Global SMEs
Volume 2: SMEs 4.0 to Gain Sustainable Development Globally

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Preface

This book is written for the students and entrepreneurs who will want to understand the role and meaning of SMEs (Small Medium-Sized Enterprises) in the globalization. In all countries of the world are the most companies small and medium-sized, but in the public and political focus stand mostly the “big ones”. This is inappropriate because of the real role of "sustainable, smart, innovative SMEs" of global.

Experts from the "German Mittelstand", and International Sustainability Management has written this book which is oriented directly to Managers of Global SMEs 4.0 to Gain Sustainable Development Globally.

These days, SMEs (Small and Medium Sized Enterprises) play significant roles in economic situation of countries as well as sustainability and wealth. Therefore, creating successful and productive SMEs could influence on future of the countries.

An important shift has occurred from the “managed” to the “entrepreneurial” economy, associated with a fall in the importance of economies of scale in production, management, finance, and R&D. It mischaracterized by a series of trends encompassing the emergence of the knowledge economy, open innovation, global connections, non-technological innovation, the, Silicon Valley Business Model” and social entrepreneurship and social innovation. SMEs and new business ventures are important players in this new environment. They have a key role in processes of creative destruction, knowledge exploitation, breakthrough and incremental innovation, and interactive learning. Ensuring they reach their full potential requires a new innovation policy approach that facilitates entrepreneurship and SME innovation. Priorities include inserting new and small firms in knowledge transfer networks, strengthening entrepreneurship skills, and improving institutional environments for social entrepreneurship.

Small and medium-sized enterprises (SMEs) have a vital role in the private sector of each nation. Moreover, as the globalization increases, they began to have a very important role of opening the local products/services to the international markets, as well as competing with multinational competitors in the local markets. In the process of internalization, there appear various pros and cons for SMEs in global market. The benefits of smallness, flexibility, and rapid response to changes, on the other hand, the disadvantages of size may provide SMEs different paths in globalization phase. The factors that will provide SMEs through internalization vary from one country to another based on the economic, geographical, and cultural differences. This sort of investigation is very critical for the developing countries because the research outcome could be useful for the economic development planners as well as to individual entrepreneurs in the countries concerned.

The creation of new business ventures and innovation and sustainability in existing small and medium-sized enterprises (SMEs) are critical parts of today’s innovation process and should take a central place in government strategies to promote innovation. Despite their importance, however, SME and entrepreneurship support is not yet fully embedded in innovation policy, and the requirements for effective policies in this area are still not well enough understood. New firms and innovating SMEs are best seen as agents of change in the economy, introducing new products and services and more efficient ways of working. They underpin the adaptation of our economies and societies to new challenges and drive economic development. Not all new and small firms are equal in innovation, of course. On one hand, there is a small group
of highly innovative and high-growth-potential firms with important individual impacts on jobs and productivity. But their numbers from the Entrepreneurship Indicators Project should not be exaggerated. They make up only a small minority of all SMEs.

Small and Medium Enterprises (SMEs) contribute significantly to the GDP growth and the economic development of a country be it developing or developed. SMEs provide, significant employment avenues, platform for creativity and innovation that stimulates national income, as well as entrepreneurial opportunities and social stability. Based on a study, International Finance Corporation (IFC) surmised that there is a positive correlation between the overall level of income of a country and the no of SMEs measured on a unit (per thousand) of population. According to the Organization for Economic Cooperation and Development (OECD), internationally SMEs account for 50% of GDP, 30% of exports, 10% of FDIs and 60-70% of the private sector employment. During the boom period of early years of the current decade (immediately preceding the recent slowdown), as per a nine country Asia-Pacific Survey done in 2007, HSBC bank opined that SMEs are considered to be the backbone of the economy in developing countries. There is certain degree of resurgence but in order to have an all-inclusive growth and to sustain it for a long time, it is imperative to focus on the development of millions of SMEs.

In previous case of the book, fundamental definitions and discussions related to SME, global SMEs and tools required to create successful and sustainable SMEs are mentioned. In particular, SME definition, leadership and management definition, entrepreneurship, business plan, human resource and SME growth, family business, marketing for SMEs, different kinds of management including risk management, human resource management, international management, international cross cultural management, international cutting edge management, behavioral economics; innovation and SMEs success; growing SMEs and technologies, roles of education, knowledge and intellectual capitals in SMEs success and sustainable SMEs were declared.

In this book, relation among sustainable development and sustainable, successful SMEs are declared. In addition, models to create sustainable, smart and successful SMEs as tools towards sustainable development and high quality of humans’ life are mentioned.

This book will be write based on the newest updated SME articles, books, the experience of Professor Dr. Hamid Doost Mohammadian and some other management and leadership books that is my main focus in the concept to bring target point of each item to prevent any time and resource wasting to whom they want to read and follow SME subjects and along with the descriptions we will bring real examples from both success and fail companies and also give shortcut to their abilities and disabilities.
1. Introduction

SMEs are formed more than 95% of businesses all around the World, so they play significant roles within developing economy sustainability, environmental and social sustainability as well as quality of humans’ life. Sustainable and successful SMEs with high productivity and efficiency could make sustainable development towards livable and sustainable living areas.

SMEs are declared as economic backbone of each country through improving inclusive and sustainable economic growth, providing employment and work for all, enhancing sustainable industrialization; even as tool to achieve sustainable development. Sustainable SMEs could be used as techniques to develop sustainability that is required not only to deal with global challenges, but also to create livable urban settings with high quality of life.

1st, 2nd, 3rd and 4th waves (ages) have been passed; before the 70’s fossil energies and various businesses could influence and improve technologies and economy, and after that technologies, IT and IoT play roles in influencing, changing and improving the various energies, businesses and even impact on citizens’ lives. In recent decades, IoE has been introduced as the implementation of IoT technology into distributed energy systems to optimize the efficiency of energy infrastructure and reduce wastage.

Different indicators play significant roles in creating sustainable and successful SMEs. Human resources (HR) play significant role in SMEs success and productivity. So, it is vital to improve HR performance and quality. In addition, vocational training as well as education are needed to achieve HR competencies towards successful SMEs. Furthermore, other tools and techniques like high technologies, innovation, different management tools etc., are needed for successful and sustainable SMEs like hybrid SMEs and SME 4.0. These tools were declared completely in previous case of the book.

As we are living in the era that confront global challenges including poverty, slum, economic problems, social instability, environmental challenges, climate change, insecurity, and so on; that threaten future of the world as well as humanities. So, it is vital to deal with these challenges to maintain the world and create more livable and sustainable world. Sustainable development is recognized as a solution to tackle global challenges and develop sustainability.

Authors believe that modern, sustainable, and smart SMEs like Blue-Green SMEs introduced by authors are one of tool to make economic sustainability, even sustainable development. Therefore, SMEs could be applied as a solution to create sustainable and livable urban areas with high quality of life through these advantages. In this book, modern SMEs and tools to create such SMEs are declared.

Sustainability, sustainable development, and their roles in dealing with global challenges, maintain the world and environment for upcoming generations as well as improving livability and quality of life are discussed. In addition, relation among SMEs, sustainability and quality of life are discussed in this case of the book. In addition, definition named high sustainability...
is introduced by authors and it is declared as one of main tools needed for sustainable and smart SMEs. I-Sustainability plus theory as a fundamental tool to create modern SMEs is introduced by authors. Fundamentally, Smart Innovative Blue-Green SMEs 4.0 are introduced as modern SMEs made sustainable economy, even develop sustainability is declared in this book. In addition, tools and models required to create such SMEs are mentioned.

This book focuses on sustainable development and its importance for the world and humanities, modern and sustainable urban areas based on sustainability and high quality of life, smart innovative Blue-Green SMEs 4.0, models and tools to create such SMEs, relation among modern SMEs and sustainable development.

These topics are discussed in future chapters:

- **Chapter 2: Towards Sustainable and Smart Global SMEs:**
  In this chapter, conclusion and overview of previous case of the book are mentioned. Generally, definition of SMEs and Global SMEs, roles of SMEs in economy of a country as well as sustainability and well-being of citizens’ life and essential tools to create successful and sustainable SMEs are recognized.

- **Chapter 3: Global SMEs as Key to gain Blue-Green Sustainable Development:**
  In this chapter, sustainability and its importance for the future of the world is mentioned. The role of successful and sustainable SMEs to achieve sustainability and Blue-Green Economy is descanted. In addition, new theory "sustainability plus" introduced and models required to gain Blue-Green Economy towards sustainable development are declared.

- **Chapter 4: Conclusion:**
  In this chapter a conclusion of previous chapters are mentioned. Furthermore, suggested future scenario is declared.
References:


Small and Medium-Sized Enterprises: Local Strength, Global Reach. OECD. 2000.

SMEs: Key Drivers of Green and Inclusive Growth. Shashwat Koirala Environment Directorate, OECD. 2018.
Towards Sustainable and Smart Global SMEs (Review of Case 1)

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1. SMEs

Global SMEs definition and tools required for creating successful and sustainable global SMEs are mentioned.

1.2 SMEs and Global SMEs

SME is based on small and medium sized enterprises concerned on manufacturing, agriculture, construction and service sectors. SMEs are introduced as the backbone of countries through linking with every aspect of the society and economy.

Generally, there are different definitions are existed for SMEs by different countries and standards. Two famous definitions are declared by OECD and EU.

According to OECD definition, SMEs are non-subsidiary, independent enterprises with up to 249 employees and specific annual turnover about 10 to 50 million concerned on the size of workers. EU defines SMEs as enterprises with up to 249 employees and specific annual turnover about 2 to 50 million related to the size of workers.

In addition, definition declared by German institute IFM is so famous. Based on this definition SMEs are firms with annual revenues up to 50 million Euro and a maximum of 499 employees. Although SMEs come in many different shapes, sizes and definitions; in today’s complex business environment, a comprehensive specific framework and polices are needed to enhance SMEs growth, help them to deal with their problems, barriers and create successful and effective ones. The most important policies realized by EU and OECD are:

- Creating environment that SMEs and family businesses could be survived
- Creating appropriate and friendly atmosphere for working
- Utilizing policies in order to thinking globally, acting regionally
- Making SMEs aligned with single markets and benefit from their opportunities
- Making new opportunities through challenges, barriers and risks by risk management, innovative and sustainable policies
- Improving upgrading skills and innovation in SMEs
- Making SMEs be aligned with growth of markets and benefit from enhancing of all markets
- Proper economic situation for developing SMEs
- Make public administrations responsive to SMEs needs

Starting new business, educating vocational and skilled capitals, finance challenges, limited resources, leadership policies, poor management practices, productivity and innovation of SMEs, protectionism culture are the main challenges that SMEs confront with. These mentioned policies could help SMEs to deal with their challenges and improve their productivity and effectiveness in order to gain the best results.

Besides of these policies, participating in global market is the other policy required for successful SME.

Global SMEs participate in business environment internationally besides of national market. Based on growing of globalization, SMEs start not only to open the local products and services to the international market, but also to challenge with international competitors in local market.
Smallness, flexibility, being aligned with cultural norms, and rapid response to changes are the main features that SMEs require to participate in global market. Furthermore, independency and owner-led business entity are qualitative features of global SMEs.

Transnational business is a feature of global SMEs that is based on:

- **Internal growth**: It could be achieved through exports, cooperation management, start-ups in international target markets and etc.
- **External growth**: International expansion, mergers and acquisitions are indicators of external growth.

Besides of these factors, specific globalization factors are needed to achieve successful global SMEs such as high technologies including IT, ICT, IoT, IoB, IoE, IoM, digitalization, innovation, networks, quality standard options and internationalization. Furthermore, international management is one of the other main factors required to gain successful global SME. Intercultural negotiation, intercultural communication, international teamwork, intercultural leadership, expatriate management, international HRM, international strategy and international business environment are the main indicators of the international management.

SMEs face challenges and barriers to participate in global market. The main challenges are:

- Shortage of working capital to finance exports
- Identifying foreign business opportunities
- Limited information to locate/analyze markets
- Inability to contact potential overseas customers
- To obtain reliable foreign representation
- Lack of managerial time to deal with internationalization
- Inadequate quantity of untrained personnel
- Difficulty in matching competitors’ prices
- Lack of home government assistance
- Excessive transportation insurance costs

It is required to struggle with these challenges in order to participate in global business market. Enhancing global SMEs features are vital to reduce these challenges and create SMEs that are able to work in global market.

In SMEs context, there are different factors that play fundamental roles. The most important ones are human resource (HR), business development, consumer behavior and market intelligence, education and vocational training for labors.

- **Human Resource**:

  Human resource (HR) is concerned on both the people who work for an organization or firm and the department responsible for managing resources related to employees. Human resource department plays important roles in development of organization. HR can play several roles in firms such as administrative roles, strategic roles, operational and employee advocate role.
There are three kinds of international HR: Parent Country National (PCN), Host Country National (HCN) and Third Country National (TCN).

Fundamentally, HR would help firms compete in global market and deal with competitive challenges such as globalization, profitability through growth, utilizing high technology, intellectual capital, and etc. Therefore, human resource development (HRD) is required to achieve successful SMEs. HRD is about process of developing and unleashing human expertise through human resource component including human resource management, human resource assessment and human resource planning. HRD is necessary tool for successful business. It could influence on SMEs processes through developing new skills, knowledge, creating proper environment with trust and respect, qualified employee in right positions and improving productivity, efficiency through qualified, expert and knowledgeable labors.

- Business Development:

SMEs should act in path be aligned with business development. In other words, SMEs have to proceed specific path to gain business development and successful business. To achieve business development, business plan, business models, be aware of consumer behavior and market intelligence are required. Therefore, SMEs should follow stages such as:

- Enterprise Concept
- Developing Enterprise Concept
- Business Plan
- Implementing Business Plan through Different Business Models Action Plan, Strategic Plan and etc.
- Towards Business Development via researching about consumer behavior, intelligence market, different tools including risk plan, emergency plan, treatment plan, innovation, management, leadership, technology, strategies towards sustainability etc.

As SMEs make more than 85% of businesses, they play important roles not only in economic systems, but also in every aspects of well-being. So, knowing about their importance, their roles in future of each country, finding out solutions and strategies in order to create successful SMEs could influence on function and processes of SMEs towards improving SMEs privileges to make the world as a better place for living.

1.2 Roles of SMEs in Future of a Country

SMEs not only improve economic systems through job creation and economic growth, but also develop sustainability of a country. The main benefits of SMEs are:

- Achieving inclusive globalization and growth of countries
- As a kind of solution for economic challenges that countries confront with such as low growth, weak trade and investment, and rising, or persistently high inequality through wider eco-system of firms, digital economy, creating opportunities for new jobs and globalization.
- Reducing environmental challenges through creating sustainable patterns of production and consumption, utilizing resources in sustainable path and seizing green business opportunities
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- Creating opportunities for employment, innovative solutions and technologies concerned on job creation, income growth, supplying citizens’ demands and friendly atmosphere create socio-economic well-being be improved.

- Improving social sustainability in countries via creating opportunities to scale up, accelerating innovation, facilitating spill-overs of technology and managerial know-how, broadening and deepening the skill-set, and enhancing productivity.

- Developing economic sustainable development through creating employment, wealth, alleviating poverty and income generation.

- Improving economic system of a country through participating in global market

- Creating a country being aligned with citizens' needs and modern supplies related to growing urbanization. So, SMEs play a role in improving livability and quality of life in each country.

- Creating stable situation of living in countries through its benefits and developing sustainability

SMEs through their benefits will improve sustainability in countries.

Sustainability and sustainable development are remarkable and timely phenomena at not only local level, but also global one. Fundamentally, sustainable development is declared as a path to maintain the world for future life through improving human situation and life. Economic sustainability, social sustainability and environmental sustainability are the main pillars of sustainability; however, the authors introduced new concept of sustainability named high sustainability in this book. High sustainability includes seven pillars: Economic sustainability, social sustainability, cultural sustainability, educational sustainability, technical sustainability, political sustainability, and environmental sustainability.

Sustainability is a solution to deal with global challenges such as poverty, slum, unemployment, insecurity, social instability, environmental challenges, health diseases, economic concerns and etc. Therefore, sustainability through successful SMEs is a path to create modern sustainable urban areas. In particular, livability and quality of life two parameters related to sustainability are required for modern sustainable urban areas. Livability is concerned on health, wealth, security, safety, education and job opportunities, public services, transportation, recreation, housing, and environmental quality and quality of life is a multidimensional issues about life satisfaction, including everything from physical health, family, education, employment, wealth, safety and security to freedom, religious beliefs, and the environment. Generally, livability and quality of life are concerned on supplying humans' needs. In other words, it is needed to supply humans' needs based on Maslow's hierarchy including physiological needs, safety needs, belongings and love needs, esteem needs and self-actualization in order to achieve high livability and quality of life. As global challenges are significant threats for supplying humans' needs, dealing with these challenges are vital. Therefore, sustainability is a tool to tackle global challenges in order to supply humans' needs towards high quality of life and livability.

SMEs are able to develop sustainability in countries through their benefits. In particular, SMEs are tools to improve livability and quality of life in urban areas. Therefore, they play important roles not only in economic systems of a country, but also in livability and quality of life concerned on social well-being and future of a country.
Fundamentally, it is needed to realize solutions, strategies and policies to create successful SMEs in order to use them as a path to improve sustainability and social well-being of a country.

2. Towards Successful SMEs

As SMEs play important roles in future of countries, it is vital to find out solutions, policies, strategies and techniques to create successful small and medium sized enterprises to create sustainable and livable urban settings with high quality of life. The most important tools required for successful SMEs are:

2.1 Proper Management

Each SME requires proper management and managers to achieve its goals. In other words, management is a fundamental indicator for successful SMEs. Proper management includes different kinds of risk management such as project risk management, financial risk management, govern mentality risk management and enterprise risk management; international management concerned on legal system, state and political system, geography and climate, culture, religious, taxation, duties and the economy; international cross cultural management; international cutting edge management and proper business development plans. In addition, education to train managers and workers who aware of these different tools of management has important role in designing proper management.

Fundamentally, proper management is a kind of management that includes these components and be aligned with sustainability pillars. It means that management strategies and policies must align with sustainability path.

2.2 Proper Leadership

Leadership is different from management. Therefore, management and leadership are required hand in hand to achieve optimal effectiveness and productivity in organizations towards successful and sustainable business.

Leadership is about processes, management and performances in order to achieve firm's objectives. So, leadership plays crucial role in growth and development of each business or organization. In particular, Leadership is a tool to move an organization towards changing, competitive landscape through imagining, motivating, organizing, managing and leading employees to a higher level of performance in order to make businesses compete, survive and develop in business environment.

2.3 Innovation

Innovation is the embodiment, combination, or synthesis of knowledge in original, relevant, valued new products, processes, or services. Innovation not only contains new processes, but also old processes, new business systems and new management methods to improve productivity and hence growth. In general, innovation is a fundamental component of being entrepreneurship. Innovation and entrepreneurship are two unboreable components. It means that to create successful SME, innovation is a sharp tool. Innovation management, process innovation, financial innovation and innovative techniques like TRIZ algorithm, IMP³rove and etc., are required to create successful SMEs. In addition, innovation influences on finding out solutions that organization confront with and designing proper models to obtain more productivity,
effectiveness and growth of an organization. Therefore, innovation plays significant roles in creating successful SMEs through different aspects.

2.4 High Technologies

We are living in an era that technologies could influence on every aspects and levels of businesses such as marketing, productivity, mobility, operations efficiency, security and effective customer communication in order to improve organizations' function. Digitalization and high technology change business models, technology, work environments, developments of skills and recruitment of talents as ways to improve SMEs function. Networks, E-business and E-commerce are the main results of technologies influence on SMEs.

Network is about set of elements and members connected to each other as a result of the relationships among members. E-business is a tool to promote SMEs' functions through integrating of internet and related ICTs into the business organization in order to promote production processes, customer engagement processes, and internal management processes.

E-commerce is a fundamental tool to participate in global market via buying or selling of products online services on the internet. Fundamentally, these tools concerned on high technologies could influence on SMEs growth and development especially helping them to participate in global market.

2.5 Knowledgeable and Expert Capitals through Education and Vocational Training

Knowledgeable and intellectual capitals who are aware of management, risk management, innovation, technology and sustainable strategies could influence on SMEs growth and development. To train such capitals, academic training and vocational education are required. Education in different scales like regional, national and international levels are essential to achieve successful global SMEs.

Fundamentally, comprehensive framework concerned on these tools are needed to create successful SMEs in order to develop sustainability in countries.

Successful SME is a solution to achieve sustainability and sustainable development in a society. SMEs through employment and new opportunities of job towards social sustainability, improving economic of a society, being aligned with environment and nature, improving socioeconomic well-being and enhancing social sustainability could improve sustainable development of a country. Fundamentally, SMEs via their privileges and benefits could enhance sustainable development in a country in order to improve livability and quality of citizens' life.
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References
1. Sustainability and Sustainable Development

Sustainability and Sustainable Development are the most controversial criteria these days. In this section, these two objects are declared. In addition, new points of view of sustainability introduced by authors are declared. Besides of main components of sustainability including economic, social and environmental sustainability, other components are introduced that are created modern idea of sustainability named sustainability plus.

1.1 Sustainability

The concept of sustainability is not new and it has a long story. For the first time in 1713 sustainability as a new concept was introduced by Carlowitz. Then in the first half of the 18th century, the idea of sustainable revenue was published by Denmark, Norway, Russia and France; and in 1970’s concept of sustainability was officially stated. In addition, in 1980, a concept of sustainable development was introduced for the first time in the World Conservation Strategy that was held by the United Nations Environment Program (UNEP) and the International Union for the Conservation of Nature (IUCN). Then, in 1987, the UN’s World Commission on Environment and Development that was ran by Gro Harlem Brundtland introduced new meaning and concept for sustainable development. Brundtland introduced sustainability as a tool and technique to provide the needs of the present generation without compromising the ability of future generations to supply and provide their needs. In 1992 in Rio de Janeiro, the UN’s Conference on Environment and Development (Earth Summit) was held and in this conference mentioned that: sustainable development is the overarching policy of the 21st century. In 1995 Agenda 21 concerned on accessing to land and security of it, liberalized credit policies, low-cost building material for sustainable urban living was held. In Agenda 21, was mentioned that: “Sustainable Development is a multidimensional phenomenon that could make a higher quality of life for all people. Generally, the United Nations (UN) has declared sustainability as a tool to struggle with urbanization problems such as social conflict, environmental degradation and the collapse of basic services which threaten the cities, human’s beings and the world.

Based on traditional point of view, there are three main indicators that have influenced on evolving debate of sustainability. Fundamentally, economic development, social development and environmental protection are components that are created sustainable development.

- **Economic Sustainability:**
  Economic sustainability concerns on a system of production and service which provides present consumption levels without compromising future needs. Economic sustainability makes a balanced in economic system of a country through producing goods and services to preserve manageable levels of government, external debt and avoid sectoral imbalances influencing on agriculture, production industrial and financial sections of a country.

  Making a maximum flow of income of rational use, resource efficiency and sustainable financial system are the main benefits of economic development.

- **Environmental Sustainability:**
  Environmental sustainability is about growing and bringing up the environment and its coordinated in a path in order to ensure the protection and renewal of natural resources and environmental heritage. Making the earth in a good or better shape for future is introduced as main aim of environmental sustainability. In other words, environmental sustainability could be defined as a condition of balance, resilience, and interconnectedness that makes human society
satisfy its needs while ecosystems be supported in order to be able to regenerate the services required to meet human's needs.

Environmental sustainability is about maintaining resources and energy through avoiding over-exploitation of renewable resource systems or environmental sink functions, depleting non-renewable resources. In addition, maintenance of biodiversity, atmospheric stability, and other ecosystem functions are included in main aims of developing environmental sustainability.

Environmental challenges such as resource depletion, global warming, climate change and unprecedented levels of species extinction not only disturb environmental sustainability, but also threaten the future of the World and humanities. In particular, environmental challenges are evidence that human societies are changing the natural world. Humanity's activity aren't always aligned with environment. So, they could change planetary systems which threaten humans' life and future of the world. It is vital to tackle with these challenges in order to improve environmental sustainability. Fundamentally, climate resilience, ecosystem management, electronics stewardship, energy, sustainable acquisition, sustainable buildings, vehicles worked with clean energies, water conservation, waste minimization and pollution prevention are needed to achieve sustainable environment.

- Social Sustainability:

In the first decade after the emergence of the notion of sustainable development in 1987, economic and environmental sustainability were focused as main factors of sustainability. In late 1990s, social sustainability was declared as fundamental components of sustainability and its role has become more vivid after then.

Social sustainability concerns on social interactions, relationships, behavioral patterns and values of humanity. In other words, social sustainability is based on the personal and societal assets, rules and processes that enable individuals and communities to take part in the long term and economically achievable standards of life based on self-expressed needs.

Minica and France declared human aspect of sustainability:

- Improvement of education, training and public support for the environment
- Protecting and promoting human health (focused on access to medical facilities, especially in rural areas, control of infectious diseases, risks pollution and ecological risk)
- Tackling with poverty
- Demographic threatening sustainable development (focusing on population growth, especially in developing countries)

In general, social sustainability is related to social interactions, relationships, behavioral patterns and values of humanity.

Generally, these indicators must be in equilibrium to achieve sustainability.

These three indicators could achieve sustainable development as a solution to maintain the world for future.

1.2 Sustainable Development

In these days, sustainability and sustainable development are remarkable and timely phenomena at not only local level, bus also global one. Fundamentally, sustainable development is
declared as a path to maintain the world for future life. It makes society stable and to improve human situation and life. High quality of life, health and prosperity with social justice and maintaining the earth’s capacity to support life in all its diversity are the main aims of sustainable development.

In particular, the main aims of sustainable development are:

- End poverty in all its forms everywhere
- End hunger, promote food security, improve nutrition and enhance sustainable agriculture
- Ensure healthy lives and promote wellbeing for all at all ages
- Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- Achieve gender equality
- Ensure availability and sustainable management of water and sanitation for all
- Ensure access to affordable reliable sustainable and modern energy for all
- Achieve sustained, inclusive and sustainable economic growth, full and productive employment
- Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- Make cities and human settlements inclusive, safe, resilient, and sustainable
- Reduce inequality within and among countries
- Ensure sustainable consumption and production patterns
- Take urgent action to combat climate change and its impacts
- Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.
- Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
- Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
- Strengthen the means of implementation and revitalize the global partnership for sustainable development

Fundamentally, sustainability and sustainable development are utilized to improve human well-being in the long term through management of the human environmental system.

### 1.3 High Sustainability

Sustainability plus is created through researches of authors about sustainability and its roles in future of the words. Based on authors' point of view, new definition for sustainability is required. Traditional pillars of sustainability aren’t enough to utilize as a tool to tackle with global problems in these days. In recent decades, innovative and new tools are needed to confront with these challenges. So, high sustainability is introduced as a new tool by authors.
High sustainability is about sustainability composed from seven pillars instead of three traditional pillars including environmental, economic and social sustainability.

Environmental, economic, social, cultural, educational, political and technical sustainability are main component of high sustainability. According to this theory, there are more indicators required to create sustainability as an effective tool to deal with global challenges.

These seven pillars created high sustainability. The below figure presents this theory:

![7 PS Model](image)

Figure 1: 7 PS Model
(Hamid Doost Mohammadian, 2017)

Above model was introduced in article named "An Applied Study of Sustainability plus, Digitalization, Urban Planning and Environmental challenges – key to Green Ubiquitous Cities & Mobility as a new concept of Urban Living" in 6th International Conference on Civil, Architectural and Environmental Sciences in Stockholm in June 2019.

Environmental, economic and social sustainability are concerned to what exactly we talked about is previous section. Therefore, in this section the other suggested pillars of sustainability introduced by authors are mentioned:

- **Educational Sustainability:**

Educational sustainability is about education and training systems of each country.

The future of a country is concerned on their juveniles. In other words, juveniles make the situation of a country. So, skillful, expert, qualified, well trained, innovative, perseverance and responsible youths should be trained to create sustainable society. To train qualified and well trained citizens as smart ones, sustainable education is needed. Sustainable education systems could influence on growing not only skillful and expert capitals, but also innovative and responsible ones to create sustainable and successful society. In general, educational systems should include theoretical education, practical and vocational training to gain sustainable education.

Sustainable education grows up smart citizens who are responsible about not only their jobs, but also the future of the country. Smart citizens are well qualified capitals that are innovative and well educated. Such citizens are able to create successful and sustainable society. In
addition, education has a power to alter cultural norms of a country and improve citizens’ beliefs, norms and improper culture in order to enhance cultural norms of citizens in order to train citizens who are aligned with sustainable development goals and successfulness of a country. As it was mentioned, in making successful and sustainable SMEs, education and vocational training are required. It means that sustainable education plays important roles in economic systems through creating successful businesses.

Educational sustainability is able to grow innovative, entrepreneur and smart citizens who are able to create sustainable and successful society. Generally, sustainable education is related to cultural, social and technical sustainability and could improve sustainable economic.

- **Technical Sustainability:**
  Technical sustainability is about utilizing high technologies such as IT, ICT, IoT, IoB, IoE, IoM, digitalization and smartness as solutions to tackle with country’ challenges such as environmental challenges, health risks, economic problems and etc.

  Technical sustainability is directly related to education. So, sustainable educational systems could improve technical sustainability. In addition, proper education is required to train skillful, expert, knowledgeable and creative capitals to be aware of technology, its importance and roles in order to utilize technology as technique for realizing solutions and new paths towards high sustainability.

  Fundamentally, sustainable education is required to make technical sustainability and enhance it.

- **Political Sustainability:**
  Democracy, freedom, equality, security, transparency, honestly and political stability are vital for sustainable country. These indicators could be introduced as pillars of political sustainability. Political sustainability is required to gain sustainable country and society. For instance, during humans’ history many revolutions have been starting by political reasons and wars not only influence on sustainability, but also threaten the future of a country. So, it is concluded that political sustainability is vital for sustainable country.

  Government plays important roles in developing such sustainability in a country. In particular, governance requires to utilize proper strategies, policies, solutions and laws to make political sustainability. In addition, strategies and solutions are needed to struggle with what threatens political indicators in order to make citizens be aligned with political policies of a country. There are different reasons such as sanction, low quality of life, economic challenges, unemployment, improper education and etc., which make political sustainability disturbed. Therefore, government needs to apply appropriate and innovative strategies and policies to deal with these challenges influenced on political sustainability.

  Fundamentally, political sustainability is an important indicator needed to achieve sustainable society and make citizens be satisfied through high quality of livability and quality of life.
• **Cultural Sustainability:**

Culture is one of the main pillars required to achieve high sustainability. Based on traditional models of sustainability, culture is a component of social sustainability; however, according to authors' concept, culture is an important pillar of sustainability that is needed to study separately. Cultural norms would influence on sustainability directly and indirectly. For instance, using public transportation is cultural norms in Scandinavian and many other European countries that struggles with environmental challenges and make them improved. So, cultural norms are needed to develop other pillars of high sustainability.

Cultural sustainability includes cultural norms, cultural beliefs, cultural practices and heritage conversation. In particular, cultural sustainability could attenuate via, cultural deviation generated through revolutions, immigrated citizens and etc. In other words, cultural deviation is significant menace for not only cultural sustainability, but also for sustainable society and country. Cultural sustainability is required to develop high sustainability in a country.

Fundamentally, all these seven pillars are needed to gain high sustainability, because there is a relation among them and they are able to influence on each other's. So, all these seven indicators not only have to be required, but also to be developed almost equally to achieve high sustainability. In particular, two points are important for high sustainability:

The first point is that seven pillars including education, culture, social, technique, politic, economic and environment are vital to gain high sustainability. The second point is that these seven pillars must develop almost equally. The below figure shows these two points:

![Figure 2: 7.PS Model and its Development (Hamid Doost Mohammadian, 2017)](image-url)

This model was introduced in 6th International Conference on Civil, Architectural and Environmental Sciences in Stockholm in June 2019 in article named “An applied comparative study about the countries with low sustainability and high CO₂-emission and advanced sustainability
knowledge in Europe and giving practical models to improve and implement sustainability solutions”.

According to this figure besides of high degree of indicators’ sustainability, the almost same degree of them are needed for high sustainability. The blue one presents high sustainability, because the indicators are high and there are almost the same. In other words, this country has two points needed for high sustainability. So, it is understood that this country has a high sustainable situation. However, the red one is not only its indicators have low quality, but also there aren’t equal. Therefore, this country requires to improve its indicators to develop high sustainability in order satisfy their citizens through promoting conditions of living.

1.3 i-Sustainability Plus Theory

i-Sustainability plus is the theory concerned on working of high sustainability, innovation and digitalization together.

In this theory, innovative management is about innovation in business, marketing and technology systems of an organization to gain successfulness and the best result.

Business model innovation is rethinking and reforming current businesses to preserve in marketing environment through enhancing an existing business model or utilizing new path to provide and increase values. In general, improper business model is reason of failing many businesses. To achieve successful business, it is required to apply four stages in order to utilize business model innovation as a tool for successfulness. These four stages are:

1. Analyzing current business model:
2. Confronting to current business model:
3. Ensuring about stability of business model
4. Building a model as experimental one and testing it

These steps managers to know about their business models, their challenges and profits. So, they can maximize their results via business model innovation.

Besides of business model innovation, marketing innovation is needed to evaluate profits of an organization. Marketing innovation focuses on finding new channels and tactics to enhance businesses’ efforts, finding new markets, creating new markets, realizing new services and offers that other businesses couldn’t provide. Different tools and techniques such as utilizing innovation, launching new product, business model or reforming old ones in new creative way and promoting existing offering in new paths could be used to achieve marketing innovation.

As it was mentioned, innovation has an important role in not only business innovation model and marketing innovation, but also in whole processes of an organization. Accordingly, technology innovation is realized as a separate segment of innovative management in sustainability plus theory. Technological innovation is related to creating new ideas based on technology or utilizing knowledge to find out innovative and new solutions to improve processes and situation of organization. In particular, new technologies such as digitalization, IT, ICT and etc., influence on innovative processes. The most important advantages of new technology are:

- Accelerating innovative processes
- Realizing new chances in markets
- Creating new ideas and using them into innovations
- Modeling products and services into market to test them to find out new results
- Developing businesses with maximum profit and effectiveness

Business model innovation, marketing innovation and technology innovation are components of innovative management of i-sustainability plus theory. Basically, innovation as a technique to find out new paths, ideas, strategies and solutions plays important role in this theory. In addition, high sustainability that includes environmental sustainability, economic sustainability, social sustainability, cultural sustainability, educational sustainability, technical sustainability and political sustainability is required to achieve sustainability plus theory. Further, innovation is a tool to find paths to gain high sustainability. In other words, innovative management not only influences on processes of an organization, but also it is able to improve high sustainability. So, innovation has significant role in this theory.

As we are living in the fourth wave based on technologies, high technologies like digitalization and ubiquitous would play role in achieving this theory. Digitalization and ubiquitous concept could be used as tools to improve high sustainability and innovative management. In general, high technologies are changing the processes and their results in these days. So, it is vital to be utilized in new policies, strategies and theories as fundamental techniques. Therefore, in this theory authors use digitalization and ubiquitous concept as one of the main pillars.

i-Sustainability plus is integration of high sustainability, innovative management, and digitalization in order to gain the best results, effectiveness and profits. The below figures present this theory:

![Figure 3: i-Sustainability Plus Theory](Hamid Doost Mohammadian, 2017)

This model was introduced in article named" Giving three Practical Innovative Models based on IMP³rove and TRIZ in Smart and Sustainable Mobility: Keys towards Blue-Green, Sustainable Livable Urban Area" for the first time and then it was revised in the later article named" Blue-Green and Inclusive Mobility: A Key to Make the World a Better Place for Living" in International Congress on Engineering, technology and Innovation held in Darmstadt in August 2019.
Based on this theory, innovative management is a tool to gain high sustainability. It shows interaction of innovation, management and sustainability could make innovative strategy that is a problem solver. In other words, this theory has an ability to struggle with challenges in different processes in order find out solutions and make the best result. Therefore, sustainability plus theory could influence on SMEs’ functions and processes.

2. Roles of SMEs in Improving Quality of Life and Livability

In this section quality of life and livability, the relation among these indicators and sustainability are declared. In addition, the roles of sustainability plus theory in improving quality of life and livability is investigated

2.1 Livability

Since 1980s when planners have been starting to study about sustainable and development patterns to deal with challenges caused by growing urbanization; livability introduced as controversial phenomena. Livability is concerned on health, wealth, security, safety, education and job opportunities, public services, transportation, recreation, housing, and environmental quality. In 1999, Vuhic defined livability as elements like home, neighborhood, and metropolitan area that are related to safety, economic opportunities and welfare, health, convenience, mobility and recreation. Then, Hylen declared livability as "an umbrella to a variety of meaning, which depends both on the objects of measurement and the perspective of those making the measurement".

Generally, livability is ‘place-based’ concept that concerns on those elements of a home, neighborhood, or city contributed to quality of life and well-being. Livability ranges from objective indicators of economic wellbeing, such as human capital, to subjective quality of life indicators like social capital, qualitative expressions of personal satisfaction and etc.

Quality of livability is measured through different factors such as political stability, safety, healthcare, education, public services, transportation, recreation, housing, and environmental quality.

Livability is a tool to present the overall contribution of the urban environment on influencing the quality of life and wellbeing. In other words, livability is concerns on well-being and quality of life that are be declared in next section.

Fundamentally, there is a relation among sustainable development and livability. Based on researches, sustainable urban development has four pillars: livability, environmental sustainability, economic performance and good governance. In addition, it is realized that livability is related to cleanliness, safety and green friendliness. So, livability is one of the main indicators required for human to be satisfied about their lives.

2.2 Quality of Life

Quality of life is an important phenomenon not only in developing countries but also in developed ones, even at the 21st century.

Although there is no specific and unique definition of the term in academic and policy discourses for quality of life, it is declared that quality of life is concerned on the overall wellbeing in society. One of the most famous meanings indicated by Fahey and his colleagues is that: "well-being reflects not only living, but also the ways in which people respond and feel about their lives in those domains". Quality of life is concerned on a person's well-being and mental
state. In other words, quality of life focuses on how humans’ needs and aspirations are sup-plied. In addition, it shows individuals and groups are satisfied or dissatisfied in various life domains. Van Poll (2003), declared that the quality of urban life is determined not only through physical aspects like the quality of the built environment and its facilities, but also social as-pects such as the human ties in the community.

Quality of life is a multidimensional issue ranged from physical to socio-cultural, psychological and environmental ones.

Quality of life has three main features:

The concept of quality of life has three main features:
- It reflects the individuals' life situations and their perceptions rather than a country’s quality of life
- It is a multidimensional concept that covers multiple life aspects such as housing, educa-
tion, employment, work-life balance, access to public services, their interplay and etc.
- It brings together objective information on living conditions with subjective views and atti-
tudes to provide a picture of overall well-being in society.

Generally, quality of Life is a multidimensional issue about life satisfaction, including everything from physical health, family, education, employment, wealth, safety and security to freedom, religious beliefs, and the environment. The role of economic factors is undeniably decisive in raising its level. Based on these definitions, SMEs could play important roles in quality of life.

Quality of life concept is concerned more than physical aspects, an economic perspective privileging income and wealth in measuring well-being, political participation, literacy, education and health. In addition, it is related to philosophical, ethical, and psychological ones, such as human rights, health considerations and environmental concerns. Fundamentally, quality of life is a broad concept which is concerned with the overall well-being in society.

2.3 Relation among Sustainability, Livability and Quality of Life

There is a strong relation among sustainability, livability and quality of life. As it was mentioned, quality of life and livability are indicators related to well-being. Quality of Life is about life satisfaction, including everything from physical health, family, education, employment, wealth, safety and security to freedom, religious beliefs, and the environment and livability is concerned on health, wealth, security, safety, education and job opportunities, public services, transportation, recreation, housing, and environmental quality. To develop high quality of well-being in society, these dimensions concerned on livability and quality of life must be achieved. It is required to find out how these dimensions will be gained.

Quality of life and livability are related to humans' needs for living. In other words, supplying humans' needs indicates quality of livability and life in an urban settings. So, supplying humans' needs is a path to create urban areas with high quality of livability. Maslow's pyramid indicated humans' needs that are required for social well-being.

Based on Maslow's hierarchy, there are five categories of humans' needs: Physiological needs, safety needs, loves and belongings need, esteem needs and self-actualization needs. The below figure presents Maslow's hierarchy of needs.
It should be mentioned that Maslow’s Hierarchy was revised by Hamid Doost Mohammadian in 2004:

These needs focus on different aspects such as physical health, job, education, housing, safety, security, health, wealth and etc., which are indicators indicated quality of life and livability. Supplying humans’ needs based on Maslow’s hierarchy could make high quality of livability and life. Basically, it is vital to supply humans’ needs in the high level and quality to gain high quality of livability and quality of life. Therefore, utilizing solutions, policies, strategies and tools to supply humans’ needs are required in order to create livable areas with high quality of life.

Nowadays, urbanization is growing; rapid and unplanned urbanization causes global challenges such as poverty, slum, unemployment, insecurity, health diseases, social instability,
economic problems, environmental challenges like climate change and etc., which make quality of livability and life be reduced through not supplying humans' needs. Generally, global challenges are significant threats for livability and quality of life via disturbing humans' needs. So, solutions to deal with challenges are vital to supply needs and improve these indicators.

High sustainability could be utilized as a tool to provide humans' needs in these days through tackling with global challenges. High sustainability including economic sustainability, social sustainability, cultural sustainability, educational sustainability, technical sustainability, political sustainability and environmental sustainability could supply humans' needs in order to gain pillars concerned on livability and quality of life. High sustainability is needed provide humans' needs in order to develop quality of life and livability indicators. Therefore, high sustainability is a tool for creating livable areas with high quality of life.

Above figure shows that high sustainability is a solution to deal with global challenges made through rapid and unplanned urbanization; which threaten the future of humans' being.

Fundamentally, high sustainability is needed to gain high quality of livability and life. In addition, these two dimensions could influence on high sustainability. So, there is reciprocal relation among high sustainability, livability and quality of life. High sustainability is a theory to improve quality of life and livability and these two dimensions could develop high sustainability in a society.
Figure 3.7: Relation among Livability, Quality of Life and High Sustainability
(Hamid Doost Mohammadian, Rezaie, 2019)

It is concluded that high sustainability is needed to supply humans' needs in order to improve quality of life and livability.

2.4 SMEs as Solutions to Improve Livability and Quality of Life

SMEs play significant role in improving livability and quality of life. As it was mentioned in previous chapters, successful and sustainable SMEs would achieve sustainable development. According to relation among sustainability, livability and quality of life; developing sustainability will improve these dimensions and create livable urban settings.

Generally, SMEs have privileges such as employment, creating new opportunities for job, enhancing sustainable industrialization, finding out solutions for economic challenges and making sustainable situation for living. These benefits are some of indicators related to social well-being and humans' needs. In other words, SMEs could achieve dimensions required for livability and quality of life.

Fundamentally, SMEs could achieve economic and wealth indicators in order to improve livability and quality of life. So, successful SME could be a solution to improve livability and quality of life through economic sustainability and wealth. In addition, SMEs indirectly via developing sustainability could make livable urban areas with high quality of life. Therefore, SMEs play significant roles on livability, quality of life and social well-being.

3. Smart Innovative Blue-Green SME 4.0 towards Blue-Green Economy

Blue-Green Economy through sustainable and successful SMEs is investigated as a tool to create Blue-Green Cities, which are the best solution to make the world as a better place for living. In this section, Blue-Green cities, roles of SMEs in designing such areas and suggested models to achieve proper SMEs towards Blue-Green Cities are declared.

3.1 Blue-Green City based on Blue-Green Economy

We are living in an era that global challenges such as poverty, slum, environmental challenges, climate change, economic problems, social instability, health challenges and insecurity threaten not only the future of the world for living, but also livability and quality of life of the world at present. Therefore, it is vital to deal with these challenges to preserve the world for
living and improving quality of human life. In other words, tackling with these challenges is a path to improve dimensions required for livability and quality of life. Urban transition is vital to deal with these challenges, even to develop sustainability. Blue-Green cities are solution for urban transition and create modern livable urban areas. Such areas are based on Blue-Green strategies aligned with being environmentally friendly. In particular, Blue-Green city is an urban area founded on incorporating natural systems through urban greening and water management. Blue-Green infrastructure based on landscape planning and water planning; is needed to design such urban areas. Resource efficiency, air quality, UHI mitigation, well-being, noise reduction, flood mitigation, biodiversity, aesthetics, water quality and sustainability are the main direct benefits of Blue-Green cities. In addition, social instability, well economic situation, security, wealth and high quality of livability could be gained through such urban areas.

Blue-Green Infrastructure is a solution to struggle with global challenges and create livable settings through restoring the water cycle back to a nature balance while improving the city's amenities and citizens' wealth by effectively managing water and promoting green infrastructure. Blue-Green infrastructure has two parts: landscape planning concerned on open space strategy, urban forest strategy, biodiversity strategy and environmental strategy and water planning including sustainable water use plan, integrated water management strategy, flood studies and stormwater management plan.

The main privileges of Blue-Green infrastructure present in below figure:

![Figure 8: Benefits of Blue-Green Infrastructure](Hamid Doost Mohammadian and Rezaie, 2019)
Fundamentally, Blue-Green infrastructure is required to create livable urban areas with high quality of life and sustainability in order to maintain the world for future generation and improve human well-being. Modern, Sustainable and livable urban areas are based on livability indicators such as sustainability, wealth and ubiquitous services. Blue-Green infrastructure including principles of healthy urban living, Design principles multifunctional green infrastructure, key factors to gain healthy urban water, strategies to maintain nature and environment could create healthy urban living based on healthy urban environment and healthy lifestyle in order to make high livability and quality of life for citizens.

In particular, D-SDIC Model that was introduced in article named "An applied comparative study about the countries with low sustainability and high CO₂-emission and advanced sustainability knowledge in Europe and giving practical models to improve and implement sustainability solutions" in 6th Internal conference on Civil, Architectural and Environmental Sciences held in Stockholm in June 2019; is about such urban areas, their indicators and dimension required to achieve livable and sustainable areas.

Based on this theory, ubiquitous services as well as Blue-Green strategies are needed to create modern livable urban areas. Ubiquitous concept is a tool to make cities being kept up with rapid urbanization demands that could create fundamental challenges. Therefore, Blue-Green strategies and ubiquitous services could work together to create Blue-Green urban areas. In
addition, other techniques such as innovation, digitalization, smartness and etc., are needed to create Blue-Green infrastructure and area. For instance, i-Sustainability Plus theory could be used as a tool in different sections of comprehensive strategic urban plan to derive Blue-Green cities based on U-DSR concept. This theory is based on seven pillars of sustainability. In addition, ubiquitous services are needed to achieve sustainability. Ubiquitous concept meant combination of reality and virtually, innovative project management and sustainability introduced by writers. Furthermore, high technologies such as IT, ICT, IoT, IoB, IoE, digitalization, smartness and innovative solutions could be tools to obtain i-sustainability plus theory. Generally, ubiquitous is a way to be kept up with growing demands in urban areas to struggle with urbanization challenges such as poverty, slum, economic problems, education and unemployment challenges, environmental problem, climate change and social instability in order to create sustainable livable urban settings. In other words, Ubiquitous services such as U-government, U-mobility, U-services including U-learning, U-shopping and others are innovative solutions to battle with pollution, traffic challenges and mobility risks. Besides of sustainability and ubiquitous, innovation is vital.

The below model that was introduced in International Congress on Engineering, technology and Innovation held in Darmstadt; in article named " An Applied Study of Innovative Models and Holding a Discussion about Innovative Sustainable Project Management: Response to Improve Quality of Life and Livability" presents how management and innovation could influence on quality and sustainability that are required to achieve U-DSR concept:

Besides of these tools, dimensions founded on U-DSR theory; Blue-Green Economy could play fundamental role in creating modern urban areas. In other words, it is one of the main indicators of modern livable and sustainable areas that could influence directly and indirectly on quality of citizens' life. This concept was declared by authors for the first time in the article named " Blue-Green and Inclusive Mobility: A Key to Make the World a Better Place for Living" in the proceeding of TRA 2020 of Helsinki.
3.2 Blue-Green Economy

Blue-Green Economy is a kind of sustainable economy that is aligned with high sustainability and seven pillar. It is concerned on Blue strategies focused on water management and Green strategies based on being environmentally friendly. In other words, it is economy system that strives to being environmentally friendly as well as enhancing economic situation of a country. Therefore, it could be introduced as a tool to improve infrastructure of a country towards Blue-Green infrastructure.

Blue-Green Economy achieve economic sustainability as well as develop all seven pillars of sustainability. For instance, Blue-Green Economy is aligned with being environmentally friendly, so it improves environment sustainability. In addition, it could develop social sustainability through supplying humans’ needs. Even, Blue-Green Economy is able to develop all aspects of sustainability in order to achieve high sustainability. Therefore, high sustainability in a country could be gained through Blue-Green Economy. The most important benefits of such economy are:

- Reducing economic challenges such as low growth, weak trade and investment, and rising, or persistently high inequality through wider eco-system of firms, digital economy, creating opportunities for new jobs and globalization.
- Developing economic sustainability via creating employment, wealth, alleviating poverty and income generation.
- Improving economic situation of a country as a component of country infrastructure towards better infrastructure in order to promote quality of citizens’ life.
- Controlling and reducing environmental challenges through creating sustainable patterns of production and consumption, utilizing resources in sustainable path and seizing green business opportunities.
- Improving socio-economic well-being through creating opportunities for employment, innovative solutions and technologies, income growth, supplying citizens’ demands and friendly atmosphere.
- Improving social sustainability thorough creating opportunities to scale up, accelerating innovation, facilitating spill-overs of technology and managerial know-how, broadening and deepening the skill-set, and enhancing productivity.
- Enhancing directly and indirectly all dimensions concerned on country infrastructure in order to not only develop sustainable infrastructure, but also create sustainable and livable urban areas with high quality of life.
- Creating sustainable countries towards more sustainable and livable world through above advantages.

As Blue-Green Economy is a fundamental tool to obtain not only sustainable economy, but also sustainable countries towards sustainable and livable world, it is vital to develop it. Therefore, successful businesses and organizations concerned on Blue-Green strategies and models, high technologies, innovation, proper management, knowledgeable and expert capitals are needed to cultivate Blue-Green Economy. It is crucial to be aware of different businesses, their roles in creating such kind of economy, and strategies required for them to develop Blue-Green economy. Declaring different kinds of businesses and finding out proper strategies for
them; could be a path to realize strategies and models for each business towards Blue-Green Economy.

Several categories for businesses and SMEs based on different factors such as ownership, nature of their activities, innovation, knowledge requirements and etc.; are declared. In this section, five famous categories that divide businesses and SMEs to different types are mentioned:

- **First Category:**
  - Technical SMEs
  - Hybrid SMEs
  - Instructional SMEs
  - Functional SMEs
  - Sentinel SMEs

- **Second Category:**
  - Believer
  - Know-it-Alls
  - Disinterested Cynics

- **Third Category:**
  - Companies based on new Technologies
  - Companies based on new Market Niches
  - Technological Ledears Companies
  - Companies which Develop in (joint) Parentship
  - Classic Subcontractor Companies with good Performances
  - Resilient Companies
  - Reactive Companies
  - Passive "calm" Companies
  - Companies on the Verge of Survival

- **Fourth Category:**
  - Sole Proprietorship
  - Partnership
  - Corporation

- **Fifth Category:**
  - Service Business
  - Merchandising Business
  - Manufacturing Business
Besides of these categories, two categories for businesses and SMEs are suggested by authors in order to find out strategies and model for creating proper businesses towards Blue-Green Economy. In other words, categorizing businesses in different groups and providing models that are being usable for these groups are required to create suitable businesses towards Blue-Green Economy.

The first category is based on business tasks:

1. Energy
2. Agriculture and Environmental
3. Health, Social Welfare and Insurance
4. Logistics, Mobility and Transportation
5. Procurement
6. Hotel and Tourism
7. Construction and Manufacturing
8. Education and Research
9. Telecommunication
10. Digitalization, IoT and Smartness
11. Finance and investment
12. Automotive and Machinery

The second category is based on kind of services that SMEs are given to their customers:

A. Productive
B. Service Based
C. Contactor

These two categories could integrate in Matrix path and according to this fact, models towards Blue-Green Economy could be gained.

<table>
<thead>
<tr>
<th>SMEs</th>
<th>Productive</th>
<th>Service Based</th>
<th>Knowledge Based</th>
<th>Contactor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Energy</td>
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<tr>
<td>2. Agriculture and environmental</td>
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<tr>
<td>3. Health, social welfare, and insurance</td>
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<td>4. Logistics, mobility and transportation</td>
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<td>5. Procurement</td>
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<tr>
<td>6. Hotel and Tourism</td>
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</tbody>
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Based on this table, different models could be designed in order to achieve Blue-Green Economy through successful businesses. In following text, different models concerned on designing proper organizations specially SMEs towards Blue-Green economy are mentioned.

In each business good thoughts and good words are needed to gain good service and products. This model is derived from Zarathustrian philosophy. The below figure declares how Zarathustrian philosophy could be innovative technique in creating successful business:

Figure 11: Developing Business Plan through Zarathustra Faith
(Hamid Doost Mohammadian, 2001)
The other model is about how these types of businesses could influence on improving value of service providers:

![Diagram of Types of Business Sectors](image)

**Figure 12: Types of Business Sectors**  
(Hamid Doost Mohammadian, 2017)

### 3.3 Towards Blue-Green Economy through SMEs

Blue-Green Economy is a path to improve quality of life and livability as well as economic situation of a country. Therefore, Blue-Green Economy is the best solution to create modern sustainable and livable counties in order to make the world as a better place for living.

To make the world as a better place for living, seven pillars of sustainability are needed. Blue-Green Economy could make these seven pillars be growth in order to achieve sustainable
development. Furthermore, sustainable development is a path to not only deal with global challenges, but also to make the world more sustainable and livable. So, Blue-Green Economy is an innovative way towards improving sustainable development, even making the world as better place for human's beings.

As SMEs are formed more than 90% of businesses of each country, even economic backbone of countries; they play important roles in economic situation of countries. Fundamentally, SMEs are fundamental and vital tools that each country needs to develop such economy. Therefore, strategies and solutions are required to create appropriate global SMEs in order to develop Blue-Green Economy as well as improving livability and quality of citizens' life in urban areas. These privileges could create sustainable and livable world for present and upcoming generations.

Each SME has typical sectors that could impact on successfulness, productivity and efficiency of it towards gaining Blue-Green Economy.

![Figure 3.13: Typical SMEs Details](image)

Qualified and successful SMEs based on specific characters that were mentioned in previous chapters; are needed to cultivate Blue-Green Economy. In other words, SMEs founded on traditional strategies would not be useful, SMEs based on smart and innovative strategies are required to achieve such kind of Economy. Generally, new generation of SMEs such as SME 4.0 would play roles in creating Blue-Green Economy.

Based on SME business models three different kinds of SMEs are existed: Traditional SMEs, Smart Digital SMEs and Smart Innovative SMEs. To develop Blue-Green Economy, inclusive and global SMEs based on smart digital SMEs and Smart Innovative SMEs as well as Blue-Green strategies are needed. In following context, this kind of SMEs that are more effective and productive than current modern generation of SMEs like SME 4.0 are introduced an investigated.

The below figure presents three different of current SME business models:
As urbanization is growing rapidly, SMEs are needed to be kept up with humans' demands in order to create successful businesses. Therefore, new generations of SMEs like SME 4.0 are required to be able to align with rapid urbanization as well as developing Blue-Green Economy. In other words, traditional SMEs could not participate in recent markets as sharp tool to make successful business, even to develop economic sustainability, however, new generations of SMEs are able not only to provide humans' needs, but also develop economic sustainability.

Basically, high technologies such as smartness, digitalization and innovation would play vital roles in creating modern SMEs. Evaluation of industrial ages and technologies create new generation of SMEs that are able to participate in markets, provide humans' needs, being kept up with their demands and cultivate sustainable Economy.

The below figure presents evaluation of the industrial ages and improving technology roles on evolving traditional SMEs towards modern SMEs like SME 4.0.
Figure 15: SME Business Models in the 5th Wave Theory (Hamid Doost Mohammadian, 2010-17)
Fundamentally, appropriate and special business plan is vital to gain smart and global SMEs. To design such business plan, some question must be answered:

![Diagram](image)

**Figure 16: How to Create Appropriate Business Plan for Smart Global SMEs (Hamid Doost Mohammadian, 2017)**

In particular, business plan has crucial role in making successful and global SMEs via being as an enterprise concept for SMEs. Therefore, specific modules should be surveyed in business plan. The below figure presents the most important modules required for smart and innovative SME business plan:

![Diagram](image)

**Figure 17: Revised Version of Business Plan as an Enterprise Concept for SMEs (Prof. Dr. habil Richard Merk and Prof. Dr. Doost Mohammadian, 2018)**

In addition, each business needs to know about challenges and risks confronted with in order to find out how these challenges threaten business values and realize strategies and solutions to reduce challenges and risks impacts. In other words, SMEs should be aware of challenging
aspects of sustainable, smart and innovative business in order to design proper business plan to tackle these challenges and create successful, sustainable, smart and innovative SMEs with high productivity and efficiency. The below table could help SMEs to find out challenging aspects confront with and strive to tackle them.

<table>
<thead>
<tr>
<th></th>
<th>Sustainability Challenges</th>
<th>Smartness Challenges</th>
<th>Innovation Challenges</th>
<th>Financial Challenges</th>
<th>HR Challenges</th>
<th>Challenges of Risks</th>
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<tbody>
<tr>
<td>Value Proposition</td>
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<td>Value Creation</td>
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<tr>
<td>Value Capture</td>
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</tbody>
</table>

*Figure 18: Challenging Aspects of Sustainable, Smart and Innovative SMEs (Prof. Dr. Doost Mohammadian, 2018)*

Besides of proper business plan, different systems are required to gain modern SMEs based on smartness and innovation. The below figure presents all systems needed for creating modern generation of SMEs like SME 4.0:

*Figure 19: Smart SME and Industry 4.0 (SME 4.0) (Prof. Dr. Hamid Doost Mohammadian, 2018)*

Also, digitalization and high technologies are needed to be used in all systems and processes of SMEs to make them modern SMEs. The next figure declares several techniques and equipment’s based on digitalization to develop modern SMEs:
Fundamentally, digitalization play important role in creating modern generation of SMEs. It means that digitalization in all processes, systems and sectors of SMEs are required to improve not only productivity, efficiency and sustainability of business, but also make services and products being aligned with customers’ demands. The below figure shows the sectors that are needed to utilize digitalization in order to improve their processes and functions. Furthermore, it presents that different degrees of digitalization could be used by SMEs and it is better to utilize digitalization not only in high amount, but also in proportion. In other words, this twelve-regular triangle should grow regularly in order to gain the best outcomes.

These strategies, tools and models are needed to create modern generation of SMEs like SME 4.0. In this book authors introduce Blue-Green SMEs as a kind of modern SMEs.
Blue-Green SMEs is a tool to achieve Blue-Green Economy. Besides of all tools and strategies that were mentioned before like proper business plan, utilizing digitalization in different departments of SMEs and others; specific strategies are needed to gain Blue-Green SMEs towards Blue-Green Economy.

Blue-Green SMEs are sustainable, innovative, smart and generally inclusive SMEs that are founded on innovation such as innovative management, innovative processes and etc., sustainable strategies including Blue-Green strategies and policies concerned on economic sustainability, smartness and high technologies. Totally, this kind of SMEs are inclusive ones that are created through all characters mentioned. Such SMEs could develop Blue-Green Economy in urban areas in order to develop sustainability and improve quality of citizens' life.

The below figure presents six special dimensions that are required to achieve sustainable, innovative, smart and inclusive SMEs:

![Figure 22: Towards Sustainable, Innovative, Smart and Inclusive SMEs (Prof. Dr. Doost Mohammadian, 2018)](image)

1. SMEs Acceleration Programs:
   - Acceleration Strategies for SMEs
   - Productive Lifecycle
   - Value Added
   - Economic, Social and Environmental Sustainability Programs

2. Innovative and Technology Upgrade Processes
   - Analysis and Identification of Green Technology
   - Improve SMEs Productivity
Improve SMEs Efficiency
Improve SMEs Environmental and Social Impacts

3. Promotion of Entrepreneurship and Inclusive Business
   Business Model to Create new Opportunities for Entrepreneurs
   Work with Low Income Communities
   Go through of Business Cycle
   To Accelerate and Up-Scale the Impact

4. Capacity Building and Knowledge Transfer
   Training
   Coach Entrepreneurs
   Capacity Building Process
   Coach SMEs Managers
   Improve and Train Leadership and Innovation Skills in SMEs

5. Access to Financial Services
   Financial Sectors
   Research and Training Product
   Business Model for Low Income Populations

6. Knowledge Platform
   Outline Platform Development
   To Capture Information
   Internet of Business (IoB)
   Inclusive Businesses and SMEs
   SMEs Development
Blue-Green SMEs have privileges that are declared in below figure:

![Figure 23: Blue-Green SMEs Advantages (Hamid Doost Mohammadian, 2017)](image)

Fundamentally, Blue-Green SMEs as a modern SMEs could participate in global markets, provide customer needs, being aligned with rapid urbanizations in order to develop sustainability in countries and sustainable development in the world towards making the world as a better place for living. In other words, Blue-Green SMEs are able to achieve sustainable development, even improve livability and quality of life.

Through i-Sustainability Plus and U-DSR introduced by authors successful SMEs could be gained in order to develop seven pillars of sustainability and sustainable development towards sustainable and livable world. The below figure presents how i-Sustainability Plus and U-DSR via Blue-Green Sustainability could develop sustainability and how these dimensions create a loop.
The other model is shown how i-Sustainability Plus Theory and Zarathustrain Philisophy could work together in order to generated path or strategies for SMEs to create modern and successful business:

Fundamentally, digitalization, innovation and sustainable policies are needed to develop modern SMEs like Blue-Green SMEs. Therefore, seven pillars of sustainability introduced by authors, innovation and high technologies could integrate and works together in different departments and processes of SMEs such as HR department, management processes, leadership function, training and education of labors and etc., to create successful, innovative, smart SMEs that are able to participate, compete, survive and grow in global market. In specific, such
SMEs have power to develop not only Blue-Green Economy, but also Blue-Green cities through developing sustainability and improving quality of life.

Through innovation management, seven pillars of sustainability via digitalization index dimensions could evolve start up towards successful SMEs which is based on global, sustainable, smart and innovative businesses. The Below figure presents a model concerned on creating evolving startups to successful SMEs via innovation management, seven pillars of sustainability and digitalization.

![Diagram of Global, Sustainable, Smart and Innovative SMEs](image)

**Figure 26: Global, Sustainable, Smart and Innovative SMEs**
*(Hamid Doost Mohammadian, 2018)*
Besides of all these models that could help SMEs to be improved and developed as modern SMEs, a model that could measure sustainability of SME is mentioned. Based on this model, social sustainability, environmental sustainability and economic sustainability of SME could be measured. In addition, sustainable development, social responsibility, economic efficiency, and social cohesion could be derived from this model. The below figure presents this model:

![Sustainable SMEs with focus on 3D Social, Economic and Environment](image)

**Figure 27: Sustainable SMEs with focus on 3D Social, Economic and Environment**

*Hamid Doost Mohammadian, 2018*

To conclude:

New modern generations of SMEs like Smart Blue-Green SME 4.0 that is introduced by authors in this book, are able to improve economic sustainability, even Blue-Green Economy. Such kind of economy could influence on developing and growing all aspects of sustainability. So, Blue-Green Economy is a path to design Blue-Green infrastructure and cities with high quality of livability. In addition, Blue-Green Economy is able to achieve sustainable development that is one of the most controversial phenomena in recent decades. Therefore, Blue-
Green Economy through achieving sustainable development and dealing with global challenges could make the world as a better place for living. In particular, SMEs are fundamental path to make modern cities like U-DSR towards more sustainable and livable World.

![Diagram](image)

Figure 28: Towards more Sustainable and Livable World through SMEs (Hamid Doost Mohammadian and Rezaie, 2018)
References


Blue-Green Cities: Demonstrating the Multiple Benefits of Blue-Green Infrastructure. New Castle University. Available at: www.bluegreencities.ac.uk


Chivot, E. Livability and Sustainability in Large Urban Regions; Hague Centre for Strategic Studies and TNO: The Hague, Netherlands, 2011.


Doost Mohammadian, H.; Rezaie, F. A Study of Risk Management in Mobility: Key to Provide Comprehensive Blue-Green Sustainable Urban Plan Model to move to Blue-Green Sustainable Mobility in order to create Modern Livable Urban Setting (Case: Germany and Iran).


HerRman, T.; Lewis, R. What is Livability? SCI Research Director; University of Oregon: Eugene, OR, USA, 2017.

Heylen, K. Livability in Social Housing: Three case studies in Flanders, in proceedings of Conference of ENHR for Workshop Residential Environments and People, Ljubljana, Slovenia, 2–5 July 2006.


Strathcona Country’s Economic Sustainability Framework. 2001. Available at: https://www.strathcona.ca/


https://www.accountingverse.com/
https://ec.europa.eu
https://www.energy.gov/
https://www.humanresourcesedu.org/
https://www.td.org/
https://www.WordPress.com
Conclusion

Content

1. Discussion
   1.1 Discussion
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2. Conclusion and Future Scenario
   2.1 Conclusion
   2.2 Future Scenario
1. Discussion

In this section, besides of discussion about SMEs and their roles in future of the world; the most important challenges and solutions that Global SMEs confront with are investigated.

1.1 Discussion

We are living in an era that humanities confront with rapid and unplanned urbanization challenges such as poverty, slum, unemployment, health diseases, insecurity, social instability, economic challenges, climate change, environmental challenges and etc., that threaten not only the future of the world, but also humans being. These challenges will influence on supplying humans' needs towards reducing livability and quality of urban life. In other words, disturbing humans' needs influences on livability and quality of citizen life. So, it is vital to tackle these challenges in order to preserve the world for future generations and improve livability for present generation. Developing sustainability is introduced as the best path to deal with urbanization challenges. Besides of constructions, architects, policy makers, governments and citizens; businesses especially SMEs that make more than 90% businesses play important roles in developing sustainability and future of the world. Generally, SMEs through their privileges such as achieving inclusive globalization and growth of countries, reducing environmental challenges via creating sustainable patterns of production and consumption, utilizing resources in sustainable path and seizing green business opportunities, creating opportunities for employment, innovative solutions and technologies, income growth, supplying citizens' demands and friendly atmosphere towards high socio-economic well-being, improving social sustainability and economic sustainability could develop sustainability in urban areas in order to deal with urbanization challenges and create modern sustainable areas. In specific, modern generations of SMEs like SME 4.0 and Smart Blue-Green SME 4.0 and other kinds of modern SMEs based on sustainability strategies, Blue-Green policies, digitalization, smartness and other tools required for successful business are needed to develop Blue-Green Economy as sharp tool to achieve sustainability as well as create Blue-Green cities. Basically, Blue-Green Economy is a path to design Blue-Green cities towards making the World as a better place for living.

Fundamentally, SMEs could be used as a tool to develop sustainability in countries through dealing with urbanization challenges and improving economic sustainability towards all aspects of sustainability.

Based on authors' view, sustainability could be realized in two aspects:

First Aspect:

Sustainability is concerned on quality of life and livability. Based on this concept, sustainability is a tool to supply humans' needs related to Maslow's hierarchy. It means that, humans' needs concerned on Maslow's pyramid could be obtained through sustainability. In addition, there is a relation among humans' needs, livability and quality of life. Particularly, supplying humans' needs could improve livability and quality of life. Therefore, sustainability would influence positively on livability and quality of life by supplying humans' needs.

Generally, SMEs are able to supply humans' needs through creating new opportunities for employment, green business chances, developing economic sustainability, improving social well-being and etc. in order to enhance livability and quality of life. German SMEs are good example for this aspect. After World War 2, Germany confronted economic and social well-
being challenges that there were significant threats for future of Germany. Germany governments utilized proper strategies, policies, solutions and paths to create new livable country. German SMEs are one of the main solution play important roles in making Germany sustainable and livable after WW2. German SMEs follow specific strategies that make them successful such as:

- **Internal secrets:**
  1. Innovative spirit-innovation-driven enterprises
  2. Flexibility
  3. Flexible work force
  4. SMEs think in generations, not quarters
  5. Loyal, well trained staff
  6. Conservative financial conduct
  7. Hidden champions
  8. Regionally embedded but internationally oriented
  9. Vocational training

- **External secrets:**
  1. Excellent regional education
  2. Adequate, regional financing, funding
  3. Well-developed infrastructure and high quality of life in rural areas
  4. Effective and competent local administrations

German internal and external secrets via tools required for successful SMEs that were mentioned before; could be used as techniques to create proper SMEs in order to improve livability and quality of life. Fundamentally, SMEs could impact on quality of life and livability through developing sustainability.

**Second Aspect:**

Sustainability is concerned on seven pillars of high sustainability introduced by the authors. SMEs are able to promote high sustainability. In particular, SMEs are fundamental tool to improve economic sustainability through employment, new jobs, improving economic systems, creating sustainable financial systems and economic growth. Economic sustainability could achieve social and cultural sustainability that are related to political sustainability. In addition, educational sustainability and technical sustainability could be improved by enhancing other pillars of sustainability and these six indicators of sustainability are needed for environmental sustainability. Generally, there is a relation among all these seven pillars and they are able to influence on each other. In other words, these pillars are related and influence on each other. Therefore, all these seven pillars are required to gain high sustainability.

In general, there is a bilateral relation between SMEs functions and seven pillars. It means that high sustainability is required for successful SME and successful SME could improve high
sustainability. For instance, educational sustainability is required for education and vocational training to achieve successful SME or SME should use strategies aligned with environmental sustainability and etc. When SMEs use strategies based on high sustainability, they could create sustainable and successful business. It means that there is bilateral relation among high sustainability and SMEs functions. Seven pillars of sustainability create high sustainability that are directly related to humans’ needs. Therefore, high livability and quality of life could be obtained through these seven pillars.

i-Sustainability Plus is introduced as a tool to create SMEs aligned with seven pillars. This theory is based on seven pillars of sustainability, innovation management and high technologies. This theory could influence on SMEs functions and processes in order to achieve high sustainability towards improving livability and quality of life.

Fundamentally, based on both two aspects, SMEs are able to improve livability and quality of life.

As it was mentioned, urbanization challenges are significant threats for future of the world and humanities. So, it is vital to deal with these challenges in order not only to maintain the world for future generations, but also to enhance livability of the world for present generation. Creating modern sustainable livable urban areas could change the world and make it as a better place for living. Therefore, SME could be introduced as tool to develop sustainability in order to make the world as a better place for living through creating such modern areas. So, it is vital to find out strategies, policies and solutions to create successful SMEs as path for designing modern urban areas. In this book, some models like i-Sustainability Plus theory are declared as paths to create successful SMEs. In addition, policies of German SMEs could be used as proper techniques for SMEs. In particular, strategies and policies concerned on tools required for effectiveness and profit of SMEs like proper management, risk management, cultural management, education and vocational training, expert, knowledgeable and intellectual capitals, innovation and high technologies could influence on SMEs processes and functions. In other words, these tools are necessary to create successful SME with high profit and effectiveness.

Fundamentally, SME is a tool to improve quality of life and livability in urban areas in order to make the world as a better place for living.

1.2 Challenges and Solutions

The main challenge that SMEs confront with are achieving sustainable development and participating in global market. These challenges are created through restrictions, obstacles that the main of them are: competition, political factors, social challenges, cultural norms, educational factors, technical challenges, economic problems, challenges concerned on utilizing technology and innovation.

It is vital to find out solutions, strategies and policies to struggle with these challenges in order to create successful SMEs based on Blue-Green Economy. Fundamentally, models and strategies that are able to make Blue-Green Economy are the best solutions to deal with challenges that SMEs are faced with. These strategies are concerned on proper management, risk management, leadership, using innovative solutions, utilizing solutions and strategies based on high technology, proper education and vocational training in order to train expert, knowledgeable and intellectual capitals towards Blue-Green Economy.
In addition, strategies, paths, and policies that are used by successful countries in SMEs could be solutions to create successful SMEs towards Blue-Green Economy. For instance, German SMEs policies such as easy access to finance, proper education system, qualified and sufficient social capital, innovation, flexibility, hidden champions, well developed infrastructure, industrial clusters and global value chain; UK SMEs strategies including proper leadership, management and digital Skills, focus on scales up, government supports and advices; and Danish SMEs strategies like utilizing high technologies, digitalization and innovation, proper financial system and short time and process to set up new business; could be used as strategies and solutions by other countries to start up successful small and medium enterprises as backbone of a country towards sustainable and livable country.

The below figure presents the challenges and solutions that SMEs confront with:

**Figure 1: Challenges and Solutions**
(Hamid Doost Mohammadian, 2017)

2. Conslusion and Future Scenario

In this section, a conclusion and suggested future studies are declared.

2.1 Conclusion

We are living in an era that rapid and unplanned urbanization causes global challenges such as poverty, slum, health diseases, insecurity, economic problems, unemployment, educational challenges, social instability and environmental challenges. These challenges are significant threats for livability of the world for present generation and future generations. So, it is vital to find out solutions to deal with them. Sustainable development is introduced as the best solution to deal with these challenges.

Sustainable development is not only able to tackle urbanization challenges, but also create modern sustainable and livable urban areas with high quality of life.
There are different paths to achieve sustainable development. In this book, roles of SMEs in developing sustainability was declared. The below conclusions are realized:

- There is no specific definition for Small and Medium sized enterprises. The most famous definitions are introduced by OECD and EU.
- Global SMEs are SMEs that work not only nationally, but also participate in business internationally. Global SMEs are required specific attributes besides of general feature of SMEs.
- Global SMEs confront external barriers like procedural barriers, governmental barriers, business environment barriers, language and cultural barriers, tariff and non-tariff barriers; internal barriers such as informational challenges, human resources barriers, financial barriers, product and pricing barriers, delivery and advertising barriers that make challenges for SMEs to participate in global market.
- SMEs play important roles not only in economic growth but also in developing sustainability of countries.

The most important privileges of SMEs are:

- Achieving inclusive globalization and growth of countries
- Struggling with economic challenges that countries confront with such as low growth, weak trade and investment, and rising, or persistently high inequality through wider eco-system of firms, digital economy, creating opportunities for new jobs and globalization.
- Reducing environmental challenges through creating sustainable patterns of production and consumption, utilizing resources in sustainable path and seizing green business opportunities
- Creating opportunities for employment, innovative solutions and technologies, income growth, supplying citizens’ demands and friendly atmosphere in order to improve socio-economic well-being.
- Enhancing social sustainability in countries through creating opportunities to scale up, accelerating innovation, facilitating spill-overs of technology and managerial know-how, broadening and deepening the skill-set, and enhancing productivity.
- Developing economic sustainable development through creating employment, wealth, alleviating poverty and income generation.
- Participating in global economy in order to enhance economy systems of a country
- Improving livability and quality of life in each country through supplying humans’ needs and developing sustainability.
- Creating stable situation of living in countries through its benefits and developing sustainability
- Global SMEs through accessing global market could create high quality of livability in countries besides of the other privileges that SMEs have.
- SMEs are able to develop sustainability in countries through their privileges.
- Based on relation among sustainability, quality of life and livability; SMEs could improve quality of livability and life through developing sustainability.
To achieve successful global SMEs in order to create sustainable countries with high quality of livability and quality of life, educated and skillful capitals are required. In other words, global SMEs needs new academic training and vocational education as tools to grow up professional capitals in order to gain successful results.

Developing business plan including enterprise concept, developing this concept, business plan, implementing and developing business plan are required to achieve successful SMEs.

Proper risk management including risk management, international management, cross cultural management and international cutting edge management, behavioral economics in SMEs, innovation, innovation management, innovation processes, financial innovation, innovative techniques like TRIZ and IMP3rove, utilizing high technologies such as digitalization, smartness, networks, E-business and E-commerce, knowledgeable, expert and intellectual capitals through education and vocational training; are fundamental tools to design business development towards successful SMEs.

Generally, strategies, policies and solutions based on above tools are required to create successful SMEs.

Successful SMEs are aligned with sustainability and sustainable development. In other words, successful and sustainable SMEs are needed to gain sustainable development in countries.

The authors introduced i-Sustainability Plus theory as tool to achieve successful SMEs that are aligned with sustainability. This theory is based on high sustainability, innovation management and high technologies. High sustainability is introduced by the authors that is created through seven pillars such as economic sustainability, political sustainability, educational sustainability, technical sustainability, cultural sustainability, social sustainability and environmental sustainability.

2.2 Future Scenario

Nowadays, global challenges not only threaten livability and quality of life at present, but also there are significant threats for future of the world and coming generations. So, it is vital to deal with these challenges. As it was mentioned sustainable development is the best solution to struggle with these challenges. In this book, successful SMEs through creating sustainable economic and improving other pillars of sustainability are able to enhance sustainable development in countries. Besides of this technique, other solutions such as ubiquitous sustainable energy management, smart and sustainable mobility, smart and sustainable cities, power of cultural dimensions in creating sustainable and livable urban areas could be used as tools to improve livability and quality of life in order to make the world as a better place for living. These solutions could be introduced as future scenario that they will be realized in future studies and books.
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