

Entrepreneurship, sustainable development and global entrepreneurship index

Dr. Naghmeh Pourfathy

PhD in monetary and international economics
from Shahid Beheshti University

Naghpoor61@gmail.com

Abstract:

Currently, the most important challenge facing advanced countries is to increase productivity in order to maintain common living standards. On the other hand, poor countries seek to create new job opportunities and reduce unemployment in their countries. One of the most important goals of contemporary economies is to determine the factors affecting economic growth. The traditional neoclassical theory believes that the economic growth of a country is determined by the supply of labor, capital and the level of technology available in that country. While today, entrepreneurship is a powerful force in stimulating innovation, increasing productivity, creating jobs and economic growth. In other words, entrepreneurship is the ability to create opportunities to produce goods and services in a stable period of time. Sustainable development and entrepreneurship have always been in the center of attention so that entrepreneurship is known as the main channel of sustainable production and processes. Entrepreneurship for sustainable development is a multi-dimensional phenomenon that connects the social, environmental and economic dimensions between entrepreneurial processes, market developments and also social developments in the big box. The entrepreneur creates and develops an activity through creative ideas, and with the growth of the business, in addition to

2- Entrepreneurship Definition

The term entrepreneurship comes from the French word "entreprendre," which means commitment, and in the field of business, it means starting a new activity. There are two types of entrepreneurs:

generating income, it plays a key role in economic growth. By identifying the business needs of the society, the entrepreneur assumes the responsibility of the main business idea to start a new business. One of the solutions for job creation is the combination of entrepreneurship and innovation. In addition to having educated and creative human capital, economies also need entrepreneurs. This article tries to address the role of entrepreneurship and entrepreneurship education in achieving economic growth and sustainable development.

Keywords: entrepreneurship, the role of entrepreneurship in economic growth, entrepreneurship education, sustainable development, global entrepreneurship index

1-Introduction

Sustainable development has emerged as a significant and even imperative concept for businesses and politics. Awareness and attention to environmental issues such as ecosystem destruction and climate change lead to fundamental and major changes in the way natural resources are used and energy is produced. At this stage, entrepreneurship is increasingly recognized as an important channel for creating transformation in sustainable products and processes. Despite the promise of entrepreneurship to enhance sustainable development, there is uncertainty about the nature of the role of entrepreneurship in sustainability and how it manifests. Entrepreneurship has long been recognized as an important tool for societal transformation, especially during the transition of the economy from one technological era to another. While there are supportive views on the essential role of entrepreneurship in transitioning to a more sustainable society, there are also major gaps regarding whether this process is truly evident or not.

2-1 Repetitive entrepreneur: A person who creates a new business similar to businesses that have existed before.

2-2 Innovative entrepreneur: A person who initiates a new job, a new product, a new process, or a business with a new structure.

Entrepreneurship has two behavioral and occupational dimensions with the following meanings:

- Ownership and management of a business and is essentially a professional (occupational) concept regarding entrepreneurship, such as job creation.
- Entrepreneurial behavior for economic opportunities and is a behavioral concept.

Entrepreneurship involves the capacity and willingness to develop, organize, and manage a business, along with accepting all associated risks, with the aim of making a profit. The most apparent example of entrepreneurship is creating a new job.

3- The origin of the word entrepreneurship

In early writings up until the 20th century, entrepreneurs were referred to as adventurers or committed individuals. The term "entrepreneurship" was introduced by Richard Cantillon. It is worth noting that early writings on entrepreneurship were more descriptive than theoretical. Research on entrepreneurship, particularly by management specialists, psychologists, and sociologists, has expanded significantly since the 1980s. This research focuses on the following main areas, which are of particular interest to scholars:

3-1- Differences between individuals: Differences in personal characteristics such as age, education, experience, social status, and psychology, along with individuals' internal inclination toward entrepreneurship, are related to their likelihood of success in the field. Shane (2003) believes that the likelihood of becoming an entrepreneur is higher for people with higher education than for the general public. Robinson and Sexton (1994) argue that the number of years spent in education is significantly correlated with self-employment. Bitsch (1995) found that individuals with university degrees are very likely to be self-employed. Additionally, the relationship between individuals' age and the probability of forming a new business is inverse U-shaped. Entrepreneurship initially increases with age due to an increase in experience and then decreases due to the opportunity cost and uncertainty insurance debate.

3-2- Environmental factors: The capital-intensive nature of the industry leads to a decrease in the formation of new businesses due to increased entry costs. A low number of businesses in an industry indicates a lack of opportunity to create value or a lack of market information, while an increase in the number of businesses is a motivation for entry into the business to obtain resources, despite the increase in competition.

3-3- Strategy and organization: Financing methods are an entrepreneurial strategy that has received attention. Consistent with Knight's argument (1921), self-financing is necessary for overcoming the ethical hazard of risk, and successful entrepreneurs are more likely to use personal resources to finance their ventures.

4- Environmental entrepreneurship

There is a general consensus that entrepreneurship has contributed to the development of the modern world and economic progress. Social welfare increases when innovative processes are implemented, a knowledge-based economy exists, and principles of sustainable development are followed. Entrepreneurship is a broad and multidimensional concept that is difficult to define. Robert Hisrich and Michael Peters (1992) define entrepreneurship as the process of creating something different with value, with time, financial support, social risks, and personal rewards and satisfaction. For the development of entrepreneurship, not only economic and political factors are important, but also cultural factors such as values, beliefs, traditions, family, social relationships, and environment.

5- Entrepreneurship education and development of entrepreneurial skills

Edokpolo and Somorin (2017) noted that the goal of entrepreneurship education is to learn new skills in a way that produces new products or creates changes in existing products, in order to solve problems and discover new opportunities. Dugan (2015) believes that entrepreneurship education is an important tool for encouraging entrepreneurial responsibilities because education provides a skill that individuals will use to start a business. Suleiman and Van Fossen (2013) believe that entrepreneurship education plays a key role in

equipping undergraduate students with entrepreneurial skills for starting a business after graduation. Entrepreneurship education is essential for developing entrepreneurial skills in individuals in order to start a business. Entrepreneurship education develops skills that individuals can use to participate meaningfully in all aspects of life, create valuable items, and achieve financial independence or personal satisfaction, or both.

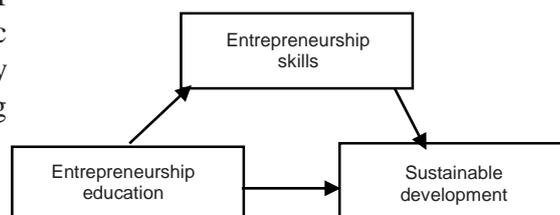
6- Emergence and integration of sustainable development

The term sustainable development was first introduced at the United Nations Conference on Human Environment in 1972, and later gained popularity through the World Commission on Environment and Development's report in 1987. In this report, sustainable development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs, and emphasizes the dynamic aspect of sustainability. It is important to note that natural resources are limited and human welfare depends on living within these limits. Sustainable development demonstrates that renewable resources should be used wherever possible, and non-renewable resources should be recycled or used less to increase their viability for future generations. The intergenerational aspect of sustainable development highlights the convergence of diverse social, environmental, and economic goals. In the past, the environment and economy were primarily seen as separate and competing domains.

7-Entrepreneurial skills and core values of sustainable development.

Entrepreneurial skills are the competencies needed to start and run a business. Participation in the skills for the 21st century has categorized entrepreneurial skills as the main skills. Life and work skills, learning and innovation skills, information, media, and technology skills are among the categories of entrepreneurial skills. The Initiative for Communities and E-Schools (2013) shows that entrepreneurial skills are often classified among non-cognitive skills. Non-cognitive skills are considered as characteristics and behaviors (soft skills). Entrepreneurial skills

can be defined through things such as communication, creativity and innovation, teamwork and collaboration, critical thinking and problem-solving, initiative and self-direction, management and leadership, flexibility and adaptability. Possessing these skills is an opportunity to create income. In 2016, the United Nations identified entrepreneurial skills as a key element in promoting social integration and reducing inequality and recognizes entrepreneurial skills as a catalyzer for social outcomes. Enhancing productive capacities and strengthening business creation can provide opportunities for all people to participate and benefit from sustainable development. Development has different meanings, including interpretations and theories of different scientists. Development is a specific process of promoting well-being, self-esteem, and freedom. Combining sustainability and development together is defined as the continuous expansion of an economy with progress in social, economic, and political life for current and future generations. Therefore, sustainable development is not a static or balanced state, but a lifelong evolutionary process in which individuals take actions that result in development that meets their current needs without jeopardizing the ability of future generations to meet their needs.



Graph1: James Edomwonyi Edokpolor

8- Importance of entrepreneurship in the economy:

One of the most important objectives of modern economies is to identify the factors that influence economic growth. The traditional neoclassical theory believes that economic growth is determined by the supply of labor, capital, and technology level (Todaro and Smith). Some neoclassical economists, such as Aderich and Kilbach, believe that technology

and free market policies of the government will have a significant impact on economic growth. Entrepreneurship is a powerful force in stimulating innovation, increasing productivity, creating jobs, and economic growth. Many agree that entrepreneurs play an important role in economic growth, but evidence shows a low correlation between economic growth and the number of ordinary entrepreneurs, while innovative entrepreneurs make a fundamental difference in the growth of countries. Zoltan Acs (Director of the Global Entrepreneurship Research Association) in articles titled "How Entrepreneurship is Good for Economic Growth" distinguishes between forced entrepreneurship (having no other choice) and opportunity entrepreneurship. He has concluded from analyzing data collected from 11 countries by the Global Entrepreneurship Monitor that forced entrepreneurship has no effect on economic growth, while opportunity entrepreneurship has a significant effect on economic growth and development. After the fall of the Berlin Wall, many non-economically viable factories in Central Europe were shut down, and economies moved towards a global integrated economy. Individuals who worked in factories in former socialist countries were the productive members of society, and after the closure of one factory after another, they had no choice but to be self-employed, which is a form of forced entrepreneurship.

9- A Brief Overview of Entrepreneurship Index

The Global Entrepreneurship and Development Institute (GEDI) is a non-profit organization that conducts research on the relationship between entrepreneurship, economic development, and success. The institute's important project is the "Entrepreneurship Index," which consists of three main sections: entrepreneurial attitude, entrepreneurial activity, and entrepreneurial aspiration, all based on 14 pillars.

9-1 Entrepreneurial Attitude

- **Opportunity Perception:** This pillar measures the potential opportunity perceived by the population through the size of the domestic

market and urbanization rate. Understanding potential opportunities is essential for starting entrepreneurial activities. This pillar includes the variable of opportunity identification, which is measured by the percentage of the population that identifies opportunities to start businesses in their living area. However, the value of these opportunities depends on the size of the market. The institutional variable of market aggregation is composed of two smaller variables, the size of the domestic market and the level of urbanization. The urbanization variable indicates which of the opportunities have a better outlook in developed urban areas compared to rural areas. Market aggregation is calculated by multiplying the size of the domestic market by the percentage of urban population.

- **Start-up Skills:** Starting a successful business requires essential skills. It is necessary for entrepreneurs to have the necessary skills to start a business. The perception of skills is measured by the percentage of the population who believe they have the necessary skills to start a business. In developing countries, many people acquire these skills in the work environment through simple businesses and trial and error, while in advanced countries, people acquire business start-up, operational, management, and required skills through formal education and training. Therefore, education is important for individuals to acquire these skills.

9-2 Entrepreneurial Ability

- **Opportunity Start-up:** This component measures the initiation of activities by individuals who are encouraged by available opportunities but face regulatory obstacles. The motivation of an entrepreneur to start a business is an important indicator of quality. Opportunity-oriented entrepreneurs believe that to be better prepared, they need to pursue skills beyond what is essential for an entrepreneur. Motivation for an opportunity is defined as a percentage of total entrepreneurial activities (TEA) that have been initiated to take advantage of good opportunities, increase income, or achieve personal goals and is in contrast to activities initiated by individuals who have no other choice for work. The institutional variable

used here is business freedom, which is a subcategory of economic freedom. The economic freedom index is appropriate for covering the overall pressure of regulations and the efficiency of government regulations in affecting the start-up of businesses and businesses in operation.

- **Technology Absorption:** In modern knowledge-based economies, information and communication technology plays a fundamental role in economic development. All sectors do not provide equal opportunities for businesses to stay and realize growth potential. The technology level variable is a measure of businesses located in technology sectors. The institutional variable for technology absorption is a measure of a country's capacity to absorb technology at the firm level and is provided by the World Economic Forum. The dissemination of new technology, as well as the ability to absorb it, is crucial for innovative businesses with high potential for growth.

- **Human Capital:** Having high-quality human capital is essential for high-level innovative businesses and requires trained, experienced, and healthy workforce to continue to grow.

- **Competition:** Competition measures the uniqueness of the product or business market, accompanied by market power of existing businesses and business groups. The diversity of competitors is defined as the degree of heterogeneity in the products, markets, and strategies of competitors in the industry. The institutional variable used in this regard is the extent of market dominance, which measures the extent to which dominant firms can set prices and influence the market.

9-3 Entrepreneurial inclination:

- **Product innovation:** New products play a fundamental role in the economy of all countries. While rich countries have been the source of more new products for years, today developing countries are producing products that are significantly cheaper than their western counterparts. New products are an indicator of a country's potential for producing new products, as well as for accepting or imitating existing products. To quantify the potential for

innovation in new products, it seems that a institutional variable related to technology transfer and innovation would be appropriate. Technology transfer is a complex criterion as to whether the business environment allows for innovation to create new products or not.

- **Process innovation:** The use or creation of new technology is another important characteristic of high-growth businesses. New technology is defined as a percentage of businesses where basic technology has been used for less than 5 years. Most entrepreneurial businesses do not use only the technologies they have created themselves. While many businesses in developing countries may use the latest technology, they are more inclined to buy or copy it. The appropriate institutional variable used here is research and development. Gross domestic expenditure on research and development is the percentage of gross domestic product spent on research and development, which is reported by the Organization for Economic Cooperation and Development. It is clear that research and development alone cannot guarantee successful growth, and without regular research activity, the development and implementation of new technologies for future growth is unattainable.

- **High Growth:** This indicator is a combination of the percentage of high-growth businesses that have planned to employ at least 10 people and have grown more than 50% in 5 years.

- **Internationalization:** Internationalization is one of the important determining factors of growth. The index used for internationalization is exports. However, institutional infrastructure is also important. A country's openness to international entrepreneurs can indicate its global status.

- **Risk Capital:** This section combines two types of financing: informal investment and the depth of the capital market (DCM). Informal investment is the percentage of informal investors aged 18-64, which is multiplied by the average investment rate of other individuals in new businesses. While the rate of informal investment is high in institution-based economies, the rate of informal investment is significantly high in innovation-oriented and

performance-oriented countries. The institutional variable here is DCM, which is a complex indicator of the size and liquidity of the capital market, initial public offerings, mergers and acquisitions, and credit and debt market activities.

10-Summary:

The relationship between entrepreneurship, innovation, and sustainable development is a topic of interest to policymakers. Entrepreneurship is an important channel for creating a more sustainable community, where entrepreneurial companies are increasingly driving innovation and competitiveness. Sustainable development in businesses means aligning strategies and activities towards meeting the needs of stakeholders and even the organization itself. Supporting and enhancing human and natural resources for the future is necessary. Entrepreneurship education can turn university graduates from employees into employers. The positive relationship between entrepreneurship education and entrepreneurship goals is an opportunity to achieve economic prosperity and self-esteem towards achieving sustainable development. In other words, entrepreneurship affects business sustainability by identifying needs, creating sustainability as a fundamental principle, conducting research, innovating, diverse leadership, setting diverse and long-term vision, and promoting flexibility infrastructure, widespread industrialization, and sustainable innovation. However, entrepreneurs also need a desirable and capable business environment for their growth and increased effectiveness.

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