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# Effects of taxation on social innovation and implications for achieving sustainable development goals in developing countries: A literature review

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## ABSTRACT

In developing countries, taxation is perceived as a brake on economic growth. Indeed, taxes in most of these countries are not sufficiently adapted to the specificity of the taxpayer and often do not consider the weak administrative capacity of the countries in the region. In this context, reforms have been initiated over the last decade to create tax environments that encourage savings, investment, entrepreneurship, and social innovation. This study provides an overview of research on the effects of taxation on social innovation and the corresponding implications for the achievement of Sustainable Development Goals (SDGs) in developing countries, taking three approaches: thematic, chronological, and methodological. Most studies agree that high taxes in business undermine social innovation and thus the achievement of SDGs, as social innovation is known to be a driver of most SDGs and business the vehicle. The majority of the selected studies used primary data collected from samples whose representativeness with respect to the population concerned (notably businesses) is still not explicitly justified.

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## 1. Introduction

The accomplishment of the Sustainable Development Goals (SDGs) is a global priority. Social entrepreneurship, which marks an important evolution toward responsible and sustainable enterprise, realizes a union between innovative business creation and organizational transformation with socially inspired values. In this context, in September 2015, the United Nations adopted 17 global goals, the SDGs, defined as socially equitable, environmentally sound, prosperous, inclusive, and predictable development as part of the 2030 Agenda, following the Millennium Development Goals during the period 2000–2015, which included eight goals (including the reduction of poverty, hunger, disease, and access to education). With social enterprise as an alternative for credible development, the central concern is how we can promote prosperity while protecting the planet (Table 1).

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**Table 1**  
Role of Social innovation in Achieving Sustainable Development.

Dimension of Sustainable Development	Contribution to Social Innovation
<b>Economic</b>	Social innovation stimulates economic growth by creating jobs, promoting decent work and sustainable agriculture, and encouraging innovation.
<b>Social</b>	Social innovation can make a positive contribution to “promoting social cohesion, reducing inequalities and expanding opportunities for all, including women, youth, people with disabilities and the most vulnerable.”
<b>Environmental</b>	Social innovation can aid in addressing environmental concerns via the introduction of new climate change adaptation and mitigation technologies and measures of resilience as well as by environmental promotion of consumption patterns and sustainable practices.

Source: UN General Assembly report on entrepreneurship for sustainable development adopted on December 21, 2016.

According to the United Nations (2020),<sup>1</sup> 470 million jobs per year will be needed worldwide for new entrants to the labor market between 2016 and 2030. At the same time, the unemployment rate in 2017 was 5.6%. Globally, 61% of workers held informal jobs in 2016. The same source informs us that the gender pay gap worldwide is 23%, and without decisive action, it will take another 68 years to achieve equal pay. While businesses have become important players in the global economy over the past decade in that they generate many jobs for thousands of people, multiple challenges such as taxation remain, especially in developing countries, preventing them from making necessary societal changes (Gbato, 2017).

Therefore, social innovation remains largely unnoticed in developing countries, and there seems to be a lack of research justifying the importance of defining and implementing key policies and strategies to integrate SDGs into business support models. Therefore, it is extremely important to understand the real impact of taxation on social innovation and its implications for achieving SDGs in developing countries, as failure to do so would hinder the exploration of new ways of thinking and acting to bring about necessary societal changes (Angelidou and Psaltoglou, 2017) and overcome the major development challenges of our time (Max-Neef, 2005). This study fills this gap by summarizing what we know so far about why developing countries should accelerate their march toward social innovation.

Accordingly, this study addresses the following research question: What is the evidence in the literature on the effects of taxation on social innovation and its implications for achieving SDGs in developing countries? To this end, three main concepts are articulated: taxation, social innovation, and SDGs, in providing an overview of the literature on the challenges faced by developing countries in fostering social innovation to achieve the SDGs. The aim of the study is to enable businesses and other stakeholders in the entrepreneurial ecosystem to scale without compromising sustainability or sacrificing their values. This includes understanding the interactions between research, development, and the emergence of ideas and social innovations; the challenges of the national fiscal and regulatory framework; the scaling process with a focus on success and failure factors; and an analysis of the role of public policy.

The remainder of this paper is organized into three main sections. The methodology is described in Section 2, while Sections 3 and 4 present the nature of the relationship between corporate taxation and social innovation in developing countries and outline the challenges of social innovation for social entrepreneurship and the achievement of SDGs in developing countries.

## 2. Methodology of the literature review

This literature review focuses on studies on taxation and innovation collected after a thorough search of multiple scientific sources: *International Journal of Economics; Innovation and Development; Journal of Development Studies; Journal of Business and Management Studies; Journal of Small Business and Enterprise Development; Journal of Financial and Quantitative Analysis; Elsevier; International Journal of Management; Journal of Entrepreneurship; Sustainability; Journal of Islamic Economics; Journal of Economic Literature; International Journal of Organizational Analysis; Economic Journal; Journal of Enterprising Culture; Journal of European Industrial Training; International Journal of Organizational Science; and Journal of Business & Social Science*; and, in addition, we consulted research papers and reports from reference institutions and universities. The selected studies covered all developing countries worldwide. As a result, this review identified relevant articles that articulate the importance of social innovation in social enterprise incubation practices in developing countries and the challenges faced by enterprises.

Given that there is still no consensus in the literature on how to conduct a systematic review (Asongu and Odhiambo, 2019), some authors note the need to consider all the information in a given study (Florax et al., 2003) while others argue that only one observation per study should be considered (Stanley, 2001). However, this study combines the methodological, thematic, and chronological approaches to writing a review of the literature. The chronological approach highlights the evolution of opinions or trends over time, while the thematic approach examines the popularity of theories and their evolution over time and the methodological approach highlights the main econometric and statistical models and techniques used to process the data. Our approach to this systematic review is consistent with extant studies on surveys and literature reviews (Asongu, 2016; Asongu et al., 2017; Asongu and Nwachukwu, 2018).

<sup>1</sup> <https://www.un.org/sustainabledevelopment/wp-content/uploads/2018/09/Goal-8.pdf>.

### 3. Corporate taxation and social innovation

According to [Weckel \(1983\)](#), innovation depends above all on an adequate entrepreneurial environment and favorable tax regulations for firms that develop it. Similarly, for [Bird and Zolt \(2008\)](#), the development of innovation, which consists of the creation and adoption of new technologies and methods, requires a favorable business climate and a favorable tax regime. In a world increasingly exposed to climate change and other environmental challenges, innovation offers a means to achieve local and global environmental goals at a lower cost. Therefore, environmentally friendly taxation (e.g., innovation taxation) would provide incentives for companies to significantly reduce their greenhouse gas emissions and/or offer consumers more environmentally friendly (eco-responsible) products/solutions in line with SDG13 ([OECD, 2010](#)). In other words, a tax system that promotes environmental friendliness and research would encourage the development and diffusion of new technologies and practices within companies (innovation).

In this context, business incubators are responsible for ensuring that the tax relief available to companies effectively supports the development of innovative activities. Indeed, the support that enterprises receive from these structures generally consists of a set of tools necessary for the deployment of the entrepreneurial process ([Sammur, 2003](#)): resources facilitating the emergence and development of enterprises, such as the provision of offices, shared services, and entrepreneurial assistance ([Hackett and Diltz, 2004](#)), relationships and/or mediation providing material and immaterial resources useful in entrepreneurship ([Pluchart, 2013](#)), *inter alia*. Being present both before and during the life of the company, these structures have the merit of providing project leaders (incubators or entrepreneurs) with a multitude of services, enabling them to transform their innovative ideas into successful enterprises.

According to [Masmoudi \(2007\)](#), the activities normally attributed to business incubators in the incubation phase relate specifically to market research, feasibility assessment, profitability assessment, business plan preparation, strategic planning, personal planning, and fundraising support (access to finance). While incubators provide an innovative response to many shortcomings of developing countries' entrepreneurial ecosystems (insufficient public policies, lack of access to finance, lack of entrepreneurial culture, lack of private sector support, *inter alia*), they face many challenges, including taxation. In this section, we examine the theoretical basis for the effectiveness of taxation on the performance of business support structures before reviewing the relevant previous work.

In summary, corporate social innovation is facilitated by firm capabilities in running highly legitimate projects that substitute institutional voids in these economies, attesting to multiple paths that corporations can take to achieve social innovation ([Saka-Helmhout et al., 2021](#)).

#### 3.1. Theoretical basis of the link between taxation and social innovation

Social innovation refers to the process of developing and implementing new, effective solutions to social and environmental problems. Whether they come from national policies or from governmental or non-governmental entities, these solutions must meet current social needs better than what has been done before, and are essential to ensure economic growth. However, neoclassical growth models assign fiscal policy the role of determining the level of output rather than the long-term rate of growth. These models provide the mechanisms by which fiscal policy can determine both the level of output and equilibrium growth rate. These endogenous growth models suggest that taxation can have both negative and positive effects on the growth rate ([Stokey and Rebelo, 1995](#); [Mendoza et al., 1997](#)).

The idea that high taxation negatively affects enterprise development is very old and goes back to [Ramsey's \(1927\)](#) seminal work. He considers the standard assumptions that markets are competitive and without externalities, and that consumer and producer preferences are convex, implying that the market equilibrium is a Pareto optimum (first social welfare theorem). The optimal solution of tax rates on goods, known as the "Ramsey rule," states that tax rates should be high for goods with low price elasticity of demand. Accordingly, if there are goods with zero-price elasticity of demand, then the tax should be directed primarily at them. The logic behind Ramsey rule is that the marginal loss due to an increase in the tax burden must be the same in all markets. If the demand for a good is elastic, then the response to an increase in the tax burden (substitution effect) is large. Therefore, to restore equalization with weakly elastic goods, we must define low tax rates on these elastic goods. This negative effect stems from the modification of individuals' decisions in the direction of sub-optimality.

[Engen \(1996\)](#) identifies five possible mechanisms by which taxes can affect social innovation: The rate of investment can be impeded by taxes, such as corporate income tax, personal income tax, and capital gains tax; taxes can slow the growth of labor supply by distorting leisure choices; they can affect productivity growth by discouraging research and development (R & D) spending; they can cause a flow of resources to other (less taxed) sectors that may have lower productivity, and they can distort the efficient use of human capital by discouraging workers from taking tax-intensive jobs.

[Laffer \(2004\)](#), through his famous formula "Too much tax kills tax," shows that an exaggerated tax destroys the base on which it is applied, and argues that lower taxes encourage the most dynamic enterprises to invest in earning money, as earnings are less affected by taxes. The Laffer curve is based on the assumption that investors invest much more in the case of increased disposable income after tax. Laffer posits that reductions in tax rates can increase revenue by improving collection.

Abdul (2015, 4)<sup>2</sup> argues that “to carry out its responsibilities to citizens and the economy, every country needs resources that must be mobilized through various means, the most important of which are taxes,” and states that a government should impose low taxes to stimulate entrepreneurship and create wealth. He also believes that a high tax rate does not guarantee that the government will maximize tax revenues and collections, as high tax rates tend to dissuade work and encourage tax evasion and avoidance. Individuals may choose to work less if their after-tax income is low, which means fewer savings and investments. Therefore, there is a need to reduce as much as possible the amount of individual taxes levied on those who are able to undertake it, with the aim of enabling those who are psychologically prepared to undertake it. He thus advocates lowering the tax burden on businessmen and producers to encourage enterprises by ensuring greater profits for entrepreneurs and government revenues.

### 3.2. Empirical literature on the effects of taxation in promoting social innovation

While it is recognized that the stimulation of innovation depends on a tax environment that is conducive to business development, very few studies have attempted to empirically verify this link in developing countries. Among the few works that can be found in the literature on these countries, one can cite Gauthier and Reinikka (2006), who examine the impacts of tax reforms on the prevalence of tax evasion and exemptions in Uganda, as well as their effects on the distribution and dispersion of tax burdens. Using least-squares fitting to simultaneously estimate tax burdens, evasion, and exemption patterns on primary data collected from 243 Ugandan firms, the authors show that there is an inverted U-shaped relationship between firm size and innovation development on the one hand, and effective tax rates on the other, such that small and medium-sized enterprises generally reduce their tax payments by resorting to fraud or operating in the informal sector, which is by far more favorable to innovation, while large firms obtain legal exemptions such as temporary exemptions from corporate income tax or reduced rates to finance innovative activities in the public interest. However, the authors arrive at these results without first justifying the representativeness of the sample or the econometric model used. Several authors, such as Shahrodi (2010) regarding Iran, analyze the impact of taxation on firm growth and show that tax policy toward small and medium-sized enterprises does not promote their growth in any way. In other words, a complex and awkward tax system suppresses entrepreneurship and innovation.

According to the African Development Bank's Africa Report (2011), the African legal and regulatory environment is one of the least favorable in the world for social enterprise development and innovation. Cumbersome regulations, complex licensing procedures, and the opacity of tax assessment rules are among the major problems. Introducing one-stop shops for entrepreneurs, setting a reasonable minimum capital requirement for business start-ups, simplifying taxation, ensuring fair competition, and strengthening bankruptcy laws are all useful in helping the private sector grow quickly and prosper.

Korem (2012) assesses the effect of taxation on the growth of Togolese small and medium enterprises (SMEs) in terms of crowding out or complementarity. Using primary data from a survey of 301 Togolese SMEs in the formal sector (the informal sector often escapes taxation) and based on ordinary least squares and logistic modeling, the author arrives at the main results that taxation has a crowding-out effect on the growth of Togolese SMEs and that there is no bell-shaped relationship between taxes and SME growth as predicted by Laffer. The originality of the study is that it considers a representative sample of Togolese SMEs comprising nearly 80% of local firms located mostly in Lomé.

Atawodi and Ojeka (2012) assess and rank the factors that encourage tax non-compliance by SMEs or affect tax compliance in North Central State of Nigeria using primary data obtained from a survey of a sample obtained through a combination of probabilistic and non-probabilistic sampling methods. To obtain a fair representation of the population, both judgmental and random samplings are used in the selection of small and medium-sized enterprises. The authors show that complex filing procedures and high tax rates are the most relevant factors for SMEs' non-compliance in this region of the country; however, the tax compliance of these firms is also conditioned by parameters such as multiple taxations and a lack of appropriate knowledge. They show that if lower taxes are levied on SMEs, leaving them sufficient funds for other activities necessary for business growth, this will afford them better chances of survival in a competitive market. They recommend increasing tax incentives, such as tax exemptions, as they encourage voluntary compliance and attract investors who are potentially viable taxpayers in the future.

Similarly, Saibu (2015) investigated the impact of tax incentives on the industrial growth of sub-Saharan African states, using Nigeria and Ghana as case studies. The study uses the ordinary least squares technique to show with respect to the postulated positive relationship that these African countries do little to achieve a positive effect of tax incentives on economic growth. Siyanbola et al. (2017) use data from sub-Saharan Africa to show that tax policy variables such as distorting taxes have a negative but insignificant effect on economic growth, while non-distorting taxes have a positive but insignificant effect on the economic growth rate.

Koranteng et al. (2017) analyze the relationship between entrepreneurs' subjective views, business growth, tax collection, and tax compliance in Ghana. Using primary data from a survey of 840 registered SMEs in the (then) 10 regions of Ghana, the authors show that SMEs have negative subjective views on their growth, which negatively affects their overall tax perception and compliance with established tax norms and regulations.

<sup>2</sup> <https://www.tuijse.org/content/7-issues/4-volume-2-issue-2/1-m1/24-64-1-pb.pdf>.

Igbinovia and Okoye (2017) examine the perceptions of selected entrepreneurs for Benin and Nigeria to determine their interest in tax burden, tax incentives, and entrepreneurial development in Nigeria. Through a cross-sectional research survey of 140 firms reflecting various levels of preferences, they analyze primary data obtained using Spearman rank correlation and ordinary least squares regression techniques, showing that many respondents confirm that the tax burden discourages entrepreneurship. Furthermore, they confirm the existence of a positive but non-significant relationship between tax incentives and entrepreneurial development in Nigeria.

Khumbuzile and Khobai (2018) examine the taxation incidence on economic growth for the period 1981–2016 in South Africa. Employing the autoregressive distribution lag (ARDL) approach, they confirm the existence of a negative nexus between economic growth and tax revenue in South Africa.

Aribaba et al. (2019) examine the effect of tax policies on entrepreneurial survival in Ondo State, Nigeria. They employed a survey design procedure with a population of 18 local government areas and adopted multi-stage sampling techniques to select a sample size of nine local governments. By estimating the collected data and an ordered logistic regression to test the formulated hypotheses, they find that there is a significant negative effect between taxation and entrepreneurship sustainability, whereas tax incentives and rates have a positive relationship with entrepreneurship sustainability. According to the authors, a favorable tax regime for small and medium-sized enterprises encourages the sustainability of entrepreneurship and reduces social services. The authors confirm the results of Farzbod (2000), who analyses the influence of tax policy on SMEs in Iran and reveals that the problems of SME taxation are mainly related to exorbitant tax rates, low tax incentives, and low efficiency, and that a poorly implemented tax system leads to low productivity. The author recommends the adoption of a tax system that is more supportive of SMEs.

Akanbi (2020) examines the impact of tax collection and incentives for firms to innovate, analyzing annual data for the period 2010–2018 obtained from the Federal Inland Revenue Service and the Central Bank of Nigeria using a multiple regression model. Heteroscedasticity, multicollinearity, and serial correlations were tested to examine the robustness of the model. The explanatory variables selected are tax revenues represented by the total real amount of tax collected, tax incentives represented by foreign direct investment, and direct capital investment as independent variables. Economic growth which is represented by real gross domestic product is the dependent variable. The author shows that there is a negative but insignificant nexus between economic growth and tax revenues, and a negative but insignificant relationship between equity and economic growth. The empirical results also confirm the existence of a negative and significant relationship between foreign direct investment, other forms of capital, and economic growth. The author recommends that the government improves tax collection mechanisms to stimulate economic growth, provide more incentives to growth-enhancing sectors, and evaluate the effectiveness of tax reforms on economic growth.

#### 4. Implications of high taxation for SDGs in developing countries

The objective of this section is to understand the meaning of enterprise creation and support in developing countries in general and their impact on the achievement of SDGs in particular. In 2015, the United Nations General Assembly defined 17 SDGs with 169 related targets to be achieved by 2030. The underlying targets and goals are a relevant part of the 2030 Agenda for Sustainable Development and are built on the 2000 Millennium Development Goals, which were not fully achieved in 2015. Among the goals are SDGs 5, 8, and 9, which call for gender equality, the promotion of sustained and shared economic development, growth, full and productive employment, decent work for all, creativity, and innovation. Entrepreneurship and innovation have been identified as key elements in meeting the challenges of sustainable development. The role of entrepreneurship in achieving sustainability in the three dimensions of SD is as follows:

##### 4.1. The social innovation ecosystem in developing countries

###### 4.1.1. Determinants of social innovation

In his 1911 “theory of economic evolution,”<sup>3</sup> Joseph Schumpeter considers “innovation” to be a “new combination of the company's resources mobilizing its capabilities and knowledge to create something new.” According to the author, the determinants of the probability of innovation can be grouped into three categories: factors specific to the company, determinants linked to ICT,<sup>4</sup> and factors linked to its economic environment. He thus distinguishes between “invention,” which is the discovery of new scientific and technical knowledge, and “innovation,” which is more than a simple modification of the function of production (the introduction of new technical processes, new raw material sources, new products, and new industrial organization forms). In this context, social innovation provides new answers to social needs that are not yet or only poorly met in all sectors. The bearer of social innovation would therefore be a social entrepreneur who is involved in the economic process, inventions resulting from technical exploits, or progress in the potential offered by new markets or new sources of raw materials in order to meet a particular social need. The narrative is consistent with this principle, “without social innovation, the economy is stationary, that is, it functions like a closed-loop reproducing itself in the same way.”

<sup>3</sup> Schumpeter, J. (1911). “Théorie de l'évolution économique: Recherches sur le profit, le crédit, l'intérêt et le cycle de la conjoncture,” Paris, Dalloz, 1937.

<sup>4</sup> Information and communication technology.



Thus, social entrepreneurs draw their resources from social innovation. In terms of social innovation, the variable size of an enterprise is very important; large enterprises are generally in a more advantageous position than SMEs because of their greater capacity to self-finance these activities and/or easier access to the capital market. This effect is even more important when the business environment is characterized by an imperfect capital market. As the size of the company is measured by the number of employees, a positive effect between the number of employees and the propensity of the company to innovate is expected.

Several empirical studies have been conducted to identify the determinants of social innovation in developing countries. These identify several lines of understanding of the factors that are likely to contribute to the accumulation of social innovation capacity. The capacity to innovate is understood as the set of skills and knowledge needed to absorb, learn, and improve existing technologies and create new ones (Lall, 1992). Social innovation allows a company to respond to a little-known or poorly met social need while escaping competition from other types of enterprise by reducing its costs to the point of driving all “non-social” enterprises out of the market (Rahmouni and Yildizoglu, 2011). Of the determinants of social innovation, a distinction is made between those that are internal to social enterprises and those that are external.

#### 4.1.2. Factors internal to social enterprises

Unlike in developed countries, studies on the determinants of innovation in developing countries are rare. Of these, several authors emphasize information and communication technologies but neglect the diversity of social innovation practices and the factors likely to influence their adoption within SMEs. Among these authors, we cite Safoulanitou et al. (2013), who identify the drivers of social innovation within SMEs in Douala (Cameroon), Brazzaville (Congo), and Kinshasa from a joint survey of 256 SMEs in the respective cities—100 SMEs each in Kinshasa and Brazzaville and 56 in Douala. However, the explanatory factors of this innovation are related to the size of the company, managers' skills, and ICT use. The authors recommend that the governments of these countries implement mechanisms to finance social innovation, improve the business climate, promote the adoption of ICT, and encourage the training of SME managers.

El Eljouis and Abassi (2019) analyze the main determinants of innovation, including social innovation, in four sub-Saharan African countries (Kenya, Rwanda, Namibia, and Senegal) using data from the World Bank's investment climate surveys. They estimate the effect of the traditional determinants of innovation by highlighting the skills problems that represent a major constraint on innovation in these countries. The authors show that in the African countries studied, innovation is far from being exclusively the result of R&D activities, but also manifests itself through the adoption, adaptation, and reproduction of methods and technologies created elsewhere via mechanisms linked to learning and assimilation.

According to El Elj (2014), a company's size is a key determinant of the quality of innovation it wishes to develop, as innovation, whether social or not, is quicker for larger social enterprises. Therefore, the larger the social enterprises that benefit from economies of scale with a more favorable market position, the easier it is for them to gain access to financial resources to carry out research and development activities. Large enterprises also generally have more financial means to purchase or exploit patented innovations in return for royalty payments. Despite the correlation between company size and access to finance highlighted by El Elj (2014), it should be noted that company size has not always been significant in empirical studies. Adeyeye et al. (2015), for example, show that there is no relationship between company size and innovation potential in Nigerian companies. Similarly, Le Bas and Nkakene (2018), in a study conducted in Cameroon, conclude that the effect of company size on the propensity to innovate is statically insignificant.

Considering start-ups as new innovative enterprises with high potential for growth and speculation on future value, some authors, such as Cheah et al. (2016), examine the start-up ecosystem in Singapore and show that there is a link between public action and the development of these new innovative social enterprises. Using secondary data, the authors show that a combination of three policy approaches—public-private partnership, collaborative networks, and planned agglomeration strategy—is conducive to the emergence of a more resilient technology innovation cluster. Specifically, the authors argue that effective training in science in universities for start-up development is essential for promoting social innovation. Given the gap between the readiness levels of scientific production and the needs of social enterprises, the authors establish the need to build the capacity of socially innovative enterprises through education and provide them with matching funding to improve their technological readiness and reduce the commercialization risks of publicly funded R&D.

Cheah and Ho (2019) analyzed the role of the start-up ecosystem in social entrepreneurship, looking specifically at how start-ups engage in increasing social impact. By selecting two Singaporean start-ups (one specializing in water innovation that deploys cost-effective water filtration solutions in rural communities and disaster areas, and the other specializing in wearable technology that offers a range of therapeutic products for people with autism, stress, or anxiety), the authors show that university incubation and mentoring networks have proven to be key hubs for promoting the scale-up of these new businesses. Thus, beyond the academic sphere (R&D, acceleration, capacity-building programs, inter alia), infrastructural resources related to the start-up ecosystem may become crucial. Confirming Saxenian's (1996) findings, the authors recommend that governments establish appropriate start-up support infrastructure within universities to foster the creation of innovation-based social enterprises.

Using the specific case of India, Kavita et al. (2020) examine the ways in which government-funded incubators contribute to building the resilience of science, technology, and innovation-based social enterprises, showing that the incubation of STI-based social enterprises should extend beyond traditional incubation activities to provide support to entrepreneurs in developing their business ideas. According to the authors, there is a need to integrate targeted, SDGs into the specific objectives of incubators, the promotion of coordination between existing incubation programs, the development of a

performance monitoring system, and, finally, the extension of capacity building at several levels, including incubator managers and the STI sector as a whole.

Human capital is another important determinant of social innovation in developing countries. Indeed, this factor enables social enterprises to acquire more ability to overcome organizational and institutional barriers to social innovation and provides more knowledge and key skills that are essential to building absorptive capacity. Several empirical studies, notably those of Almeida and Fernandes (2008), emphasize the crucial importance of managerial quality and the qualification of human resources in building knowledge capital in developing countries. The lack of skilled personnel remains among the most important barriers to innovation processes, especially in African middle-income countries (Christensen et al., 2017).

With regard to the organizational structure of the company, it is emphasized that a less hierarchical and more flexible form of organization, giving workers greater autonomy to make decisions and define their responsibilities, is more effective in generating innovation. With regard to the size of the company, although Schumpeter (1942) argues that large companies are more likely to innovate because of the resources they have at their disposal, several authors contradict this thesis and show that small enterprises seem to be more innovative because of the increasing costs of bureaucracy in large enterprises (Kamien and Schwartz, 1982; Dasgupta and Stiglitz, 1980). According to Åstebro and Elhedhli (2006), smaller companies have a greater capacity for innovation because it reduces the costs of replacing old technologies and promotes radical innovations. The literature on firms' organizational culture also points out that it takes a minimum of three years to change the culture (e.g., Wilhelm, 1992). Given that new project ideas require partners to adapt to a sustainable business model (De Silva et al., 2019; Saka-Helmhout et al., 2020), this suggests that partners will likely need at least three years for social innovation outcomes to materialize.

Among other internal factors for social innovation in developing countries, firm-specific resources and partnership governance are considered by the authors to be of great importance. With respect to firm-specific resources, Gundlach (1995) determine firms' financial commitment by examining partners' resource contributions in relation to overall project funding. With respect to partnership governance, it is possible to distinguish between (i) informal governance and (ii) formal governance (Lashitew et al., 2020; Quélin et al., 2019). For informal governance, two different conditions are typically included: previous partnership experience and time spent together on the current project. In addition, projects that receive a high financial commitment from partners and rely on informal and/or formal governance require a consent seal for (the legitimization of) their business activities (Bucheli and Salvaj, 2018).

#### 4.1.3. External factors to social innovation

Among the external factors, economic openness is considered a key determining factor for promoting innovation in developing countries. According to several authors, such as Keller (2004), there are two main mechanisms by which economic openness affects firms' incentives to innovate: the first relates to knowledge transfer and the diffusion of innovations, while the second relates to competition in the international market and its effect on incentives to innovate. However, in the context of developing countries, arguments about the impact of technological spillovers related to economic openness, in particular through foreign direct investment and the opening up of corporate capital in host countries, are far from fully justified.

However, economists do not unanimously accept the argument that foreign ownership of domestic companies significantly and positively affects the innovation propensity of companies in developing countries. According to Gorodnichenko et al. (2010) and Ayyagari et al. (2011), exporting companies, which are generally more exposed to foreign competitive pressure, often have a higher incentive to innovate than non-exporting companies to improve their non-price structural competitiveness. Rahmouni et al. (2010) and El Elj (2012) argue the opposite and show that export incentives and innovation incentives are not correlated, as innovation is carried out in the parent companies of developed countries at the origin of foreign direct investment in the developing countries. Offshore companies undertaking low value-added activities are often not integrated into the local fabric and, therefore generally have only weak economic externalities. Technological externalities are almost nonexistent.

Another important factor of innovation reported in the literature is related to the interactions between companies and suppliers, customers, public assistance agencies, industry associations, and many other organizations that can provide external inputs that are missing in the learning process. According to Panda and Ramanathan (1996), this interaction, which is likely to be particularly beneficial, would serve the purpose of allowing companies to accumulate information on technologies and opportunities as well as obtaining other inputs necessary to complete the internal learning process, such as external staff training, consulting services, and R&D grants. Several authors support the idea that proximity reduces communication costs, whereas direct contact improves the quality of interactions. Samba and Biampikou (2011) show that in Congo, the use of tools such as mobile phones and computers allows SMEs to improve their performance and reduce their transaction costs, despite their high accessibility costs in the Congolese market. Mbassi (2011) shows that the use of ICTs induces organizational changes that are favorable to the increase in total factor productivity in Cameroon's SMEs.

When business projects are located in countries with different levels of economic development, the host country's level of development has a potential influence on the firm's social innovation. A stable institutional environment can facilitate business investment and social innovation in that the risks of opportunistic behavior and uncertainties are lower (Asongu et al., 2018; Quélin et al., 2019). Given that firms' resources and capabilities are enabled or constrained by the institutional environment in which they operate (Oliver, 1997) and that the success of social innovation is influenced by institutional conditions (Candi et al., 2019; Lashitew et al., 2020), a configurational approach to analyzing interconnected structures and capabilities is also essential for understanding the drivers of innovation.

While previous studies on corporate social innovation have recognized the role of corporate capabilities, particularly partnerships (De Silva et al., 2019; Haigh and Hoffman, 2012; Michelini and Fiorentino, 2012) and institutional barriers (Lashitew et al., 2020), they have unfortunately not captured the interplay between the two and the enabling role of institutions in the successful realization of social innovation in business. However, this gap has been filled by the work of Saka-Helmhout et al. (2021).

#### 4.1.4. Barriers to social innovation

While many studies show that innovation activities have positive effects on a company's activities, the question of why not all companies engage in innovation also arises. However, companies' innovation behavior is affected by their assessment of the obstacles and difficulties encountered in the innovation process. Little empirical research on barriers to innovation has been conducted in either developed or developing countries. However, an analysis based on obstacles to innovation makes it possible to identify these obstacles and to understand their nature, origin, importance, and impact on the innovation process while measuring the effects and consequences of enterprises' activities. Moreover, it facilitates evaluating the effectiveness of public actions and determining corrective measures to overcome or eliminate these barriers.

In developing countries, the first work on barriers to innovation dates back to a study by Hadjimanolis (1999) which assesses barriers to innovation in a small developing country such as the case of Cyprus. It highlights the main role played by several internal and external barriers to the innovation process, such as lack of technical training of employees, bureaucracy, the inadequate pattern of innovation financing sources, and unsatisfactory technological infrastructure at the level of national innovation policy.

Clancy (2001) analyzes innovation barriers in Indian small-scale industries to establish that technical efficiency significantly varies among companies, tracing the mechanism underlying this to the absence of technological avenues within companies as well as to a weak external environment. This study identifies institutional support and weak managerial skills as the main factors that stifle innovation within companies. Accordingly, innovation-oriented policy practices have been acknowledged as restrictions on financial incentives. However, according to the author, attention should be paid to improving and upgrading the management skills of entrepreneurs.

Lim and Shyamal (2007) examined the barriers faced by Malaysian manufacturing companies during the innovation process using data from the National Innovation Survey 2000–2001, conducted by the Ministry of Science, Technology, and Environment in 2003. They explore differences between companies by industry type and company size, and show that the level of importance of barriers differs for innovative and non-innovative companies. Among the main barriers to innovation in Malaysian companies (excessive innovation costs, excessive perceived economic risks, lack of market information, lack of technical information, lack of appropriate sources of finance, lack of customer responsiveness, new products, lack of skilled personnel, insufficient flexibility in standards and regulations, and organizational rigidities), economic-related barriers are the most important, followed by information-related factors and lack of skilled personnel. However, since external barriers are more important than internal ones, the latter can be resolved more quickly when a company engages in an innovation process.

Safoulanitou et al. (2013) conducted a comparative analysis of SMEs and innovation in three sub-Saharan African countries: Cameroon, Congo, and the DRC. Based on a joint survey of 256 SMEs in these countries, i.e., 100 SMEs in Brazzaville (Congo), 100 in Kinshasa (DRC), and 56 in Douala (Cameroon), they established that the principal bottlenecks to innovation are the substantial financing innovation cost, the absence of financing innovation channels in the three countries, and the lack of financial resources. The dependence of SMEs in Cameroon on the technical progress of their partners and the weight of attendant entrepreneurship obstacles in the immediate environment of SMEs of Kinshasa and Brazzaville also create innovation disincentives.

Rahmouni (2014) argues that many companies in developing countries face barriers derived from the multidimensional nature of the innovation process. Using Tunisian company data, they use a multivariate probit model and regress nine barriers to innovation on a set of common explanatory variables. The results confirm the positive role of company size in promoting innovation. Furthermore, they show that research activities are significantly and negatively related to perceived excessive innovation costs, and that state participation in social capital is negatively associated with perceived excessive economic risks, innovation costs, lack of funding sources for innovation activities, and increased customer responsiveness to new products or services, suggesting a greater role of public and foreign participation in social capital. They suggest that the use of a third-party technology consulting agency is positively associated with barriers to innovation. Innovative companies that use external technical assistance experience more barriers related to economic risk, lack of market information, insufficient flexibility of regulations and standards, and lack of customer responsiveness to new products or services. The originality of this study lies in its use of a set of explanatory variables that appear systematically in the innovation literature and for which the database provides sufficiently reliable data.

Achehli and Lagziri (2020) analyze the factors that prevent or inhibit social innovation activity in Morocco, particularly in the Tangier-Tetouan-Al Hoceima region, using primary data collected from 81 Moroccan companies that were considered innovative. Assuming that Moroccan SMEs are not externally influenced, they show that the level of importance of innovation varies according to the size of the companies, with very small enterprises feeling the obstacles to innovation more severely than SMEs do. According to the authors, the high cost of innovation is the most important constraint for very small enterprises, followed by difficulties in building alliances and a lack of access to the knowledge network. The implementation of tax incentives to encourage innovation seems essential, as tax incentives have a real leverage effect on a company's R&D and,



therefore, on their productivity. They also stress the importance of encouraging banks to grant credit for innovation through a model based on sharing and cooperation (open innovation). Such an initiative, based on an open source, allows its users to achieve their goals by relying on the help of other users of the network, and also to be at the cutting edge of technology without the need for large financial input. For medium-sized companies, lack of access to information on technology is the most important barrier to innovation activity in Morocco, followed by the high cost of innovation and qualification of personnel and relations with universities. However, the authors arrive at these results without justifying the representativeness of their sample.

In short, the high cost of innovation is the most important constraint for very small enterprises in developing countries, followed by difficulties in building alliances and a lack of access to knowledge networks. According to Tadesse (2009), financing constraints are greater for smaller enterprises. While the experiences of the majority of companies belonging to foreign groups indicate that the problem of financing innovation is not relevant to them, domestic companies are the most affected. Lall and Wangwe (1998) summarize these financing problems in sub-Saharan African companies as follows: insufficient liquidity in the banking systems, an overly cautious attitude of new foreign banks in the country and external financing institutions, inadequate policies to mobilize domestic savings in the financial system, and a lack of strong projects from the industrial sector compared to more lucrative commercial activities. The perception of the effect of these obstacles on innovation indicates the weaknesses of the policies pursued. According to Guellec and Van Pottelsberghe (1997), public authorities can directly encourage innovation in companies through tax benefits, or indirectly by subsidizing company research through tax incentives commensurate with their research efforts or research tax credits.

#### 4.2. The role of social innovation in achieving SDGs

Few empirical studies have examined the link between social innovation and sustainable development in developing countries. Several authors defend the idea that sustainable development plays a proven role in promoting entrepreneurship and social innovation, notably through education and university incubation in line with SDG4<sup>5</sup> (Lans et al., 2014; Kuckertz and Wagner, 2010; Fleaca et al., 2018); inclusion and empowerment of vulnerable groups, especially women, in line with SDG5<sup>6</sup>; development of organizational strategies and practices in accordance with SDG8<sup>7</sup> (Jolink and Niesten, 2015; Stubbs, 2017; Lotfi et al., 2018; Ayuso and Navarrete-Báez, 2018); capacity and willingness to innovate in line with SDG9<sup>8</sup> (Belz and Binder, 2017; St-Jean and Labelle, 2018; Ploum et al., 2018; Fischer et al., 2018); and willingness to create environmentally friendly enterprises consistent with SDG13.<sup>9</sup>

Among the main studies, one can cite that conducted by Pansera and Sarkar (2016), which explores different ways of meeting a need in a simple, efficient, and low-cost manner (frugal innovations) in India. They show that companies developing environmentally friendly solutions with limited resources play a key role in achieving SDGs by promoting the horizontal mechanisms of technology management and product and service delivery. According to the authors, frugal innovations stimulate basic innovators who improve the living conditions of their local communities and empower social minorities.

While the nexus between sustainable development and entrepreneurship has received attention from academics and policymakers, society is searching for sustainability-related solutions. The relevance of institutional quality and innovation to achieving sustainability goals is a critical area addressed by the current debate on sustainable development, particularly in developing countries. According to Filser et al. (2019), studies focusing on how entrepreneurial activities are important in the achievement of the SDGs remain sparse and should be extended with further research.

Juma et al. (2017) explore the dimensions involved in community-based enterprise creation and offer comparative insights into two case studies as well as a model of fluid and multi-systems that is collaborative and integrative with various entities, *inter alia*, the private sector, governments, the community, and NGOs. Employing a theoretical framework to integrate partners into a system to enable them to build collaborative nexuses on sustainable entrepreneurship prospects, the authors show that the entrepreneur can be seen as the hub of entrepreneurial activities, but the interdependence between entrepreneurs and partners in the community is essential. They argue that the path to sustainability starts with external collaboration involving entities in the entrepreneur's surrounding system. As a limitation of the results obtained, it appears that their research applies an exploratory case study methodology, which generates a number of limitations, and the results are not generalizable (Stake, 1995); moreover, the case study methodology may introduce bias (Voss et al., 2002). Indeed, case studies could include a longitudinal approach that examines how communities can achieve sustainability goals through entrepreneurship. As an alternative, the model can be applied to a large sample, on which econometric analyses test its viability and facilitate its generalizability. Moreover, deploying different theoretical lenses could provide additional insights.

Youssef et al. (2017) analyze the need for innovative and institutional solutions to entrepreneurship in 17 low-income and emerging African countries, where the contribution of informal entrepreneurship was much higher than that of formal entrepreneurship from 2001 to 2014. They use Human Development Index data to explore the conditions under which

<sup>5</sup> "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all."

<sup>6</sup> "Achieve gender equality and empower all women and girls."

<sup>7</sup> "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all."

<sup>8</sup> "Build resilient infrastructure, promote sustainable industrialisation that benefits all and encourage innovation."

<sup>9</sup> "Take urgent action to address climate change and its impacts."

entrepreneurship can simultaneously boost economic growth and promote environmental and social goals. The authors confirm that both formal and informal entrepreneurship contribute to environmental degradation, but show that the negative effect of informal entrepreneurship is much stronger than that of formal entrepreneurship. However, the authors argue that the nexus between entrepreneurship and sustainable development is substantially positive when institutional quality and innovation are high. Hence, policies are needed to promote innovation, foster governance, and consolidate enforcement. The originality of their study is that it clarifies the conditions under which countries and firms in Africa can move toward more sustainable products and services, as a formalization of the informal sector can lead to improved environmental and economic performance.

The results of [Youssef et al. \(2017\)](#) are confirmed by [Dhahri and Omri \(2018\)](#), who studied the relationship between entrepreneurship and the three pillars of sustainable development for 20 developing countries over the period 2001–2012. The authors provide evidence that entrepreneurship in these nations positively contributes to the social and economic dimensions of sustainable development, whereas it contributes negatively to the environmental dimension. The robustness of these results is tested using a causality approach, which confirms that there are interactions between entrepreneurship and the three dimensions in the short and long terms. However, the authors stress the need for managerial strategies to promote innovation and exploit sustainable development opportunities. The main limitation of this study is that the effect of sustainability entrepreneurship is not explicitly measured.

#### 4.2.1. Focus on the role of SDG4 in promoting social innovation

The importance of education in sustainable development is contained in SDG4, which calls for opportunities that are inclusive and equitable in education and lifelong learning. In view of this, social entrepreneurs need specific skills to achieve targeted development goals and thus create economic added value in society ([Lans et al., 2014](#)). Social entrepreneurship through “education” concerns the avenues by which future goods and services are, *inter alia*, discovered, created, and exploited, and by whom and with what social, economic, environmental, and psychological consequences ([Cohen and Winn, 2007](#)); the technological process of achieving development through the discovery, exploitation, and evaluation of opportunities and value creation at multiple levels ([Katsikis and Kyrgidou, 2009](#)); and the exploitation and discovery of economic opportunities via the generation of market imbalances that spur the transformation of the respective sector into a more ecologically and socially sustainable state ([Hockerts and Wüstenhagen, 2010](#)).

While developing countries do not focus much on social entrepreneurship, there has been a marked improvement in recent years in the provision of training on social innovation in universities, business schools, and engineering institutions of learning ([Verzat, 2012](#)). However, these institutions, whether public or private, do not always have skills that are necessary and sufficient to integrate sustainable development practices and principles into all aspects of learning and education; hence, the creation of university incubators is important ([Cuby, 2001](#)).

Of the reasons for the importance of university incubators in promoting social innovation, the authors agree that, where relevant, the skills developed help higher education institutions adapt their educational programs to the needs of society. [Lee and Osteryoung \(2020\)](#), in this respect, show that university incubators are designed to promote the intensity of research, innovative ideas, commercialization, and development activities of entrepreneurs. [Laviolette and Loué \(2006\)](#) confirm this result, stating that entrepreneurs who have received training during the creation process are more successful. Based on the assumption that technology comes from laboratories or universities, [Becker and Gassmann \(2006\)](#) compare university incubators with other incubators and show that the former favor lower R&D costs for venture investments. [Todorovic and Suntornpithug \(2008\)](#) confirm this result by stating that the role of university incubators in a company is not only to provide services to newly created companies, but also to adopt a positive attitude toward leadership and institutional development while promoting entrepreneurial thinking and culture.

According to [Mendoza \(2009\)](#), university incubators can accelerate the growth and stability of start-up social enterprises by providing targeted services and support. They typically provide infrastructure and resources to enable high-tech start-ups to overcome barriers related to the complexity of the social innovation environment and processes ([Mian, 1996](#)). In addition to infrastructure, [Somsuk et al. \(2012\)](#) show that the success of incubators housed in universities and colleges remains conditioned by factors such as networks, technical and human support, and institutional reputation.

Based on a Cobb-Douglas production model, [Lasrado et al. \(2016\)](#) model the effect of university incubators on the performance of start-ups. To test whether firms emerging from university incubators achieve higher levels of post-incubation performance than firms incubated in non-university incubators and non-incubated firms, they show that the performance of university-incubated firms continuously improves beyond the incubation period. They report that this performance is superior to that of non-incubated firms and that university-incubated firms grow faster than non-incubated firms beyond the incubation period. However, according to the authors, the influence of incubation on the viability of a new business depends on the type of support offered by an incubator and the environmental and business characteristics in which incubation services are provided.

[Tchouassi et al. \(2018\)](#) analyze the relationship between entrepreneurial knowledge and economic development for youth and women's empowerment through the creation of sustainable businesses and jobs in Cameroon and Congo. Based on a field questionnaire survey in Brazzaville and Yaoundé, they show that identifying and strengthening the missing entrepreneurial knowledge of women and youth not only promotes their autonomy, but is also one of the corridors through which the densification of the entrepreneurial fabric and economic development takes place. They justify this result by stating that young entrepreneurs constitute a growing share of business creators and promoters, leaders of small and medium-sized

enterprises that proliferate and establish new niches or innovative sectors for entrepreneurship. Educating young people on organizational strategies and practices as part of entrepreneurial coaching is therefore essential to enhancing business performance.

Based on the observation that higher education institutions (HEIs) have extended their contribution beyond traditional teaching and research functions to engage in socio-economic problem solving, Kumari et al. (2019) examine the role of these HEIs in promoting, creating, and sustaining social innovation. With the trend of these institutions' growing involvement in social innovation practices, the authors seek to highlight tools such as learning processes and systems thinking approaches that support HEIs' orientation toward social innovation. By developing an understanding of the concept of "co-creation for social innovation" and the functions and activities of HEIs that can contribute to this process, the authors suggest that HEIs should be actively encouraged to implement collaborative learning tools and focus on open platforms designed for systematic change and collective action that will ultimately help them (i.e. HEIs) to strengthen their collaboration with social actors and engage with society. Within this framework, activities such as mutual learning and knowledge dissemination by means of collaboration, a transdisciplinary approach, relational transformation, and technology-based learning are key catalysts that can improve social innovation.

According to Kim et al. (2020), sustainable social innovation depends on improved collaboration between social entrepreneurs and stakeholders. Social entrepreneurship education (SEE) programs must be designed and implemented to cultivate social entrepreneurs' capacities to improve connectivity with all relevant entities in the social enterprise ecosystem. By focusing on strengthening internal connectivity between members of a SEE program and external entities such as businesses, government agencies, and civil society, the authors identify directions for improving SEE that integrate key features of SEE with social theories of learning and the five-fold helix model for sustainable innovation ecosystems eliciting university-industry-government-public-environment nexuses within a knowledge economy. Through an in-depth study of a unique program of higher education dedicated entirely to teaching and training current and future entrepreneurs who strive to solve social problems by creating profit-oriented start-ups in Korea, the authors identify academic institutions as the benchmark for training social entrepreneurs capable of finding solutions to existing social problems through solidarity based on a strong consensus among stakeholders.

#### 4.2.2. SDG9 and social innovation in developing countries

According to Schumpeter (1939), innovation refers to establishing a new production function. This definition includes several specific aspects, namely, the introduction of new modes of production and products, the opening of new markets, the acquisition of new sources of materials and supplies, the implementation of a new organization of an entire industry, a new method of marketing, or a new organizational method in the practices of an enterprise, the organization of the workplace, or external relations. In the literature, several approaches dating back to Schumpeter's work have been highlighted to analyze the importance of innovation in the creation and support of companies. These have been developing rapidly for several decades because of endogenous growth theories (Aghion and Howitt, 1998), which show that the ability to innovate is both an engine of economic growth and a source of greater competitiveness in international trade (Foray and Freeman, 1992). For developing countries, whose aim is to actively integrate into the global economy, this topic is increasingly important, as it allows for an improved understanding of the conditions and factors that are favorable or unfavorable for innovation in enterprises.

#### 4.2.3. SDG5 and social innovation in developing countries

For several years, a great deal of work has been done in favor of women's economic empowerment, understood as a multidimensional social process that permits people to take control of their own lives. In this context, by enabling women to make decisions on issues they consider important for their lives, communities or societies, women's economic empowerment should contribute to greater social innovation (Page and Czuba, 1999). In other words, economically empowering women would therefore be essential to sustaining their benefits at the individual, family, and wider community levels in such diverse areas as literacy, education, training, and awareness-raising (Alvarez et al., 2013).

However, while women's accompaniments in the field of social innovation remain largely unexplored, studies have shown the need to adapt this support to the profiles of women entrepreneurs, as well as to the specificities and difficulties they encounter. Jennings and Brush (2013) show in this context that women entrepreneurs generally face a very unfavorable entrepreneurial environment, with access to finance being identified as one of the major obstacles to business development. They remain less involved in networking activities, which are useful in helping them leave isolation and share common concerns related to the new anticipation of their professional role (Richomme-Huet and d'Andria, 2013). This result confirms the findings of Carrier et al. (2006), who argue that women entrepreneurs, once they enter the entrepreneurial career, face certain challenges related to the "gender divide" that manifest, among other things, in less access to important resources for the development of their businesses, as a result of which they encounter difficulties in accessing networks, information, and capital.

While women's economic empowerment is key to social innovation in developing countries, Dempsey and Jennings (2014) show that women entrepreneurs in developing countries, although well educated, generally lack entrepreneurial and management training. They have less professional and managerial experience, and therefore show a lower belief in their ability to become and succeed as entrepreneurs, which affects their entrepreneurial intention and also their entrepreneurial decisions. If this research corroborates that gendered socio-cultural values are substantially entrenched in the legal

institutional and environmental support mechanisms and that gender has such an influence on women's entrepreneurship, these factors, therefore, need to be taken into consideration in their entrepreneurial coaching, as doing so significantly increases the chances of success of the enterprises created.

Regarding the inclusion of gender in business support, the debate remains open. While some studies advocate the need to integrate gender issues into generalist support systems (Nilsson, 1997; Stevens, 2010), others insist on establishing specific support programs (Tillmar, 2007). According to Greer and Greene (2003), governments need to implement a policy of support and a set of financial tools specific to women entrepreneurs to address the existing inequalities between men and women in a particular area of access to the resources necessary to create and develop their businesses.

Furthermore, it should be noted that in developing countries, research on women's entrepreneurship remains neglected, particularly in Africa. Several factors may explain this gap, including the fact that women-owned businesses are more likely to be found in the informal sector than in the formal economy (Datta and Gailey, 2012), which is generally over-represented in traditional sectors with low growth opportunities, and that the businesses women create remain on the periphery of the national economy (De Vita et al., 2014). Moreover, much entrepreneurship research in the academic literature has traditionally tended to focus almost exclusively on male entrepreneurs and argue for the absence of gender-based differences (Welter et al., 2014). Several other studies in Africa have recognized the differences between men and women and the specific barriers faced by women. They show the presence of an environment characterized by unequal social norms (Zeidan and Bahrami, 2011) as well as issues at the individual (education, motivation, skills, self-confidence), structural (legal framework, tax rules, access to finance, access to networks), and cultural (stereotypes, family responsibilities, relationship to money, gendered model for access to property) levels.

Key recent studies include those by Drine and Grach (2012), who compare men's and women's perceptions of support for entrepreneurship in typical services, such as information provision, training, and funding, rendered by the government in Tunisia. A survey of 50 male and 50 female entrepreneurs in the regions of Sfax, Sousse, and Tunis showed that existing support services are insufficient to promote female entrepreneurship. According to the authors, 47% of the respondents (M/F) believed that support measures increase the survival rate of businesses, and 84% said they had benefited from this support. In terms of information, women entrepreneurs did not make much use of support because of a lack of information/understanding of these support measures. Of the women interviewed, 66% were aware of the training programs (versus 57% of men). The problems are the cost of these courses, their location in a few regions, and the lack of appropriate training. In terms of capital ownership, women are disadvantaged because they lack necessary skills. It is clear that there are biases and discrimination that prevent women from accessing capital. The fact that women-led businesses are smaller and undercapitalized is part of the reason. Most of these businesses are financed by money borrowed from their families.

Derera et al. (2014), in the case of South Africa, start from the context that women entrepreneurs do not benefit from equal opportunities as men in terms of capital for start-ups owing to a plethora of discriminatory policies entrenched in models of lending, and adopt a mixed-method approach engaging experts and surveying women entrepreneurs to assess the gendered barriers to raising start-up capital. Their results show that the gendered orientation of start-up capital for women entrepreneurs varies in South Africa, especially regarding the difficulties women face when engaging in non-traditional industries. Such findings build on previous research by emphasizing the intersection between the contribution of women to the economy and their productive activities in the domestic and informal contexts. This study calls for women entrepreneurs' activities in these economic sectors to be recognized in models of lending as an important economic growth area.

Marijke et al. (2016) explore four dimensions (meaning, competence, choice, impact) of psychological empowerment in a sample of six rural women entrepreneurs in Amhrahia-Otinibi, a village in the Greater Accra Region of rural Ghana, showing that rural women engaged in entrepreneurial activities find their work more important and meaningful. These women also have appreciable skills to manage their businesses and enjoy a greater level of autonomy, independence, and freedom to manage their businesses. In addition, these women have significant control over what happens in their business. The results offer preliminary evidence that rural women engaged in entrepreneurial activities in this region of Ghana feel much more empowered, and provide valuable insights into the use of entrepreneurship as a strategic tool for empowering women in rural communities. The main limitation of this study is that its sample is poorly representative of the population.

Brière et al. (2017) analyze the fit between the support services offered to women entrepreneurs and their context through an exploratory study conducted in South Africa and Rwanda. Based on a model combining the context, support strategies, and performance of women's enterprises, they illustrate the mismatch of support services characterized by a stereotypical logic of performance, a generic approach, and the absence of consideration of how family circumstances influence the entrepreneurial pathway. Given that over the years, the situation of women entrepreneurs has significantly changed and that the relevance of supporting women entrepreneurs' activities is well established, the authors highlight the need for a differentiated approach given the barriers they face, which need to be considered in their specific context.

In Kenya, Gogi et al. (2017) examine the influence of savings as the main component of an incubator (Women Enterprise Fund, WEF) on the growth of SMEs run by women entrepreneurs. Their premise is that women-owned SMEs are relevant in the development process and that it is beneficial for African countries to promote these SMEs by taking into consideration their needs in these countries' development programs. Using a descriptive survey design, they target a sample of 1160 women entrepreneurs registered with the WEF, of whom 348 are owners of small and medium-sized enterprises, through a simple random sampling method. As the main results of these studies, the authors conclude that savings patterns, savings strategies, and stock levels affect SME growth to a large extent. This study recommends that support structures should strongly encourage women entrepreneurs to save part of their income for reinvestment in their business.



St-Pierre et al. (2017), using data from a survey of the diversity of objectives pursued by SME managers and their conception of performance, compare the importance that women and men give to social-environmental objectives that influence sustainable development and their conception of sustainable performance, finding that women are generally less motivated to value economic or financial performance and are less growth-oriented than men. Women adopt more relational management styles than men do, borrowing from a more participatory and interactive management style with their various stakeholders. Their work suggests that women entrepreneurs are more committed to the concept of sustainable development than men are, if only by fostering greater interaction with their various stakeholders. Furthermore, according to the authors, women value the elements associated with sustainable development more than men do. However, in a holistic approach to performance, the authors argue that women value these goals more than economic or personal goals. These results lead them to suggest new avenues of research to better understand the role of sustainable development in the behavior and attitudes of SME managers.

Overall, women's entrepreneurship in developing countries, mainly Africa, is evolving rather timidly, and women are still far from reaching their full potential. These findings are confirmed by numerous studies that present the differences that exist between female and male entrepreneurship (Peterson and Altounian, 2019); motivation for female entrepreneurship, poverty reduction, and growth orientation in women-owned small businesses (Manolova et al., 2012) and women's empowerment through entrepreneurship (Digan et al., 2019), as well as the challenges faced by women in the small business sector (Aneke et al., 2017), including insufficient start-up capital and lack of information. Despite these studies, it is difficult to determine whether women entrepreneurs in developing countries are aware of and/or benefit from the government support programs and other support structures available to them. However, many governments offer a range of initiatives to support women's entrepreneurial talent. In this context, governments must recognize the existence of gender-specific constraints in resources and emphasize building the capacity of women to fully participate in the global economy (Derera et al., 2014). For this reason, government agencies in many countries are making efforts to encourage more women to engage in entrepreneurship (McGowan et al., 2012).

## 5. Concluding implications and future research directions

The objective of this study was to provide an overview of the existing literature on the effects of taxation on social innovation and the corresponding implications for achieving SDGs in developing countries. The strategy was based on three approaches: thematic, chronological, and methodological. Most studies agree that high taxes in business undermine social innovation and thus the achievement of SDGs; as social innovation is known to be a driver of most SDGs and business the vehicle.

Several lessons emerge from this work, particularly with regard to promoting social innovation by reducing the tax rate on businesses in developing countries. The main ones are: (1) the need for social enterprises for a certain level of basic education, allowing them to integrate more easily and quickly into the process of creating and supporting the enterprise; (2) the need for training that aims to increase specific scientific, technological, managerial, and entrepreneurial knowledge; (3) the desirability of establishing a monitoring network for all innovative entrepreneurial activities, integrated into the business support organizations, and capable of carrying out relevant R&D; (4) the provision of a platform for entrepreneurs to facilitate the transfer of technologies and the development of know-how; and (5) the facilitation of access to financing for enterprises with innovative and inclusive projects.

Although we have attempted to provide strategies to promote social innovation in developing countries, the integration of sustainable development objectives into business incubation practices remains indispensable. As vehicles for SDGs, social enterprises can thus contribute to inclusive and sustainable growth in most developing countries. For this goal to be clearly understood by the various actors in the entrepreneurial ecosystem in general and business support structures in particular, it would be useful for future research to empirically examine how economies based on entrepreneurship and social innovation contribute to job creation (SDG8), the economic empowerment of women (SDG5), improved access to quality education (SDG4), innovation and technology (SDG9), and efforts against climate change (SDG13). This recommendation is also motivated by the fact that the informal sector remains predominant in developing countries (accounting for more than 70% of the total employment), even though these countries are rich in human, natural, and economic resources that can enable them to rapidly become emerging economies.

In light of the above, the lessons from this study, summarized in the second paragraph of this section, should be considered within an empirical framework in both country-specific and panel-oriented settings to provide room for more policy implications. This policy recommendation builds on the caveat that the corresponding lessons are broad factors documented in the literature examined in this study, and hence need to be substantiated through country-specific empirical scrutiny using more contemporary data.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.



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