are expecting a growing market from urban farming. This industry structure is characterized on the one hand by direct operators of farms in the urban environment, and on the other hand by supplier or service companies. Additional market potentials around urban farming are described in Sect. 5.4. In order to be able to describe the diversity of urban farms across the

entire spectrum of offerings in a structured manner, the following typology of companies and players in the industry is helpful.

Typology of Urban Farming Actors

The typology of the Association for Vertical Farming e.V. is a very pragmatic differentiation of urban farming companies and projects currently active on the market. This typology divides actors into the following categories with corresponding characteristics:

- Type of organization (producer, technology provider, institution, or consultancy).
- Size of the company (start-up, SME, large company).
- Type of integration into buildings (holistic, retrofitted, converted).
- Placement in the building (house roof, indoor, house facade, underground, outdoor).
- Exposure (Exposed[1], Enclosed[2], Closed[3], Other).[4]
- Growing medium (aeroponics, hydroponics, aquaponics, soil).[5]
- Production purpose (cultivation for sharing in a community, cultivation for educational purposes, cultivation for preparation in restaurants, cultivation for and/or in retail, cultivation for wholesale, e.g., greenhouse or warehouse, cultivation for purification of air and water, cultivation for medicine and bio-pharma, cultivation for research and development).
- (freely translated from English: Association for Vertical Farming e.V., n.d.).

This typology is not yet conclusive. The following additional optimizations seem to make sense:

- In addition, the category "manufactured food (herbs, vegetables, mushrooms, insects, etc.)" should be added.
- The category "size of the company" is to be expanded to include the term "type of company"; the characteristic "non-profit company" is to be integrated, since non-profit as a corporate form plays an increasing role against the background of sustainable urban development.
- In the category "production purpose," the characteristic "cultivation in private households" is to be integrated.

[1] Exposed to sunlight and the elements, such as a rooftop or open-air farm.

[2] Protected from the elements, but still using sunlight as the main source of lighting and heating.

[3] No natural sunlight. The plants are grown with light from LED technologies.

[4] No natural sunlight. The plants are grown with other types of lighting.

[5] Soil is again divided into: Planters (difficult to move), In Containers (easy to move), Intensive (Plants are grown directly on the surface and at a depth of at least 15 inches) and Extensive (Plants are grown directly on the surface and at a depth of 6 inches or less).

From any combination of the above categories and characteristics, the diversity of market potentials of food cultivation in urban structures can be very well represented. Figure 13.1 summarizes the described system of categories. However, this categorization remains rather on a theoretical level. Complementary to this categorization, the common procedures are made tangible by means of examples and assigned in an application-practical way in the following.

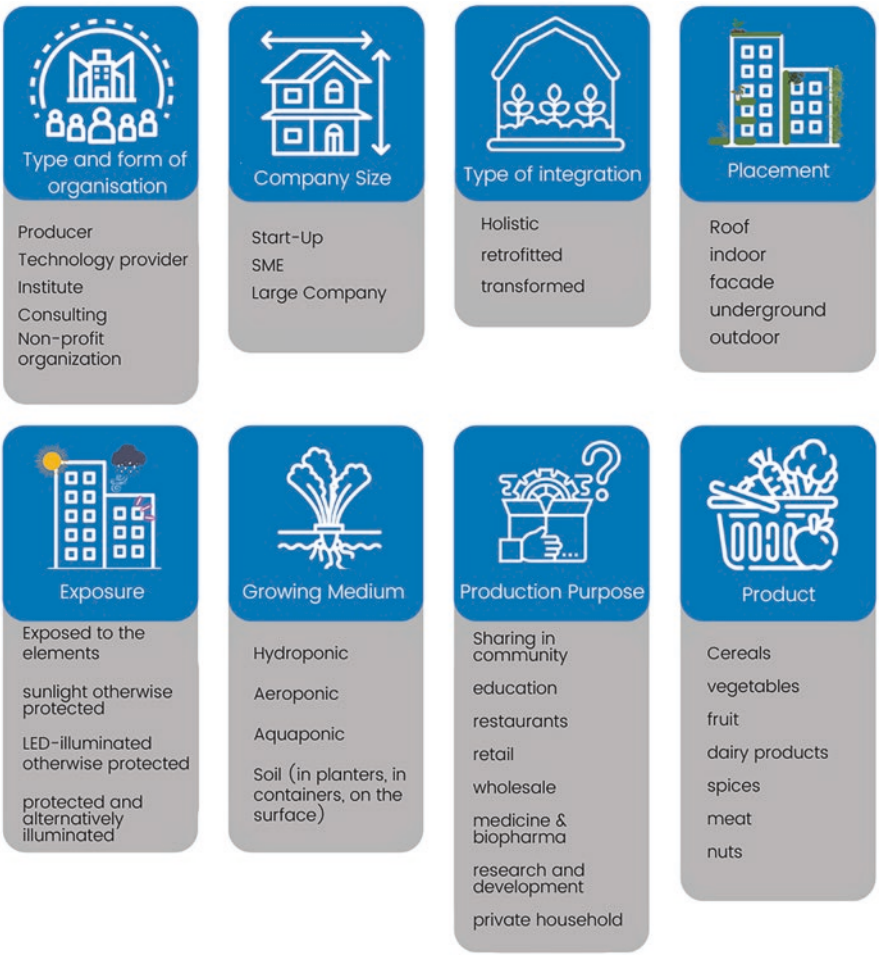

Fig. 13.1 Typology for urban farming projects (own representation based on Association for Vertical Farming e.V., n.d.)

Solidarity Agriculture

Solidarity-based agriculture is an association of farms or market gardens with private individuals. Producers and consumers form an economic community. Estimated annual costs of agricultural production are financed by a fixed (usually monthly) amount. Producers can thus engage in balanced farming practices, keep soils fertile, and produce according to demand, independent of short-term market influences. In return, buyers receive the entire harvest as well as the processed products, which they share according to prior agreements and depending on the financial contribution made (cf. Netzwerk Solidarische Landwirtschaft e.V., n.d.-a, n.d.-b).

In Germany alone, between 300 and 400 communities are currently organized in the "Solidarity Farming Network" (see Netzwerk Solidarische Landwirtschaft e.V., n.d.-a, n.d.-b). Even if the concept is not exclusively based on production being directly integrated into urban structures, associations of producers and consumers are usually closely networked locally and connected to urban agglomerations. In the overall view of urban farming approaches, the concept of solidarity farming is particularly interesting because of its strong social and ecological orientation. The proximity of production and consumption strengthens the personal relationship to food and social interaction.

Hydroponics

As early as the nineteenth century, the German botanist Julius Sachs devoted himself to the factors that plants need for growth and survival. As part of his research, he discovered that plants do not necessarily have to grow in soil, but only need the nutrients provided by microorganisms living in the soil. In 1860, he published a nutrient formula for growing plants directly in water without soil. In this way, Sachs laid the foundation for modern hydroponic technology (see Lagomarsino, n.d.).

Today, so-called hydroponics are operated in different systems, each of which is suitable for different crops. With its X-Factory, the Ulm-based company ROKO Farming GmbH & Co KG has designed a research system that allows the Nutrient Film Technique (NFT), the Ebb and Flow Technique, the Deep Flow Technique (DFT), and High Pressure Aeroponic Technique (HPAT) to be operated in parallel. In the facility, which at approximately 1 × 1.3 × 2.25 m is roughly the size of a refrigerator, the aforementioned system combinations are being tested with various plant cultures. In addition to the hydroponic processes, the facility has measurement and control technology for the LED lighting, to temperature and air flows, and to the nutrients in the water. Using open-source software, parameters can be read out and analyzed in order to develop the most efficient cultivation methods possible. In this way, trial cycles can be carried out in a relatively small and comparatively inexpensive environment before the concept is scaled up to larger facilities with higher investment requirements (cf. ROKO Farming GmbH & Co. KG, n.d.).

The first trial cycles have already been completed for quite a few companies that have developed hydroponic systems in different contexts and have them in use, such as Infarm, Kalera, or Square Roots. However, for new start-ups or established agricultural companies that want to add urban farming approaches to their business model, the trial facility will offer corresponding added value in the future.

Aquaponics

Aquaponics describes a combination of classical aquaculture with the hydroponics described above. The combined processes complement each other in a cycle in which the waste products of fish culture are processed by bacteria into nutrients that are in turn consumed by plants. This biocycle—also described as the "nitrogen cycle"—takes place accordingly in inland waters. While conventional agriculture uses only a section of the nutrient cycle, aquaponics reproduces a complete biocycle that emulates the natural ecosystem of a lake, for example (cf. aquaponik manufaktur GmbH, n.d.-a, n.d.-b).

Aquaponics plants exist all over Germany in research, private, semi-professional and professional operations. Christian Echternacht & Nicolas Leschke, the founders of ECF Farmsystems, are among the pioneers in planning, building, and operating aquaponics facilities. In Berlin, they have been operating a modern aquaponics plant with a size of 1800 square meters since 2015, which sets standards in European comparison. Here, perches are grown in fish tanks and basil in hydroponics. ECF Farm sells its products in its own "farm store" and in food retail stores throughout Berlin.

Another example is the company Aquaponik Manufaktur GmbH, which plans, builds, monitors, and maintains plants. The company relies on system components that can be used in a modular fashion according to individual requirements. With a major research focus, it takes into account circular economy factors that can also be coupled with existing structures beyond the actual plant. The aim is to create plants that utilize ecological and economic synergies and contribute to solving ecological problems (cf. aquaponik manufaktur GmbH, n.d.-a, n.d.-b).

Other Proceedings and Companies Involved

– Depending on the way they are used and integrated into urban spaces, both hydro and aquaponics processes are based on individual components that are often designed, produced, and offered by SMEs. Some of these suppliers directly address the urban farming industry, others face the challenge of adapting their products, equipment, and systems to the context of an urban farm. For example, the companies Weiss Klimatechnik GmbH (COOL IT. Weiss Klimatechnik GmbH, n.d.) or Viessmann Climate Solutions SE (Viessmann Climate Solutions

SE, n.d.) build systems for cooling large server farms and are in the process of developing vertical indoor farms as a potential future market. In a personal conversation with the sales representative of Knecht GmbH, Dennis Jipp, it became clear that the company, as a supplier of greenhouse equipment for traditional horticulture, would like to open up new business areas by adapting your planting tables for vertical farming projects (D. Jipp, personal communication, Sept. 29, 2022). The company DH Licht develops lighting solutions for classic horticulture in addition to LED lighting solutions for "closed multi-layer plants" (DH Licht, n.d.). Swisslog Holding AG develops warehouse automation solutions for vertical farms (Automation for Vertical Farming—Sustainable and Flexible, n.d.).

– In addition to these examples of business model innovations and adaptations by established companies, urban farming is also opening up new market potential for startups, particularly in the areas of robotics, big data, and artificial intelligence. Organifarms GmbH, for example, is developing "Berry," a harvesting robot for berry cultivation in greenhouses (Ernteroboter für Erdbeeren, n.d.). HarvestAI is developing a machine learning and computer vision system that derives harvest predictions from data generated in greenhouses (HarvestAI—LEVERAGING THE POWER OF YOUR GREENHOUSE DATA, n.d.).

Another relevant industry segment is urban farming for private individuals. This market operates with lower individual volumes but higher quantities. Examples include start-ups such as Agrilution (The Plantcube—The Vertical Farm for your home., n.d.), Our Greenery (Ready. Set. Grow., n.d.), or urbanhive (The smallest indoor garden with the greatest variety., n.d.), which offer solutions for apartments or balconies that allow herbs, sprouts, or salads to be cultivated in private environments. The spectrum of start-ups offering components for growing food in local or urban areas also includes companies for local animal and insect breeding or the cultivation of mushrooms.

The examples described above make it clear that urban farming is developing into a future market with great growth potential. According to Polaris Market Research, the market for vertical farming alone will reach a global volume of almost USD 12 billion by 2026 (Report Ocean Private Limited, 2022). The fields of activity for start-ups and SMEs are diverse and many companies are already active.

The vision of agriculture integrated into cities is gradually becoming a reality. The following chapter is intended to place this assessment even more firmly in the context of urban development.

Opportunities for Cities with Urban Agriculture

Cities are logistical hubs that must import nearly everything their populations consume. Urban consumption and the associated logistical effort are triggers for a variety of problems.

Consumption, for example, is directly linked to the generation of waste, which is not always disposed of properly. In Berlin, over 800 thousand megatons of household waste were recorded in 2021 alone (Senate Department for the Environment, Mobility, Consumer and Climate Protection, 2022, p. 5), and over 85 thousand megatons of sewage sludge (ibid. p.15). In a study published in 2014, the Federal Environment Agency evaluated that "53.3 kg of food are kept ready per person each year in restaurants, large kitchens or at events. Of this, 23.6 kg or 44% ends up prematurely in the waste. […] in so-called "inner-home consumption", around 430 kg of food are purchased per person each year, and 17% or 82 kg of this quantity are disposed of too early" (Federal Environment Agency, 2014).

Food waste can also be converted back into energy in biogas plants. The company Refood specializes in collecting food leftovers from restaurants and hotels, processing them, and recycling them in biogas plants (ReFood GmbH & Co. KG, n.d.).

The issue of gray water and wastewater, which are normally treated in sewage plants in cities, can also be addressed. A project from Berlin Kreuzberg provides a template. "The Roof Water-Farm combines wastewater treatment technology with food production as a "Closed-Loop Urban Farming Approach". Hydroponics and aquaponics are used as building-integratable, water-based farming strategies.

"Sustainable urban living is technologically feasible and, most importantly, highly desirable. […] For the first time in history, an entire city can choose to become the functional urban equivalent of a natural ecosystem. We could even generate energy from burning human feces if we so choose. We have the opportunity to create a cradle-to-cradle waste-free economy" (loosely translated from: Despommier & Carter, 2020, p. 2 f.). This is how Dr. Dickson Despommier describes his vision of a sustainable city.

In order to come close to this goal, urban farms should not exclusively practice local plant cultivation, but rather see themselves as part of the urban ecosystem in order to be able to benefit from closing urban material cycles. An example of this effort can be found with the company Yasai in Switzerland, which has designed and achieved Europe's largest vertical farm. "Yasai integrates vertical farming with the circular economy approach into the local context as infrastructure for smart cities" explains Co-Founder & CEO Mark E. Zahran a company goal (Zahran, n.d.).

Sustainability in Urban Farming

The vision of a circular city makes addressing sustainability criteria for urban farming projects inevitable. The Association for Vertical Farming has formulated ten principles of sustainable development for vertical farm operators with the establishment of the Vertical Farming Global Sustainability Registry Network. A structure tailored to the industry has thus been developed, which pursues the following goals:

- Enabling companies to report on their sustainability performance in the form of a voluntary self-disclosure.
- Recognition that participating companies or institutions are helping the industry reach its meaningful sustainability potential through their annual efforts.
- Recognition for participating companies or institutions that visibly demonstrate their efforts to take responsibility in promoting or fulfilling environmental, economic, and social sustainability.
- Capture, monitor, analyze, and publish development trends and annual guidance and recommendations on sustainability-based productivity improvements in different types of vertical farming (see SURE Network—Vertical Farming meets Corporate Social Responsibility, 2022).

In the following, the ten principles are explained and made tangible via examples:

Principle 1: Vertical Farming (hereafter VF) should optimize crop productivity per liter (L) of water.
Principle 2: VF should optimize plant productivity per watt (W) of output.
Principle 3: VF should optimize plant productivity per kilogram (kg) of nutrients.
Principle 4: VF should optimize crop productivity per square meter (m^2) of cultivated area.
Principle 5: VF should optimize crop productivity per cubic meter (m^3) of crop volume.
Principle 6: VF should optimize crop productivity per unit labor hour (man-h).

These first six principles all relate to optimizing crop productivity. This increase in productivity is to be achieved through more effective use of water, electricity (e.g., through artificial lighting, air conditioning, or other farm electronics), land utilization, nutrients, or human labor.

The need for these optimizations becomes clear against the background of a study by Asseng, et al. (2020). The research group compared the possibilities of cultivating wheat classically in fields or alternatively in a 10-story vertical indoor farm. The authors summarized that wheat yields from vertical indoor farms under optimized growing conditions would be several hundred times higher than field yields due to higher yields, more frequent harvests, and vertically stacked layers. Wheat grown indoors requires less land than field crops. It is independent of climatic variations, water can be reused, pests and diseases are eliminated, and there is no loss of nutrients to the environment. However, given the high energy costs of artificial lighting and capital costs, it is unlikely that wheat produced in this way would be economically competitive at current market prices (see Asseng et al., 2020).

This does not apply to all plants and varieties, however. However, the need to develop an economically viable business model through a wide variety of optimization options (e.g., effects of the light spectrum on plant growth) is essential for the success of urban farming projects of all kinds.

Principle 7: VF should ensure food safety (S)

Food safety encompasses the health and safety of food at all stages of its production. In Germany, products may only be marketed as food if they comply with legal regulations. This safety system is internationally coordinated and includes both European and German legislation (cf. Federal Ministry of Food and Agriculture, n.d.).

Principle 8: VF should optimize access to fresh food (A).

Ensuring and expanding access to fresh and safe food will succeed if an urban farming project is run in a way that adds ecological value while producing at prices that allow social classes with lower household incomes to access locally produced food.

Principle 9: VF should promote the building and strengthening of neighborhoods (N).

"When producers and consumers meet directly again, new alliances can emerge, neglected places can be revived and transformed into places with high quality of stay and high recreational value." This is how the registered association "die Urbanisten" formulates the potential of urban farming on their website (die Urbanisten e.V., n.d.). Direct contact gives consumers the opportunity to learn about the background of the origin of their own food or even to participate in the production. This approach, which can be understood as a combination of the principles of solidarity-based agriculture and technology-oriented methods of urban farming, is pursued under the name "Shared local farming" by the Viennese start-up farmNOW Shared Vertical Impact *Farming* GmbH, for example.

Alexander Juranek, one of the founders of the start-up, puts it this way: "We have redefined vertical farming as a shared activity, i.e. as a communal activity and movement. […] Our Shared Impact Farming should be accessible to all city dwellers. For this we have developed an allotment 4.0, where everyone can sustainably grow and harvest their own salads, vegetables and herbs in the neighborhood, or even their own apartment building. FARM.NOW provides and operates the infrastructure, modular farms and a web-based booking platform, but everyone can use the farm technology, and become part of a large community" (Juranek, n.d.).

An exploratory study from a metropolitan region in the southwest of the USA shows that a farm concept integrated into neighborhoods strengthens the population's acceptance of new production methods and products (Grebitus et al., 2020). In this way, this social aspect of sustainability also has an impact on the economic perspective, as innovations take hold when they are technologically feasible, socially accepted, and economically marketable (Orton, 2019).

Principle 10: VF should promote equity creation and growth (E).

Following the economic principle of sustainability, the development of vertical farms should give companies the opportunity to build up equity and promote growth. All of the previously mentioned principles ultimately make their contribution to this principle. The optimization of production resources and food safety as a basis for the marketability of products as well as the social integration of farms can ultimately lead to economically successful business models.

Sustainability as a value system can probably never be completely captured. Even if, for example, questions of taste or integration into urban infrastructure through opportunities for sector coupling are not yet explicitly mentioned in the context of the Smart City topic area, the ten principles mentioned do provide a good orientation framework for the establishment and operation of sustainable farms in urban areas.

The Meanings of Start-Up Mindset, Agile Organization, and Open Innovation

"The concept of vertical farming [is] conceivably simple. Yet implementing it might require the kind of technical expertise needed for rocket science or brain surgery, for example. On the other hand, people can do rocket science and brain surgery very well. We shouldn't shy away from the challenge of vertical farming just because it requires cutting-edge technology, architecture, and crop production" (Translated from English: Despommier & Carter, 2020, p. 3 f.).

The spectrum that developers of new urban farming structures have to deal with ranges from architectural and engineering building design and the technological design of a farm to the biological aspects of crop cultivation and the reduction of the ecological footprint, to integration into social urban structures and the development of modern digital business models. Not shying away in the face of such complexity, but on the contrary contributing to the food system of the future by building an urban farm is not an easy task. Only a specific attitude, an organizational framework and the right infrastructure will allow us to work on this complexity, to be creative and cooperative and to be able to develop innovations. These are vital fields of action that are generally attributed to the "start-up mindset" of entrepreneurs.

Successful entrepreneurs succeed in convincing an interdisciplinary team of unconventional competence bearers of the relevance of their mission and provide them with the necessary infrastructure to single mindedly bring market-oriented ideas to fruition. This start-up mindset can be actively developed, as described by David Sturt and Todd Nordstrom in an article for Forbes. The prerequisites for this are:

- That managers encourage their workforce to ask open-ended questions, such as "How can we …?" or "Why don't we try …?"
- That companies embrace change and are not afraid of change.
- That companies consciously cultivate a culture of error, since failures often occur in the innovation process, which can be understood as valuable learning curves.
- That managers communicate about the meaningfulness of innovations and make the innovation process transparent (cf. Sturt & Nordstrom, 2016).

Such open value systems give successful start-ups the flexibility and ability to develop innovations faster than is possible in established companies. Urban farming

start-ups and companies that want to adapt their existing products for the young market can also benefit from this start-up mentality.

Based on this basic attitude, many start-ups work with so-called agile methods as an organizational framework. In the spirit of the *lean start-up approach* (Build, Measure, Learn), they design prototypes with "Minimum Viable Products," "Minimum Loveable Products," or "Minimum Marketable Products," which are subjected to initial tests under simulated market conditions via iterative process loops in order to be able to draw conclusions for optimizing the planned offerings (cf. Forbes, 2021). The field of agile methods is large. In addition to the lean start-up approach described above, methods such as design thinking as a problem-solving method in complex environments or SCRUM as an agile project management method have become widely known among executives.

All these methods are applied in the participatory self-image of an organization and in compliance with agile basic principles. Some of these basic principles are mentioned below (cf. Diehl, 2020):

- Depending on the task, *small empowered development teams are* given short- or long-term goals to work on independently in *self-organization.*
- *Customer orientation and understanding of problems* form the basis of every development process. In doing so, one does not "run blindly after every customer requirement," but rather deals intensively with the customer's wishes.
- Through *review and adjustment, the* content orientation and selected procedures are subjected to critical and constructive readjustment at regular intervals.
- Work processes follow a certain rhythm; *timing* and *continuity* simplify processes and internal coordination.

Agility thus aims to set an organizational framework of values, principles, practices, and methods for shaping innovation. This framework makes it possible to work very dynamically on complex projects in a well-organized network organization and to give development teams the necessary structure. Under this self-conception, agility is well suited as an orientation and drive system for the development of innovative urban farming projects.

While the principles of agility as a mindset and process claim are primarily applied to internal attitudes and a specific internal structure of an organization, open innovation, on the other hand, describes the technology-supported opening of the innovation process to the outside beyond company boundaries. Partnerships with customers, universities, research institutes, suppliers, or start-ups are integrated into the process of developing new products and services (cf. Schlichter, 2016). This is mostly software-based either in open systems or systems with access restrictions for registered users. Open innovation can be described according to the type of information flow from the outside into a company (inbound innovation) or, conversely, from within the company (outbound innovation) (cf. Chesbrough et al., 2005, p. 8ff.). Open innovation platforms can be used to create project consortia through an open flow of information; specific industry challenges can be addressed and solved by a community. Given the diversity of issues and stakeholders that must be taken into account in sustainable urban farming projects, such an open innovation

process is necessary in order to consistently address the objectives of the urban farming sector and to be able to network stakeholder groups on a project-specific basis, even beyond the region.

Conclusion and Outlook

Despite its regional and global relevance and a large number of promising projects, the development of a food system of the future is still in its infancy. At the same time, the discrepancy between the current status quo and the described vision of circular cities with integrated agriculture offers many development potentials for innovations.

In order to activate this potential, politicians, city administrators, and urban planners must set the strategic course; housing companies must commission architects and engineers with the appropriate repair, reworking, or new construction of buildings. Process engineers, biologists, programmers, and business economists should join together to form start-ups and become farm operators, who in turn will work with civil society initiatives to design educational concepts for the neighborhood. The spectrum of start-ups, existing companies, and politics involved in the development of urban farm projects could look like this or something similar.

Negotiations on a sustainable food system and the promotion of an industry require networking and dialogue among as many stakeholders as possible. Inter- and transdisciplinary networks of economic, scientific, civil society, and political actors should work together toward the goal of using urban farming projects to design environmentally friendly processes, products, and services that generate real added value for society.

Ultimately, this can only succeed if all stakeholders involved develop a "start-up mentality." After all, the prerequisite for the development of cities fit for the future is agile structures that enable rapid learning and open knowledge exchange, motivate networking, and drive joint innovation development beyond one's own company boundaries. Open innovation plays a central role here and promotes the targeted opening of the innovation process to the outside world. This creates new partnerships between customers, universities, research institutes, suppliers, or start-ups, which are involved in the process of developing ideas for new urban food systems in open and agile processes.

The transformation of the food system is becoming more and more necessary due to the current increasingly worsening crises. On the other hand, the concept of urban farming is not a pure adaptation strategy. Rather, it offers the opportunity to design business models that are ecologically, socially, and economically desirable. To be sure, the transformation of cities will take many decades. But it is time to create the necessary open structures and corresponding start-up ecosystems to facilitate the next development steps mentally, technologically, and structurally for the industry and all stakeholders involved.

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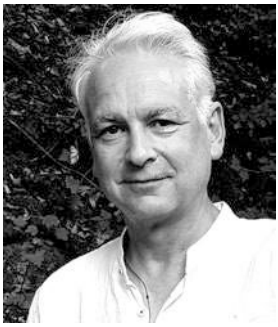

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Chapter 14
Epilogue: Bridging Past to Future—Small Analogy of Economic Crises

Volker Schulte and Ivan Köhle

Abstract In this epilogue, we would like to summarize economic crisis phenomena with a helicopter view, as it were, from the perspective of historical science. Many of them continue to shape the collective memory to this day.

Keywords Economic crisis phenomena · Pre-modern economic crises · Crises and Industrial Revolution

Economic crises are a central moment of economic structural change. They characterize economic events in capitalism. Economic structural change is always characterized by the process of creative destruction (Schumpeter, 1942). An economic crisis is a macroeconomic disturbance that either affects individual nations, does not stop at national borders and usually has a global impact. This is also and especially true in a globally interconnected economy (Maussner, 2013).

But even before the Industrial Revolution, which began in Europe in the late eighteenth century, there had already been various economic crises. Crises are therefore not a modern phenomenon; they were just shaped differently.

Let us first look at the concept of economic crisis. In economics, an economic crisis is defined as a stagnation or decline in economic growth. This is characterized—and can be measured—by the development of price levels, employment, and capital flows. Stagnation is the term used to describe a phase in which an economy is not growing. In the event of an economic downturn, economic output shrinks. In this case, the term recession is used, or depression in the case of a prolonged recession. Since the Industrial Revolution, the development of an economy has been characterized by recurring cyclical disturbances and is perceived in this way (Schohl, 1999).

Economic crises are, as we stated, not only a feature of capitalist modernity. On the contrary, we can state that today's economic crises are much more pleasant for

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A. H. Verkuil (ed.), *Start-up Cultures in Times of Global Crises*, Sustainable Business Development, https://doi.org/10.1007/978-3-031-53942-8_14

society and far less threatening to its existence than, for example, economic crises of the pre-industrial era. These were always characterized by existential crises, famine, and ruin.

Pre-modern Economic Crises

Maximum Price Dictate

The maximum price edict of Emperor Diocletian is an example of an inflation crisis in late antiquity. In this edict, a price control law was enacted for the entire Roman Empire in 301 AD, setting maximum prices for a wide range of products and services. Failure to comply could result in the death penalty. The edict was intended to stop inflation, which had worsened during the imperial crisis of the third century.

During this crisis, numerous emperors had increasingly minted coins. As a result, inflation has been driven up considerably. The decree doubled the nominal value of the existing silver currency. So that the state did not have to forego 50% of its tax revenues, it was stipulated that payment obligations had to be paid with the same coins at double the value before the effective date of the increase in value. This measure of doubling the nominal value was intended to protect the buyer in inflationary times. However, Diocletian did not only pursue the shortage of circulating silver values, but he also wanted to make the turnover of goods controllable by means of a state price control. Price control became a core component of the maximum price dictate. According to recent research, the fixed-price policy contributed overall to stabilizing the economic conditions of the time (Strobel, 2016).

Crises in Subsistence Economies

In these pre-modern eras, which were generally still characterized by subsistence farming, harvest fluctuations led to shortages and increased prices for agricultural products, which were influenced by the climate, special weather conditions, and warlike devastation. It was not until the nineteenth century that the productivity gains in agriculture, at least in the industrialized countries, gradually mitigated existential economic crises affecting the masses. Good harvests resulted in an increase in population, while bad harvests could have devastating consequences and, due to the increase in food prices because of shortages, left entire regions impoverished and led to famine crises. Consequently, there was also always a decline in commercial production because the available resources had to be used primarily for the purchase of food (Plumpe, 2017).

In Central Europe, the introduction of the plague around the middle of the fourteenth century triggered an epidemic that led to an economic standstill and the shrinking of the population. The so-called Little Ice Age in the mid-sixteenth

century led to a drop in average temperatures in Europe, which prevailed for almost 300 years (Bergdolt, 2006).

Also, the demographically devastating Thirty Years' War in the first half of the seventeenth century drastically reduced the population, especially in the German lands and principalities. In parts of southern Germany, only a third of the population survived (Arndt, 2009).

The eruption of the Tambora volcano in Indonesia in 1816 led to unprecedented crop failures in large parts of Southeast Asia, but also in Europe and North America. In regions of the Midwest, snowstorms occurred as late as June de of 1817. The reason was that the jet stream distributed soot particles in such large quantities around the globe. The temperature drop in Europe was about 2 degrees. The summer of the following year, 1816, was the coldest since weather records began. Numerous European countries experienced crop failures, famine, and economic crises. Southern Germany and Switzerland were hit very hard. In France and England, famine riots occurred Because of crop failures, oat prices rose so much that many horses were slaughtered, although the horse population in Europe had already declined due to the Napoleonic Wars (D'Arcy Wood, 2014).

The hunger crisis in Ireland in the mid-nineteenth century can already be assigned chronologically to the Industrial Revolution. In fact, however, it was also a subsistence crisis because millions were dependent on agriculture. The so-called potato blight led to famines in Western Europe in 1846/47, to which 12% of the population in Ireland fell victim. In this context, it should also be mentioned that the British colonial masters continued to export potatoes from Ireland during this bitter emergency. As a result of the famine, one million people died there and another two million emigrated (Donnelly Jr, 2002).

Speculation and Tulips

A key feature of today's economic upheavals and crises is speculation. In premodern times as well as today, speculation was and still is practiced. In the modern economy, speculation is a central component of economic success. Good liquidity with a corresponding supply of money at low-interest rates encourages speculation. Speculation as such is basically not a bad thing, but necessary for economic activity. Future success is calculated, and an investor takes a risk. It is a bet on the future. Only then is it decided whether an investment has been successful. Without speculation, there is no economic development. Speculation becomes problematic when bubbles form. In these cases, the market runs hot, the bet on the future no longer works out as soon as the bubble bursts. (Haase et al., 2016; Cowing, 2015).

The so-called tulip speculation in the Netherlands from 1634 to 1638 was widely known. More precisely, it was a commodity speculation triggered by a hype on the tulips and new cultivars imported into Europe from Asia and the Ottoman Empire. Individual cultivars fetched top prices, about 10,000 guilders for a tulip bulb. The rising prices attracted speculators, who made empty purchases on credit. The hope

was that at the time of delivery, they would be able to make a substantial profit by reselling the bulbs and thus service the loans they had taken out. The business went well for several months, making individual speculators rich, as the price of tulip bulbs increased 50 folds within a short period of time. In February 1637, however, the speculative bubble burst. Panic selling set in, plunging many investors, including small ones, into bankruptcy. It must be conceded, however, that this tulip speculation remained a local affair, limited to the Netherlands (Chavagneux, 2020; Fritschy, 2008).

In conclusion, there were state bankruptcies, exchange crises, and speculative bubbles in pre-modern Europe. There are numerous examples of this from the sixteenth, seventeenth, and eighteenth centuries.

Industrial Revolution Era

With the Industrial Revolution and thus with the establishment of industrial capitalism, the character of economic crises also changed. Economic crises in the age of capitalism are characterized by a much geographically broader, if not global, impact. The more extensive production and the larger the markets became; the more significant speculative financing of trade and the size of economic crises became. Low-cost mass production of goods is always production for more distant sales markets. This also increases the risk of finding buyers in other countries for the goods that are produced. Supply and demand, and thus also price fixation, determine whether goods have acceptance on the market.

With the beginning of the Industrial Revolution, crises changed. Their course was different than before. The upswing of industry and trade, which was controlled by price and sales expectations, was made possible by credit-financed investment and expansion processes. This type of trade was dependent on prices and the interest that had to be paid for loans. When maturing loans could no longer be serviced, insolvencies occurred, often snowballing, and leading to mass unemployment and factory closures. Since the Industrial Revolution, upswing phases have always been associated with innovations. This is illustrated strategically in the so-called Kondratiev Cycles (Klump, 1993; Alexander, 2002). Upswing, saturation, downturn, and innovation alternated in recurring cycles.

Great Depression 1857

In the years following the bourgeois revolutions in Europe in 1848/49, there was an international economic boom. This was driven primarily by the Californian gold discoveries of the time. This allowed the money supply to expand very rapidly. This expansion phase lasted until about 1857. This period also saw strong population growth in Europe. In contrast to earlier times, the productivity gains from new technologies in agriculture were also able to feed the growing population. In this

context, it is also important to consider that there were large waves of emigration from continental Europe to North America, South America, and Australia (Blaschka-Eick, 2010). Banks and trading houses were the big beneficiaries of this era, along with the railroad infrastructure. The new investment banks were able to lend considerably more than their deposits amounted to. A special feature was that the banks could expand the money supply regardless of the stance of the respective central banks. This, of course, also increased the risk of bank failures. Signs of overheating began to appear as early as the mid-1850s. The economic bang came in August 1857 when a first bank in the USA stopped making payments. Short-term deposits when in long-term here investments were made. The railroad companies were no longer making the profits that had been expected. The failure of the first bank triggered a domino effect, and interest rates rose exorbitantly. Some railroad companies in the USA went bankrupt. At the same time, many banks in the USA closed because they were no longer able to meet their payment obligations. The total number of bankruptcies in 1857 and 1858 was more than 5000 in the USA. Even solid institutions and companies with strong balance sheets in normal times were swept away (Plumpe, 2017). This crisis also spilled over into Great Britain, where the drama was repeated with bank failures. Unlike American conditions—the Federal Reserve did not exist at the time—the Bank of England was able to intervene and end the bank deaths. This calmed the markets. In historical retrospect, it can be stated that the Great Depression of 1857 was an exception in a longer-term positive and economic environment. The strong innovative power of that era meant that the economic crises were only short lived in each case. The strong upswing in the credit industry was virtually the trigger for mobilizing sufficient capital for development in Europe and the USA. The money was always reinvested and led to economic growth and innovation (Vedoveli, 2018).

Great Depression 1873–1896

The 1860s and early 1870s can rightly be considered the boom years of the young industrial nations (Cottrell, 1988). In Germany, the boom was further fueled by the German-French War, from which Germany emerged victorious. With the founding of the Reich in 1870/71, Germany was on an unprecedented expansion course with a liberalization of stock corporation law, hundreds of new stock corporations were founded (Zorn, 1963). Investment increased dramatically and the money supply also increased sharply. New records were broken year after year in all sectors, such as building construction, civil engineering, railroads, and later the petroleum and electrical industries. Between 1871 and 1872 alone, more than 100 investment banks were newly founded in Germany (Zorn, 1963).

The so-called Founders' Crisis erupted in the spring of 1873, triggering price falls and collapses, especially on the Vienna stock market The starting point was a real estate bubble in the KUK Dual Monarchy. Even very good papers lost almost 100% of their value a few months later, in September 1873 there was also the collapse of the New York bank Jay Cook and Company. In the USA, there was a great

wave of bankruptcies, the New York Stock Exchange was temporarily closed (Plumpe, 2017).
The economic collapse then occurred in October 1873 also in Germany banks became insolvent. The crisis led to the mass bankruptcy of newly established joint-stock companies. The result was a severe economic slump. A long-lasting economic downturn set in, lasting until the end of the 1870s. In the perception of contemporaries, as well as in the decades that followed, this poor economic mood continued into the 1890s. After that, the golden years began in Europe and North America and lasted until the outbreak of World War I (Rosenberg, 1967).

Great Inflation 1923

The outbreak of World War I abruptly interrupted the long-lasting growth phase of the world economy. International trade and world economic relations were eliminated and the burdens resulting from the enormous damage caused by the First World War led to severe economic and social upheavals. The conversion of production to armaments cost a great deal of state resources, which the states had not even planned for at the beginning of the war. The consequences of this war affected both trade relations with other countries and the international division of labor. It was not possible to re-establish world trade and the world monetary system of the pre-war period. However, this would have been necessary to compensate for the economic and financial consequences of the war, such as reparations and debt burdens (Holtfrerich, 2011). For the losing powers of World War I, first and foremost Germany, the defeat represented a catastrophe. They were now obligated to make payments that could not be made due to the destruction alone. But the situation was no better in the victorious countries. Large parts of northern France and Belgium were destroyed by the war. Europe, as a traditional creditor of the old world, now became a debtor, while the USA now became a creditor (Broadberry & Harrison, 2005).

In 1918, the map of Europe changed dramatically. Numerous European states had disintegrated. Russia Austria and Germany collapsed, but there were also great social conflicts in Great Britain, France, and Italy. By 1920, a severe world economic crisis had already set in. The attempt to reintroduce the gold standard, as it had been generally established before the war, led to severe social dislocation (Crabbe, 1989).

In Germany, public spending and the devaluation of the mark even succeeded in ensuring full employment until 1922. In the winter of 1922, however, unemployment began to rise Now he sets galloping inflation. The whole economic situation became increasingly chaotic. By the fall of 1923, the economy had come to a complete standstill (von Wallwitz, 2021).
This problem was not solved until the currency reform started in October 1923 and the introduction of the Reichsmark in August 1924. The restrictive budgetary policy that now began, also to protect the new currency, led to mass unemployment in

Germany. These severe structural adjustments were followed by a slow recovery in Germany, which prevailed until the outbreak of the next major global economic crisis in 1929 (Plumpe, 2017). Internationally, the reintroduction of the gold standard led to tight budgets and little room to stimulate the economy. Instead, governments and national banks were interested in keeping their currencies at as high a level as possible. This led to deflationary developments. Overcapacity in industry and agriculture and restricted world trade put considerable pressure on price developments. Nevertheless, this period is referred to as the Golden Twenties. Overall, the period between 1924 and 1929 may be regarded as a time of relative prosperity (Krohn, 1982).

World Economic Crisis

The Great Depression broke out between 1928 and 1930, depending on the country. The so-called Black Friday, October 24, 1929, has been inscribed in the memory. The center of this crisis was in the USA. In this crisis between 1929 and 1932, gross domestic product in the USA and Germany fell by more than 25%, with corresponding declines in industrial production. Unemployment in Germany cracked the million mark. This was preceded by a stock market speculation bubble bursting in the USA. This was the beginning of the worst global economic crisis the world has ever seen. A stock market crash, recession, a crisis of the international financial system, and increasingly protectionist economic and trade policies of the industrialized countries led to an economic and social catastrophe that led to the rise of radical political forces, especially in Germany (Gusmorino, 1996; Berton, 2012).

The Great Depression invalidated all the experience of crisis accumulated up to that point, and the previous possibilities and instruments for improving the economic situation were no longer applicable. In Germany, however, government investment programs, especially in the armaments industry, restored the country to full employment as early as 1936 (Herbst, 1982).

Recent Economic Crises

Oil Crisis 1973

During the Vietnam War with its exorbitant expenditures, the US government had to get off the gold standard with respect to the dollar. This resulted in the desired strong devaluation of the US currency. This in turn led to a loss of purchasing power for the oil exporting countries. These reacted with massive price increases on the until then so cheap oil (Cohen, 2021). One of the authors of this chapter can still remember times when his parents paid 49 cents for a liter of leaded gasoline shortly before the outbreak of the oil crisis.

In October 1973, the Yom Kippur War also broke out, a war between Israel and its Arab neighbors. When the Arab onslaught failed to produce the expected victory, some Arab oil exporting countries decided to use oil as a weapon. Production was curtailed. Exports were reduced by 5%. In addition, for each month that Arab territories conquered since the Six-Day War had not yet been returned, prices were increased by another 5%. This applied primarily to the important producing countries of Saudi Arabia, Iraq, and Kuwait. The aim of this cutback, as well as in part of a supply boycott, was to prevent Western countries from supporting Israel. The supply shortage resulted in the price of oil being raised by several 100% (Ströbele, 2022; Akins, 1973). This led to an enormous increase in the profit margin but, therefore, also to corresponding inflationary tendencies in the oil subscribing countries. As a result, there were also balance of payments deficits in the oil importing countries and a period of economic recession. The so-called OPEC countries, i.e., the oil exporting countries, achieved a balance of payments surplus of over 160 billion US dollars in the years 1974–1977 (Deutsche Bank, 1978).

The oil crisis of 1973 was thus based on the factors of inflation, devaluation of the dollar, the Middle East conflict, and an unprepared economy in industrialized countries. Older readers will remember that the oil crisis led to car-free Sundays, but also to extended school vacations, the closure of indoor swimming pools, and speed limits (Chevalier, 1976). With the oil crisis and the first reports of the Club of Rome, a rethinking in the consumption of fossil resources is also taking place. While in 1972 the share of oil and coal for energy production was still around 90%, it dropped considerably to 60% in the years up to 2000 (Wettach, 2004). It can thus be stated that as a result of the 1973 crisis, on the one hand, energy saving measures orchestrated by the state were propagated for the first-time comma and, on the other hand, strategic oil reserves were created in the Western industrialized countries. In addition, the rising oil prices of OPEC led to exploration for the exploitation of oil fields both in Europe brackets Norway brackets as well as in the USA and Great Britain (Türk, 2014). In the Federal Republic of Germany, the 1973 oil crisis led to the worst recession since the postwar period, with an economic contraction of 1.6% and unemployment of over one million working age people (Heilemann, 2019).

Financial Crisis 2007/08

The financial crisis of 2007-2008 was, among other things, the result of a real estate crisis. A speculatively inflated real estate market, the so-called subprime crisis, led to a shock in the financial world. Subprime market refers to credit transactions in which creditors should actually be barred from lending due to lack of capital and poor creditworthiness (Ryan, 2008).

The so-called "Case-Shiller National Home Price Index" recorded a very sharp increase in housing prices between the late 1990s and the peak in 2006; an indication of a housing bubble. Financial actors overlooked the price bubble and incorrectly assumed housing prices could not decline over an extended period (Shiller,

2012). The homeownership rate in the USA was already relatively high in 1997 before the housing bubble, at 65.7%. By 2005, the rate had risen to 68.9%. During this time, the number of homeowners increased by 11.5% (Sanders, 2008). The increase was greatest in the western US, among people aged under 35 years, those with below-average incomes, and Hispanics and African Americans. Rising housing prices ensured that even bad investments did not result in major losses. Gradually, people became more willing to make increasingly risky loans.

The beginning of the financial crisis can be dated on August 09, 2007. On that day, interest rates for interbank financial loans rose very sharply. The crisis reached its peak with the collapse of Lehman Brothers Bank on September 15, 2008. As a result, the Western European countries were forced to provide extensive loans and guarantees to so-called systemically important banks by initiating capital increases and providing funds for recapitalizations. This led to a further increase in government debt and a higher government debt-to-GDP ratio, especially in the USA and the European region (Ryan, 2008).

The financial crisis of 2008 cannot be understood if we do not also look at hedge funds. In international finance, hedge funds developed in the late 1990s and early 2000s. These are derivatives, the composition of which is often difficult to understand or not clear at all. Hedging should achieve the reduction of risk by varying individual positions. Risks from one position are offset by the opportunities of another position within the investment construct (Ben-David et al., 2012).

The banking crisis triggered a credit crisis a production crisis and thus an economic crisis. The IMF estimated the capital loss from the crisis at $4 trillion (Collins, 2008). In Europe, the result was the euro crisis, which effectively bankrupted the Greek national budget. In 2010, the European Financial Stabilization Facility (EFSF) was established, and in 2012, the subsequent European Stability Mechanism (ESM) was created to prevent sovereign insolvencies (Hellwig, 2017).

The Other Economic Stimulation: The Guernsey Experiment

In 1815, there was an interesting experiment in monetary policy on the island of Guernsey. The economic dislocations generated in the wake of the Napoleonic Wars were making themselves felt throughout Europe. The inhabitants of this Channel Island produced food far in excess of their own needs, but the taxes collected and interest payments to London banks nevertheless brought payment transactions to a standstill. The governor of Guernsey, Daniel de Lisle Brock, who was in office during this period, proposed the construction of a market hall at a cost of 4000 pounds sterling, which would give the economy a new boost. However, these 4000 pounds were not to be printed with the British pound, but simply themselves. This island currency came into circulation as a kind of second currency. After 5 years, the hall had fully paid for itself, i.e., it had fully earned its depreciation and the 4000 pounds, which had in the meantime circulated throughout the island and had generated sales of all kinds, were once again completely available in cash to the investor of the

market hall. The collected island money in paper form was burned. According to this principle, several building projects were thus realized one after the other with self-printed money that was later destroyed again (Gesell, 1922).

Uncertainty and complexity of crisis phenomena were far more difficult to manage in earlier eras than they are today. This gives us hope for the future.

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Chapter 15
Some Last Comments

Arie Hans Verkuil

Abstract This chapter describes the pro-social dimension of sustainable business development. Binding values for a common ethos of humanity are emphasized, which should be valid globally, interculturally and interreligious.

Keywords Pro-social · Ethics · Unifying values

The previous chapter describes how different eras have faced different economic, social, and environmental challenges, some of which were external and some self-inflicted. As described in the first chapter, the challenges of our globalized era are demographic, technological, and environmental.

Just as each epoch has attempted to solve the specific challenges of its time with the methods at its disposal, based on the state of its knowledge, the solution approach of our time is pro-social sustainable business development oriented to the principles of sustainability, which can lead to the considerations and solution models described as examples in this volume.

The models show that we face similar challenges in our globalized, multilateral world, especially in the ecological field. However, these challenges must be solved differently in different societal sub-contexts with their different technological and social possibilities.

Ethics, which as a discipline asks about the conditions for a successful and meaningful life, plays an important role here. In this context, common globally interculturally and interreligiously valid BINDING VALUES FOR A COMMON ETHOS OF HUMANITY could provide important and good services. These values could include, by way of example:

- Ecological responsibility
- Non-violence
- Justice
- Truthfulness
- Equality (Weltethos, 2023)

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A. H. Verkuil (ed.), *Start-up Cultures in Times of Global Crises*, Sustainable Business Development, https://doi.org/10.1007/978-3-031-53942-8_15

The orientation toward unifying values and, above all, the common responsibility for an ecologically, socially and economically intact environment could be the basis for a sustainable economy which, with its orientation toward Sustainable Business Development, seeks and finds new innovative solutions for a time of global challenges. Joint internationally networked research and education is a crucial basis for this.

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