

Preface

The entrepreneurial process has always grounded on initiatives of visionary and courageous individuals who sought, on many occasions, a greater degree of well-being for the societies where they lived. Since the first dawn of humankind, it has been necessary to develop an entrepreneurial spirit to survive in hostile environments. All the great architectural works built by all the kingdoms and empires created throughout history, and all the scientific and technical advances reached in the past have been born from active entrepreneurship, and in some occasions, even from intrapreneurship.

However, this individualistic vision of entrepreneurship has been changing during the four industrial revolutions that have occurred over the centuries. Contrary to the famous assertion affirming that the first steam engine in the modern age was designed and built by the Scottish James Watt in 1769, to initiate the First Industrial Revolution in the second half of the eighteenth century, the first patent for a modern steam engine was registered in Spain in 1606. The inventor and entrepreneur was the Spaniard Jerónimo de Ayanz y Beaumont (*c.* 1553-1613), and his steam engine was used for the first time in the world in the mine of Guadalcanal, located in the province of Seville, Spain (García Tapia, 1992). Besides, the steam engine designed by Watt was an improvement of the Newcomen machine invented in 1712 by Thomas Newcomen (1663 – 1729) with the help of the physicist Robert Hooke (1635-1703), and the mechanics John Calley (1663 – 1717). In turn, the Newcomen machine was an improvement of the machine Thomas Savery (*c.* 1650 – 1715).

Therefore, inventions have been overlapping each other, as is the case today. Consciously or unconsciously, teamworks are seeking both the collective and personal benefit. Therefore, as in almost all inventions, there is a search for a solution to a problem or need, there is the inventor a social responsibility that is then transmitted to the company when it is created to market the invented

Preface

product. Hence, throughout history, there have been entrepreneurs who, in general, have been defined by having this personal and social double vision.

Contrary to Van Praag and Van Ophem (1995), who affirm entrepreneurship was first studied in Cantillon's *Essai sur la nature du commerce en general* [Essay on the Nature of Trade in General], published in France in 1755, this concept (in the sense of merchant) was first studied in Spain. In fact, this notion appears in the second book of Tomás de Mercado's *Tratos y contratos de mercaderes y tratantes discididos y determinados* [Deals and Contracts Applied to Certain Merchants and Traders], published in 1569, and re-edited with a few tweaks in 1571, as *Suma de tratos y contratos* [Treaty on Deals and Contracts]. Regarding entrepreneurship, "Tomás de Mercado approves new business and exchange trade, only if they are consistent with the moral rules based on do not take advantage of others by using abusive prices and interest rates, or by conducting unfair agreements, both socially and economically" (Saiz-Alvarez, 2017: 3020).

This change has been due to the need to undertake entrepreneurial organizations with a much broader vision as the information and vision of the world expanded. Thus, today conducted in economic globalization, so that companies with a holistic view will be able to compete and survive successfully in international environments.

In this competitive context, the Entrepreneur 4.0 is born. A visionary, open-minded, and digitalized entrepreneur who works in globalized economic backgrounds with the help of ICT (Information and Communication Technologies). The emergence of this kind of entrepreneur is independent of the age or level of academic training, and work experience gained. As a result, it can range from the Traditionals (born before 1948), Baby boomers (1948-1960), X-Generation (1961-1979), Y-Generation or Millennials (1980-1994), Z-Generation or Centennials (1995-2003) and Alpha-Generation (from 2004). In fact, they solely work in fully digitized labor environments.

It is interesting to note the reasons how the use of the Internet divides generations. In fact, these divisions link to the main milestones appeared in the development of the technology. The border between traditionals and baby boomers is in 1948 when Norbert Wiener published his book titled "Cybernetics" (from the Greek, Κυβερνητική) that means "pilot" or "governor," which had a strong influence on research into artificial intelligence and control systems. In 1960, the border between baby boomers and X-Generation, several computer manufacturers and the Pentagon developed COBOL —an acronym for Common Business-Oriented Language. In 1979,

the frontier between X-Generation and Y-Generation, the first Multi-User Domain (or Dungeon)(MUD1) went online to allow many people to play against each other online. In 1994, the border between Y-Generation and Z-Generation, the World Wide Web Consortium (W3C) moved from CERN in Switzerland, where the web was born, to Silicon Valley by including Java and the formation of Netscape. Finally, with the border between Z-Generation and Alpha-Generation in 2003, the blu-ray optical disc is released.

THE STRUCTURE OF THE BOOK

The book is organized into seven chapters. During the whole process of analysis and development of the book, the author uses a micro (individual), meso (organization), and macro (country) analysis to have a complete vision of the theme analyzed. A brief description of each of the chapters follows:

The Introduction identifies the process of structural transformation born after the democratization of the ICT at the beginning of the twenty-first century. One of the most favored nations in the world with this process is the People's Republic of China. An emerging economy that is having a growing protagonist role in the world, as everything is pointing at this country will be the next first economic power during the mid-2020 decade. As a result, corporations around the planet must adapt their business strategies to this new economic and geopolitical situation defined by a new globalized and digital business scenario. As a result, a new type of manager is now emerging in the second decade of the twenty-first century: the Entrepreneur 4.0. This new kind of entrepreneur must compete in the age of "glocalization" (think global, act locally) to make companies thoroughly globalized with the aid of ICTs, knowledge of foreign languages, and must have an overall vision for the business. Isolated nations will be more regionally integrated, and if they transform their managers and CEO (Chief Executive Officers) into Entrepreneurs 4.0, these nations will be the leading countries in the future.

In the following pages, will be studied what business strategies can be developed by start-ups and SMEs to have, by adding corporate entrepreneurship in the case of large organizations, a process of sustainable growth over time, that is, preserving the environment for the next generations and currently caring for the human resources of the organization. To do this, in Chapter 1, "Being an Entrepreneur 4.0", we describe the keys to understand and satisfy the market, and the SMART (acronym Specific, Measurable, Attainable,

Preface

Realistic, and Timely) goals focused on transforming entrepreneurs to successful entrepreneurs are analyzed and a proposed Decalogue of Rules described in the chapter. Then, we suggest some keys to competing in hostile business environments, and also the internationalization process is also studied. In this entrepreneurial strengthening process rooted in precise information, formation, working experience, and relational capital, SCM (Supply Change Management)-based business strategies also play a vital role to propose an original VCIT model intended to make Entrepreneurs 4.0 healthier and economically stronger. Finally, we examine how to change from Blue and Red Oceans, a concept seminally introduced by Chan and Mauborgne (2005), and enlarged by Saiz-Alvarez and Colvin (2015) with the ideas of Blue Seas and Lakes, Red Seas and Lakes, and Purple Oceans, Seas, and Lakes. In this book chapter, and complementary to these markets, a new type of market linked to Entrepreneurs 4.0 is seminally introduced: the Grey Oceans, Seas, and Lakes. These concepts are novel and original in the existing economic literature on entrepreneurship. As a result, twelve symbiotic oceans described in the chapter define all possible market situations that Entrepreneurs 4.0 may encounter during the life of the company.

However, one of the keys to being an Entrepreneur 4.0 is to innovate consistently and more efficiently. With this scope in mind, in Chapter 2, titled “How to Be Different? Innovation Techniques and Lateral Thinking”, we briefly analyze how user innovation and open innovation are both inserted into the last of the six innovation waves that have occurred in humankind. Then, we study the relation between innovation and value creation with the CTA (Create, Transform and Apply) business cycle and the importance of HT-HC (high concept-high touch) concepts launched by business policies focused on creative thinking. Creative thinking techniques defined as Brainstorming, the Osborn-Parnes Creative Problem-Solving Process, SCAMPER, 635 Brainwriting, Lotus Blossom, Laddering, Stop-It Mop-It, Six Thinking Hats, Business Process Re-engineering (BPR), and the Theory of Inventive Problem Solving (TRIZ). Techniques directed to increase the stakeholders’ satisfaction by diminishing the operating risks related to launching new products and services. Finally, we explore the Innographer as an Entrepreneurship-based Tool for Innovation, formed by the sum of the Customer Iceberg Model, the Customer Scenario Tool, the Value Innovation Tool, and the Value Proposition Message Tool.

Once the company has innovated in its product or service to offer to the market, describe the existing business models in the world. We show this

objective in Chapter 3, “How to Join the Market? Business Models and Value Proposal”, where we study the importance of a good design thinking project, and to create an attractive Business Model Canvas, Social Business Model Canvas, and a Lean Canvas Model, among other business models. As a result, and based on the Balanced ScoreCard (BSC) approach to providing a balanced view of the organizational goals, Chapter 3 reviews how the Business Model Canvas, Social Business Model Canvas, and Lean Canvas Model, are comprehensive tools to foster entrepreneurship. In the chapter, the author proposes the matrix of stakeholders to have a clear vision of the firm and to suggest a successful strategy focused on creating value for the company entering the market.

Pages complemented with Chapter 4, “Delving Into the Business Model”, to study the Outcome-driven Innovation, Jobs to Be Done, Napkin Ideas and Competitive Advantages, and Why Do Companies Fail. In these pages, the author reviews how companies competing in a globalized economic world design value-creating strategies to achieve leadership by using different business models rooted in ODI (Outcome-driven Innovation), napkin ideas, and teamwork. The chapter includes the leading causes of bankruptcy for companies, especially when firms perform neither a PESTEL (Political, Economic, Social, Technological, Environmental, and Legal) analysis nor a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis to analyze their business environments.

In Chapter 5, “Doing Business: How to Shoot Up”, the author briefly defines the seven most used market structures existing in the world and the differences between a Limited Liability Company and the Corporation with Variable Capital. One of the big faults made by SMEs is when entrepreneurs put their assets at risk to get their companies moving forward, which constitutes a significant danger. In the chapter, the author suggests some strategies to reduce this problem of risk exposure and includes eighteen strategies and techniques of negotiation. Then, the author analyzes outsourcing as a cost-reducing strategy to impulse corporate growth to explain how to take business advantages using Giffen goods. The chapter ends with some plans on how to achieve leadership from the application of the RECA (Reduce, Eliminate, Create, Add) matrix.

Entrepreneurs 4.0 should be aware of their role in improving society. In fact, and more in developing countries, business strategies carried out by managers to generate wealth must complement public policies fighting against poverty, because of the benefits caused by State intervention (crowding-in effects).

Preface

Therefore, it is necessary to raise social awareness of entrepreneurs to create positive results overall society, and especially the most disadvantaged. In this regard, Chapter 6, titled “Ethics and Social Entrepreneurship”, addresses how ethics plays a fundamental role, not only in the economy but also especially in the company. Mainly in developing countries, social entrepreneurship is of primary importance and is socially necessary to alleviate social inequalities among the richest and the poorest in the society. In this process of diminishing social differences, business models are of fundamental importance, especially digital models with the intensive use of ICT, as we are currently in the digital economy. Hence, in the chapter, the author synthesizes the 57 digital business models that exist today on the market and enhances the importance of the Circular Economy, and the Socioeconomics of Solidarity as an emerging trend in the economic thinking.

Finally, Chapter 7, titled “From Single Entrepreneurs to Family Businesses”, encourages start-ups to become SMEs (Small and Medium Enterprises) family businesses to achieve a profound social change in the countries where they carry out their professional activity. Besides, the author briefly analyses the European model defined by linking the private sector and the public intervention to create crowding-in effects to compensate, and even to overcome, the crowding-out effects generated. The generation of crowding-in effects is notably intense in the EU (European Union) where governments offer to SMEs and citizens benefit from EU Structural and Investment Funds. In this case, federal intervention causes benefits to the private sector, and startups transform into SMEs. The final goal of SMEs is to give a legacy to society, as a way to return to society what the company has received from it (social mortgage). In this process, both the proprietor-manager dilemma and the succession process are a problem, mainly in second and third generation family SMEs, which determines the future of the company. Finally, the book ends with a chapter of conclusions.

This book has been written primarily for entrepreneurs and family businesses SMEs that make, on average, more than 90 percent of the business market in the world. In fact, the number of entrepreneurs determines the economic power of the countries, as the greater the number of entrepreneurs, the more powerful that nation will be.

I sincerely wish that the next chapters would be enjoyable, useful and beneficial for you to be a highly successful entrepreneur 4.0. Do not worry if you are small in the market. With constancy and intelligence, you will grow until becoming a leader in your sector. In fact, being an Entrepreneur 4.0

is an art. However, in this art, both knowledge and professional experience play a fundamental role, so entrepreneurs have to take advantage of the maximum number of opportunities as possible while they are in business. This globalized commercial world is very competitive, and only the most efficient with social impact and with a developed environmental conscience can survive in the long-term.

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REFERENCES

Chan, W., & Mauborgne, R. (2005). *Blue Ocean Strategy: How to Create Uncontested Market Space and Make Competition*. Boston, MA: Harvard Business School.

García Tapia, N. (1992). Some Designs of Jerónimo de Ayanz (c. 1553-1613) Relating to Mining, Metallurgy, and Steam Pumps. *History and Technology*, 14, 135–149.

Saiz-Álvarez, J. M., & Colvin-Díez, J. (2015). Purple Oceans and the Mergers & Acquisitions Virtuous Circle. New Concepts for the Theory of Mergers & Acquisitions. *Progress in Economic Research*, 32, 139–154.

Saiz-Alvarez, J. M., & García-Vaquero, M. (2017). Entrepreneurship: Concepts, Theories, and New Approaches. In *Encyclopedia of Information Science and Technology* (4th ed.). Hershey, PA: IGI Global, 3020-3031.