Journal of the Knowledge Economy
https://doi.org/10.1007/s13132-024-01747-w

Entrepreneurship Development as a Tool for Employment Creation, Income Generation, and Poverty Reduction for the Youth and Women

Abdijabbar Ismail Nor[1]

Received: 12 October 2022 / Accepted: 11 January 2024

Abstract

Unemployment and poverty are global challenges, especially in emerging countries. In Somalia, both poverty and unemployment are major problems that are widespread among the youth who constitute more than 70% of the population. Despite the efforts to eradicate, both unemployment and poverty still remain major challenges in the country. Empirical studies have shown that entrepreneurship development plays an important role in socio-economic development. Therefore, this study aims to determine the contribution of entrepreneurship training and education, as well as SMEs' development to job creation, income generation, and poverty reduction for the youth and women. The study applied a cross-sectional research design using a questionnaire to collect the data from a sample of 120 respondents from fresh graduates and other entrepreneurs who benefited from entrepreneurship training and education of the Next Economy Program provided by SIMAD Innovation Lab and ILO-SIYB Training packages as well as the entrepreneurship training programs provided by Irise-hub. The study applied partial least square structural equation modeling (PLS-SEM) to test the hypotheses through Smart-PLS (v.3.3.9). The study revealed that entrepreneurship training and education and SMEs' development have a significant positive relationship with job creation, income generation, and poverty reduction. Therefore, the study findings have significant implications for entrepreneurs, entrepreneurial institutions, practitioners, and policymakers in entrepreneurship development. This study highlights the role of entrepreneurship development as a strategic tool for socio-economic development.

Keywords Entrepreneurship training and education · SMEs · Job creation · Income generation · Poverty reduction

✉ Abdijabbar Ismail Nor
abdijabbar@snu.edu.so

[1] Faculty of Economics and Management Science, Somali National University, Mogadishu, Somalia

Published online: 23 March 2024

Introduction

One of the major challenges facing developing and underdeveloped countries of the world is unemployment. International Labour Organization (ILO) (2012) shows that Africa is the continent with youngest children and youth aged below 30 years constituting 70% of the continent's entire population. The report also shows a large group of the active population in Africa is openly unemployed indicating that the youth unemployment rates in Africa are high. Kenya National Youth Policy (2012) defined youth as those individuals aged between 18 and 30 years and youth unemployment constituted 70% of total unemployment in 2007 (Kilele, 2008; Sambo, 2016a, b), while in the context of Somalia, youth under the age of 30 constitute more than 70% of the population, and unemployment and underemployment are widespread among them (NYP, 2017). USAID Somali Assessment (2020) also describes youth as much of the population (75% of those below the age of 30). And they suffer from a higher rate of unemployment than the overall population. Despite the efforts and the progress on the status of youth employment in Africa, there is still a need for more interventions to work on various thematic areas, including employment creation, skills development, and poverty reduction.

Poverty is also another major challenge facing developing and underdeveloped countries of the world. It is so prevalent as a result of the high rate of unemployment that has become the major characteristic of the developing and underdeveloped countries of the world (Adofu & Ocheja, 2013). Despite the efforts to eradicate it, poverty still remains the major problem to the success of the struggle for the optimum utilization of human resources for both the social and economic development of nations. More than a billion people live in extreme poverty (Collier, 2007). Poverty in Nigeria is becoming widespread and severe (Ifeoma et al., 2018). In spite of Nigeria's huge resources, the country is facing low gross domestic product (GDP), low per capita income, high unemployment rate, low industrial utilization capacity, and high birth rate. In Somalia, 43% of the total population was estimated to be living in extreme poverty (defined as US$1 per day in PPP), and 73% were estimated to be living on less than $2 per day (Socio-economic Survey, 2002). Another World bank Socio-economic Survey (2016) shows around 51% of the population lives in poverty while the poverty situation is worse in the IDP camps where 70% is estimated to live in poverty. The nature of poverty in Somalia is considered multi-dimensional and complex. One of the core causes of poverty in the context of Somalia is the presence of conflict, natural disasters, human displacement, inequalities, regional and social disparities, and the lack of opportunities for the nation's youth (Nor, 2021).

Entrepreneurship development is perceived as an alternative way to tackle some of the socio-economic problems that hinder some countries, especially unemployment and poverty problems (Mitra et al., 2011; Ifeoma et al., 2018). Adenutsi (2023) stated that entrepreneurship development creates employment through the startup of new businesses or the expansion of existing ones; also creates new markets, new industries, new technology, new institutional forms, new

jobs, and net increases in real productivity; and increases income which enhances the standards of living for the population and leads to the poverty reduction. Abdullahi et al. (2021) indicated the development of entrepreneurship results in employment creation, income growth, and the development of the economy. In Zambia, approximately 25% of young people are engaged in their own businesses and the majority of their businesses are focused on marginal trading and service activities (Adebayo & Nassar, 2014). Entrepreneurship development is a potential mechanism for poverty alleviation (Agri et al., 2017). Entrepreneurship development of women entrepreneurs in Kenya has improved their economic status and contributed to the promotion of tourism, employment, and export trade (Misango & Ongiti, 2013). Semegn and Bishnoi (2021) revealed that Ethiopia established a large number of new MSEs in 2016–2017 which created employment opportunities for over 1.2 million youths. This implies that entrepreneurship development and small and medium enterprises development are both tools for creating jobs for the youth and poverty alleviation. Anne (2014) argues that SMEs are critical in generating and supporting economic growth and equitable development around the globe. He also stated that SMEs are the centers of employment for more labor, market-based economic growth, and combating poverty. Entrepreneurship education creates business opportunities and trains people with innovative enterprise skills to grasp the opportunities for starting new entrepreneurial activities (Cheng et al., 2009). Entrepreneurship education enhances the students' entrepreneurial competence, skills, and employment opportunities, and also equips the students with good ideas to create new ventures or improve the existing ones (Bernstein & Carayannis, 2012). According to Ifeoma et al. (2018), entrepreneurship development is considered a key tool for poverty reduction, stimulating employment and economic growth in developing countries.

Somalia as elsewhere in Africa and other world attempts to eradicate poverty as SDGs in 2030 as a global agenda. Therefore, the Federal Government of Somalia with the assistance of its international partners including USAID and ILO and other international partners conducted many entrepreneurship development programs intended to create jobs and alleviate poverty. The Federal Government of Somalia with the help of ILO carried programs in Somalia with a total project budget above $1 million under interventions falling into one or more of the categories of intervention such as providing participants with salaried jobs, cash-for-work schemes, or public works. Also, vocational training interventions include employability skills training and other interventions intended to support micro-, small-, and medium-sized enterprises (ILO, 2021). The Next Economy Program made possible by the Dutch Ministry of Foreign Affairs to empower youth in Nigeria, Mali, Kenya, Somalia, and other countries to enhance their talents, build their confidence, and improve the skills they need for a successful career in a job or as an entrepreneur was also implemented together with their local partners such as SIMAD Innovation Lab, SOS-Somalia, and other local partners. Therefore, this study aims to assess how entrepreneurship training and education and small- and medium-sized enterprises development contribute to job creation, income generation, and poverty alleviation.

Numerous studies have been conducted on entrepreneurship training and education, SMEs development and job creation, and poverty reduction in developed

countries including the USA, UK, other countries in Western Europe, and Japan. However, it seems much fewer studies have been done in developing countries. Cala et al. (2015) suggested detailed country studies using explanatory variables that reflect the particulars of these developing economies will be worthwhile to better understand the conditions that encourage entrepreneurship activities in developing countries. They also argued that policymakers in developing countries should be careful when using evidence from developed countries to design entrepreneurship-promoting policies (Cala et al., 2015). Various studies on entrepreneurship and SMEs have been conducted in the context of African countries from various perspectives, including entrepreneurship and employment creation (Ajagbe et al., 2015) as well as entrepreneurship development and poverty reduction (Ogidi & Okonkwo, 2021), entrepreneurial training and education and income generation (Nor, 2021), entrepreneurial education as a tool for reducing unemployment (Omogbolahan, 2012), entrepreneurship development and entrepreneurial orientation in rural areas (Charles, 2015), the effect of entrepreneurship development on poverty alleviation (Ifeoma et al., 2018), entrepreneurship training and education as strategic tools for poverty alleviation (Ogundele et al., 2012), small and medium scale enterprises (SMEs) and economic development (Etuk et al., 2014), and the impact of small and medium enterprises (SMEs) on economic growth and job creation (Maow, 2021).

In the context of Somalia, entrepreneurship development such as entrepreneurship training and education and small- and medium-sized enterprises development activities have been increasing in the country in recent years and play a substantial role in the social and economic development of the country by creating jobs for the youth and women, generating income opportunities for families and also increasing innovation and domestic production (Nor, 2021; MAOW, 2021). However, to the best of the author's knowledge, adequate studies have not been conducted on the empirical role of entrepreneurship training and education, and SMEs' development in job creation, income generation, and poverty reduction. This means a research gap exists in understanding the specific impact of entrepreneurship training and education and SMEs development on job creation and income generation for the youth and women. Therefore, this study acknowledges this gap by assessing how entrepreneurship training and education and small and medium enterprises development contribute to job creation, income generation, and poverty reduction. This study contributes to the existing literature by extending the concept of entrepreneurship and small and medium enterprises development. The study also examines the theoretical and empirical relationship between entrepreneurship training and education and small and medium enterprises development and job creation, income generation, and poverty reduction. The findings will also provide practical implications for the government, international organizations, and owners and managers of SMEs, as well as policymakers who are interested in SMEs and entrepreneurship development.

This paper is structured as follows. The first section contains the introduction; the second section discusses the literature review which shows previous studies on entrepreneurship development such as entrepreneurship training and education, SMEs development, and their relationship with job creation, income generation, and

poverty reduction. The third section illustrates the study methodology. The fourth section presents the analysis and results. The fifth section discusses the results, the sixth section concludes the study, presents the limitations of the study, and finally, recommends future research directions.

Review of Literature and Hypotheses Development

The study illustrated the previous theoretical as well as empirical studies on entrepreneurship development, entrepreneurship training, and education, as well as SMEs development and their relationship with job creation, income generation, and poverty reduction.

Entrepreneurship, Entrepreneurship Development, and Small- and Medium-Sized Enterprises

The concept of entrepreneurship was originally applied by Richard Cantillon in 1755 to the improvement of economic activities as cited by do Adro et al. (2021). Generations ago, scholarly research on entrepreneurship was nearly non-existent and rare, and there was little consideration in the research community about entrepreneurship context. But lately, entrepreneurship has emerged as one of the most dynamic fields (Audretsch, 2012). The field of men's entrepreneurship emerged in the 1930s while women's entrepreneurship emerged in the late 1970s (Yadav & Unni, 2016). Bruni et al. (2004) argued that initial research on entrepreneurship assumed that male and female entrepreneurs were generally the same and there was no specific need for a separate investigation (Yadav & Unni, 2016). Yadav and Unni (2016) believed that as a result, the sub-domain of women entrepreneurship did not develop as a significant area until the late 1990s to early 2000s. Minniti and Arenius (2003) studied women in entrepreneurship to expand the analysis presented in the global report entitled Global Entrepreneurship Monitor (GEM) program 2002 which was initiated by Babson College and London Business School with sponsorship from the Kauffman Foundation. The study revealed that on average, participation rates for men tend to be 50% higher than those of women. Arenius (2003) also showed that women's entrepreneurship is expanding around the globe since many studies have shown that women-owned businesses encompass between one-quarter and one-third of businesses in the formal economy and women also play an even greater role in informal sectors. GEM data show that individuals between 25 and 34 years of age are more likely to be involved in starting a new business. Likewise, the likelihood of starting a new business is significantly higher among women who believe they possess the necessary skills and knowledge than those women believe themselves as lacking such skills and knowledge. Thus, Arenius (2003) argues that adult women represent an available pool of potential entrepreneurial initiative that nations in different stages of development can leverage to improve their economic development.

Entrepreneurship is an identification of new business opportunities and the mobilization of economic resources to initiate a new business or regenerate an existing

one, under the circumstances of risks and uncertainties for the purpose of making profits under private ownership (Adenutsi, 2023). Entrepreneurship is the process of creating value by combining together a package of resources to exploit an opportunity (Ugoani & Ibeenwo, 2015). Adenutsi (2023) also defined employment creation as an income-earning opportunity offered to other people. And income generation is the assurance of earning regular income for undertaking a lawful economic activity that enables the income earner to live at least a decent normal life. As per Mohd Shariff et al. (2010), poverty is a state of absolute economic deprivation in which the individual cannot independently have access to the basic human life-sustaining essentials such as food, clothing, protection, and shelter. Poverty is a lack of income or shortage of assets, or a lack of competence (Singer, 2006). Entrepreneurship is defined as the individual ability to find a business idea and transform it into practice (European Commission, 2020; Miço & Cungu, 2023). Entrepreneurship refers to an individual's ability to transform ideas into action and includes creativity, innovation, and the ability to plan and manage projects in order to achieve business objectives (Miço & Cungu, 2023).

Entrepreneurship development refers to the process of enhancing entrepreneurial skills and knowledge through structured training and institutional building programs intended for individuals who wish to start or expand a business (Charles, 2015). Adenutsi (2023) believes that entrepreneurship development creates employment through the startup of new businesses or the expansion of existing ones; creates new markets, new industries, new technology, new institutional forms, new jobs, and net increases in real productivity; and increases income which enhances the standards of living for the population and leads to the poverty reduction. Entrepreneurship education teaches students, learners, and business people; it also equips them with skills needed for teaching responsibility and developing initiatives of prospective trainees (Ezeani, 2012). Entrepreneurship education is an effective tool for self-empowerment, job, and wealth creation (Okereke & Okorafor, 2011). Ugoani and Ibeenwo (2015) conducted a study on entrepreneurship development and employment generation in Nigeria; the result showed a strong positive correlation between entrepreneurship development and employment generation with a coefficient of correlation ($r=0.901$ at $\alpha=0.05$, $p=0.00$). Mitra et al. (2011) examined the participation of graduate entrepreneurship in the perspective of human capital development, education, training, and research to meet the Millennium Development Goals (MDGs) in Nigeria, and they found entrepreneurship development in developing economies is based on human capital development.

The integration of entrepreneurship education into non-entrepreneurship undergraduate curricula leads to an increased interest in entrepreneurship careers and entrepreneurship education which will enhance the students' entrepreneurial competence, skills, and employment opportunities. It also equips the students with good ideas to create new ventures or improve the existing ones (Bernstein & Carayannis, 2012). Entrepreneurship education creates business opportunities and trains people with innovative enterprise skills to grasp the opportunities for starting new entrepreneurial activities (Cheng et al., 2009). Entrepreneurship training will equip people with skills for constant improvement and innovation in their undertaken and help an individual in strengthening his/her entrepreneurial

motivation and in acquiring skills and capabilities necessary for playing his/her entrepreneurial role effectively. According to Ifeoma et al. (2018), entrepreneurship development is also considered a key tool for poverty reduction, stimulating employment and economic growth in developing countries. It also enhances educational attainment and increases the rate of economic growth (Ifeoma et al., 2018). Entrepreneurship development plays a vital role in the process of economic growth and the economic development which in turn creates jobs and alleviates poverty (Ben Slimane & M'henni., 2020).

According to Al-Haddad et al. (2019) in the view of Chuma and Makandwire (2004), small and medium enterprises play a vital role in poverty reduction, social growth, and economic development. Through the establishment of small and medium enterprises, economic growth will be achieved which will create employment opportunities for the general public in the community. The employment opportunities will boost the disposable income of the people which will also enhance the standards of living as well as reduce the poverty levels. Small and medium enterprises are essential for the growth and development of the economy as well as for employment generation (Makatiani, 2006). Abdullahi et al. (2021) studied the impact of small entrepreneurship development on poverty alleviation through a survey research design using a questionnaire as an instrument for the primary data collection. The result indicated that there is a strong positive correlation between small business enterprises and poverty alleviation ($r = 0.740$, $\alpha = 0.01$). Ogidi and Okonkwo (2021) examined the effect of entrepreneurship development on poverty alleviation in Nigeria by collecting data from selected business enterprises through questionnaires, and the data was analyzed using chi-square and found that entrepreneurial development among small-scale businesses alleviates poverty. Kastelli et al. (2023) indicated that founders' educational level and experience positively related to the formation of knowledge-intensive entrepreneurship. Thus, investment in entrepreneurial education, training, and lifelong learning could boost the exploitation of research outcomes from students, and academics reshape the landscape of entrepreneurial ventures and change its characteristics.

Theoretical Framework

This study applied several theories that have been developed by scholars to explain the field of entrepreneurship including human capital entrepreneurship theory, opportunity-based theory, risk-taking theory, and need for achievement theory. Human capital theory (HCT) is one of the resource-based entrepreneurship theories and was proposed by Schultz in 1979. This theory views education as a tool for developing human capital, stimulating labor productivity, and boosting the level of technology across the globe (Robert, 1991). The theory also inspires spending on the nation's workforce since the investment in training and development is a productive investment like investment in physical assets (Olaniyan & Okemakinde, 2008; Chineze et al., 2021). The study also applied the opportunity-based theory, which was developed by Peter Drucker and Howard Stevenson. Drucker (1985) explained

that entrepreneurs exploit the opportunities that are created by the changes; he also argues that entrepreneurs always search for change, respond to it, and exploit it as an opportunity (Simpeh, 2011). Another theory that supports entrepreneurship education is the risk-taking theory of Richard Cantillon and John Stuart Mill. The theory states that entrepreneurship is a mental education that motivates individuals to take calculated risks to guarantee future streams of benefits; it also argues people taking big risks should have a great responsibility to deal with the risks (Chineze et al. (2021). This implies that entrepreneurship education improves the ability, knowledge, skills, capability, and potential of individuals to undertake risk for which economic benefits are assured. The need for achievement theory by McClelland (1961) is one of the psychological entrepreneurship theories that emphasize personal characteristics that define entrepreneurship. Need for achievement theory states that human beings have a need to succeed, accomplish, excel, or achieve. Therefore, entrepreneurs are driven by this need to achieve and excel (Simpeh, 2011).

Entrepreneurship Training and Education and Job Creation, Income Generation, and Poverty Reduction

Olayinka et al. (2015) empirically examined the impact of entrepreneurship training and education on poverty reduction in Nigeria, through a stratified random sampling technique, and selected 500 entrepreneurs and apprenticeships from six recognized local governments in Lagos State. The researchers applied a linear regression model to test the relationship between entrepreneurship training and youth empowerment. The study found a significant positive relationship between entrepreneurship training and youth empowerment at $\alpha = 5\%$ level of significance, $p = 0.00$. The study also examined the coefficient of determination (R^2) and found that 68% of the variation in youth empowerment is explained by entrepreneurship training. Nor (2021) examined the correlation between entrepreneurship development and poverty alleviation through income by using entrepreneurial training/education as an independent variable and income as a dependent variable and found a significant positive relationship between entrepreneurial training/education and income generation ($r = 0.451$, $p = 0.000$ at $\alpha = 5\%$, $p = 0.00$). The study also revealed that the provision of entrepreneurial training increases 20.4% of the income of the entrepreneurs which leads to poverty reduction.

Ogundele et al. (2012) investigated the intensity of entrepreneurship training and education as strategic tools for poverty alleviation in Nigeria by using a stratified random sampling technique, comprising 250 entrepreneurs and apprenticeships from five recognized local government areas in Lagos state, and revealed that entrepreneurship training and education are significantly related to the youth empowerment and social welfare services. The findings of the study also revealed that youth empowerment is influenced by their acquired technical skills. Sambo (2016a, b) investigated the factors affecting youth entrepreneurship development within Kibera, Kenya, from the perspective of entrepreneurship education through structured survey questionnaires to collect primary data from business owners in the Kibera district of Kenya. The study revealed a strong significant positive relationship between

the provision of entrepreneurship education and training and development of youth entrepreneurship ($r=0.75741$, $p=0.000$). According to the European Commission (2020), social entrepreneurship contributes to important policy objectives, including job creation, inclusiveness, equal opportunities, sustainability, and community participation (Fernández-Guadaño & Diez, 2023).

A study conducted by Simiyu and published by UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training (2010) on Entrepreneurship Education as a Tool to Support Self-Employment in Kenya shows that entrepreneurship initiatives played a significant role since over 40% of TVET graduates in primary and secondary schools who have attended and passed through the TVET programs become self-employed and also over 20% of those who joined salaried employment started their own businesses and then created jobs for others. Technical and vocational education and training (TVET) provides knowledge, skills, and attitudes relevant to employment or self-employment (Nwachukwu, 2014). Bernstein and Carayannis (2012) conducted research on exploring the value proposition of the undergraduate entrepreneurship major and elective based on student self-efficacy and outcome expectations. The findings of their study revealed that enhancing the students' understanding and their awareness of entrepreneurship leads to greater levels of interest in entrepreneurship careers and entrepreneurship education regardless of the students' intended field of study. They also argued that entrepreneurship education addresses the lack of knowledge of entrepreneurship and encourages new venture creation. Patricio (2023) revealed entrepreneurial teaching and learning, preparing and supporting entrepreneurs, and digital transformation and capabilities influence the development of graduates' entrepreneurial activities. Their findings also showed that entrepreneurial universities promote innovation and the entrepreneurial ecosystems as knowledge providers and capability builders to catalyze economic and social development.

Based on the above arguments, the following hypotheses are assumed.

H_1: There is a significant positive relationship between entrepreneurship training and education and job creation.

H_2: There is a significant positive relationship between entrepreneurship training and education and income generation.

H_3: There is a significant positive relationship between entrepreneurship training and education and poverty reduction.

Small- and Medium-Sized Enterprises and Job Creation, Income Generation, and Poverty Reduction

Dilger (2020) examined the types of businesses that appear to create the most jobs. Their research indicates that small businesses create more jobs than large businesses during economic expansions and lose more jobs during the recession. Ajagbe et al. (2015) researched building a sustainable future for Nigeria through an administered questionnaire to collect the primary data. The findings from the study revealed that there is a significant relationship between entrepreneurship development and unemployment reduction. The analysis of this study results also showed that 82% of the

participants indicated SMEs and entrepreneurship development results in increased employment generation in the country. Hussain et al. (2014) conducted research on entrepreneurship development and poverty alleviation by reviewing the literature, and found innovations; entrepreneurship training and education; youth and women participation; and micro, small, and medium enterprises are key tools for entrepreneurship development to stimulate employment and alleviate poverty. A study conducted by Nor (2021) shows that small businesses are major sources of income generation for small business owners since 62% of the respondents indicated that their small business was their only source of income generation although 38% showed that they have other sources of income.

Al-Haddad et al. (2019) had undertaken a study to find out the role of small and medium enterprises (SMEs) in employment generation, income generation, and economic growth, by collecting the data through a structured questionnaire and analyzing the data through a Statistical Package for Social Sciences (SPSS). The study found a significant positive relationship between SMEs and unemployment reduction ($r=0.518$ and $p=0.000$). The result of the study also showed a significant positive relationship between SMEs and an increase in income level ($r=0.241$ and $p=0.000$). Nor (2021) conducted research on entrepreneurship development and poverty alleviation by collecting data through a questionnaire and found that 97% of the respondents indicated that the establishment of small businesses created job opportunities for them. Jwasshaka and Fadila (2020) conducted research on minimizing the unemployment of graduates through technical education and training through a meta-analysis approach. The findings revealed that most of the studies conducted highlighted the TVET as a tool for poverty reduction among youth. Bakhouche (2022) showed that SMEs have a significant impact on employment, economic growth, and social progress in both developed and developing countries.

Manzoor et al. (2021) conducted a study on the role of SMEs in rural development using the access of SMEs to finance as a mediator by collecting data from 338 entrepreneurs operating SMEs in rural areas. The data were analyzed using confirmatory factor analysis and structural equation modeling to test hypotheses. The study found a significant positive relationship between SMEs' progress and rural development ($r=0.434$, $p<0.01$). Bhurtel (2015) studied Technical and Vocational Education and Training in Workforce Development, and he proved that the TVET is key for skill development; he also stated that TVET plays a major role in the economic growth of the nations through the skill development of the workforce and rise in the employment rate. TVET also plays a significant role in employment generation in the job market and promotes self-employment. Small- and medium-sized enterprises (SMEs) significantly contribute to the employment and GDP of many countries worldwide. The SMEs sector drives economic growth, boosts employment, and offsets poverty (Kusa et al., 2021). MSEs are considered engines for creating employment opportunities and economic growth in emerging countries like Ethiopia (Mamo, 2023).

Based on the above literature, the following hypotheses about the relationship between SMEs development and job creation, income generation, and poverty reduction will be tested.

H_4: There is a significant positive relationship between small and medium enterprises development and job creation.

H_5: There is a significant positive relationship between small and medium enterprises development and income generation.

H_6: There is a significant positive relationship between small and medium enterprises development and poverty reduction.

Methodology

This study applied a cross-sectional research design by using a questionnaire to collect the data from 150 respondents from the beneficiaries of the entrepreneurship training and education of the Next Economy Program provided by SIMAD Innovation Lab and International Labour Organization Start-improve your business (ILO-SIYB) Training packages, as well as the entrepreneurship training program provided by Irise-hub by using a simple random sampling technique. The sample size was small and the respondents were limited to the beneficiaries of the entrepreneurship training and education provided by SIMAD Innovation Lab, International Labour Organization (ILO), and the Irise-hub, but the sampling technique was free from bias since any of the respondents in the population had an equal chance to be chosen. The study applied structural equation modeling to test the hypotheses through Smart-PLS (v.3.3.9). Although 150 respondents were selected for data collection, and the questionnaire was sent through email, a sample of 120 was received; the others have not responded, despite the researcher's repeated attempts. Finally, a total of 120 questionnaires were processed for the analysis yielding a response rate of 80%. Five-point Likert-type scales were employed in the study. The five variables were assessed using the expressions "Strongly disagree" (1) and strongly agree" (5). All of the items were based on past research. For entrepreneurship training and education (ETE), six items (ETE1, ETE2, ETE3, ETE4, ETE5, and ETE6) were adapted from the scale developed by Ogundele et al. (2012) and Abdullahi (2021); seven items for SMEs (SMEs1, SMEs2, SMEs3, SMEs4. SMEs5, SMEs6, and SMEs7) were adopted from administrative questions developed by Ajagbe et al. (2015), Al-Haddad et al. (2019), and Nor (2021); and 13 items from job creation (JC1, JC2, JC3, and JC4), income generation (IG1, IG2, IG3, IG4, and IG5), and poverty reduction (PR1, PR2, PR3, PR4) were adopted from Nor (2021) and Ogundele et al. (2012). The questionnaire's content validity was assured by looking at the reliability and Cronbach alpha coefficients for each scale and found that they all met Hair et al. (2021) reliability limits, with coefficients of 0.70 or higher in all cases. The study examined the internal consistency, convergent validity, and the discriminant validity of the measurement model, and all measurements were confirmed. The study also examined the collinearity problem and found that the maximum threshold VIF value was 2.555 which is less than the VIF value of 5. Therefore, the study confirmed no collinearity problem.

The majority of the respondents representing 50.8% were male, while 49.2% of the respondents were female. 12.5% of the respondents fall age under 20 years old, 83.3% of the respondents were 21–30 years old, and 4.2% respondents were aged between 31 and 40 years old. 82.5% of the respondents were single and 16.7% were married, while 0.8% of the respondents fall into divorced status. 85% of the respondents were bachelor level and 4.2% were secondary level, while 10% of respondents were master level and above, and 0.8% of the respondents had informal education.

Data Analysis and Results

The study applied partial least square structural equation modeling (PLS-SEM) to test the hypotheses by using Smart-PLS (v.3.3.9) for the analysis. The study first tested the measurement model (Fig. 1) to confirm the reliability and validity of the data. After the measurement model was confirmed, the study tested the structural model results (Fig. 2).

Assessment of the Measurement Model

The study examined the construct reliability by evaluating Cronbach's and composite reliability. Factor loading and average variance extracted (AVE) were also checked for examining convergent validity. The study also checked HTMT as a measurement for discriminant validity to validate the measurement model (Tables 1 and 2).

Construct Validity and Reliability

To examine the internal consistency reliability, the study tested Cronbach's alpha and confirmed greater than 0.70 thresholds. The study also tested composite reliability which is also confirmed greater than 0.70 thresholds (Table 1).

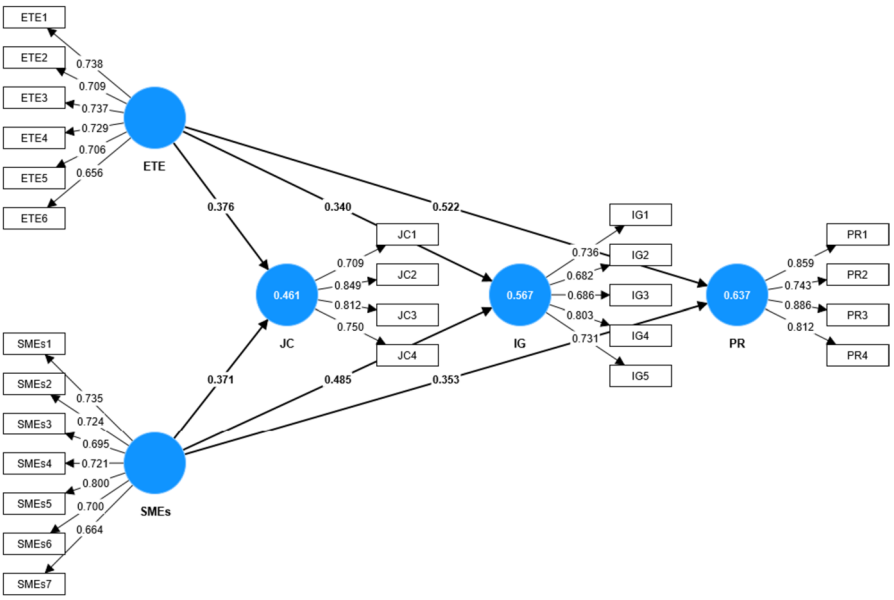

Fig. 1 Measurement model

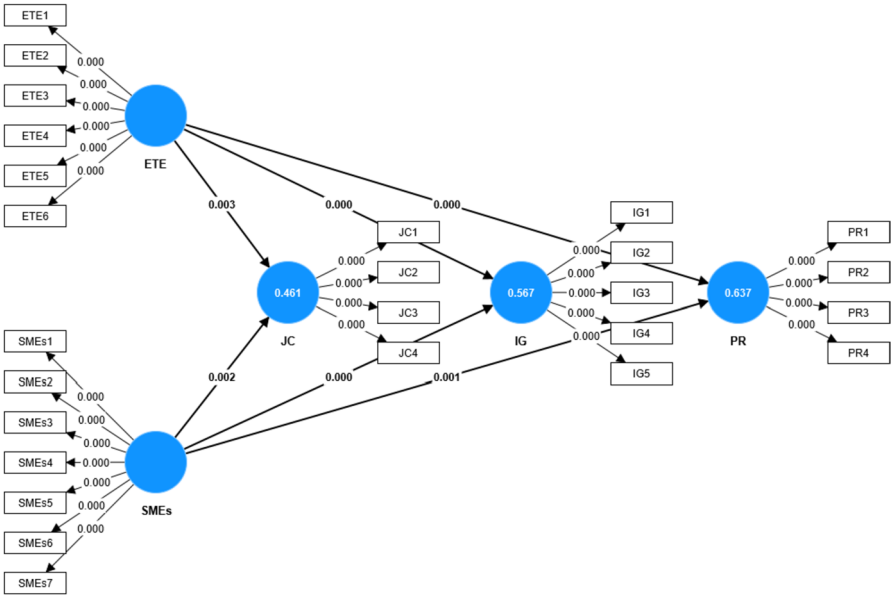

Fig. 2 Structural model

Table 1 Internal consistency and convergence validity results

	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
Entrepreneurship training and education	0.806	0.861	0.508
Income generation	0.782	0.850	0.532
Job creation	0.786	0.862	0.611
Poverty reduction	0.845	0.896	0.684
SMEs development	0.845	0.883	0.520

Table 2 HTMT results; heterotrait-monotrait ratio (HTMT)

	Entrepreneurship training and education	Income generation	Job creation	Poverty reduction	SME development
Entrepreneurship T&E					
Income generation	0.803				
Job creation	0.774	0.886			
Poverty reduction	0.896	0.831	0.819		
SMEs development	0.785	0.839	0.752	0.807	

Internal Consistency and Convergence Validity Results

The study examined internal consistency and convergent reliability, as shown in Table 1.

According to Table 1, Cronbach's alpha and composite reliability were both confirmed greater > 0.70 thresholds (Nunnally & Bernstein, 1994). The study also examined every latent variable's average variation extracted (AVE) and was confirmed greater than the required threshold of 0.5, indicating that on average, each construct could explain more than half of the variance to its measuring items (Hair et al., 2014; Henseler et al., 2016).

Discriminant Validity

The study examined the heterotrait-monotrait (HTMT) ratio to validate the model's effectiveness as shown in Table 2.

In Table 2, the study applied HTMT to evaluate the constructs' discriminant validity; HTMT was confirmed less than 0.90. The maximum threshold value of this study was 0.896 which is less than 0.90 as recommended by Hair et al. (2021). Therefore, the discriminant validity was confirmed**.**

The Assessment of the Structural Model

Once the study has confirmed that the measurement of constructs is reliable and valid, the study addressed the assessment of the structural model results by examining the structural model for potential collinearity problems and evaluating the significance and relevance of the structural model relationships, and finally, the study examined the model's explanatory and predictive power (Tables 3, 4, 5 and 6).

Assessment Collinearity Issues of the Structural Model: Collinearity Statistics (VIF)

The study assessed collinearity issues of the structural model since the estimation of path coefficients in the structural models is based on ordinary least squares (OLS) regressions of each endogenous construct on its corresponding predictor constructs. The path coefficients might be biased if the estimation encompasses high levels of collinearity among predictor constructs. Therefore, the study checked the collinearity problems of the structural model, and the result is shown in Table 3.

The study examined the collinearity problem using the variance inflation factor; the result showed the absence of the collinearity problem between the explanatory variables as shown in Table 3. In the context of PLS-SEM, the presence of a VIF value of 5 and higher indicates a potential collinearity problem. In this study, the maximum threshold VIF value was 2.555 which is less than the VIF value of 5 (Hair et al., 2021). Therefore, the study confirmed that there is no collinearity problem.

Table 3 Outer VIF values; collinearity statistics

	VIF
ETE1	1.726
ETE2	1.746
ETE3	1.768
ETE4	1.549
ETE5	1.595
ETE6	1.386
IG1	1.408
IG2	1.670
IG3	1.746
IG4	1.841
IG5	1.572
JC1	1.405
JC2	1.946
JC3	1.819
JC4	1.622
PR1	2.240
PR2	1.830
PR3	2.555
PR4	1.908
SMEs1	1.627
SMEs2	1.650
SMEs3	1.541
SMEs4	1.777
SMEs5	2.164
SMEs6	1.602
SMEs7	1.382

Table 4 Direct effects; β-values, T-values, p-values

	β-value	T-value	p-value	Decision
Entrepreneurship T&E—> job creation	0.376	3.023	0.003	Supported
Entrepreneurship T&E—> income generation	0.340	3.596	0.000	Supported
Entrepreneurship T&E—> poverty reduction	0.522	6.129	0.000	Supported
SMEs development—> job creation	0.371	3.110	0.002	Supported
SMEs development—> income generation	0.485	5.083	0.000	Supported
SMEs development—> poverty reduction	0.353	3.397	0.001	Supported

Assess the Significance and Relevance of the Structural Model Relationships (Path Coefficients)

The study evaluated the significance and relevance of the structural model relationships (path coefficients) as shown in Table 4.

Table 5 Model's explanatory power (R square)

	R square	R square adjusted
Income generation	0.567	0.560
Job creation	0.461	0.452
Poverty reduction	0.637	0.631

Table 6 Assessment of the model's predictive power

	SSO	SSE	Q^2 (=1-SSE/SSO)
Entrepreneurship training and education	720.000	720.000	
Income generation	600.000	434.525	0.276
Job creation	480.000	353.706	0.263
Poverty reduction	480.000	284.556	0.407
SMEs development	840.000	840.000	

As shown in Table 4, the study examined the direct effect between the exogenous and indigenous variables through bootstrapping technique and found all exogenous variables have a significant positive relationship with indigenous variables at 0.05. The regression coefficients (β) were examined to test the entire hypotheses in the study and found a significant positive relationship between entrepreneurship training and education with job creation ($\beta=0.376$, $t=3.023$, $p=0.003$), income generation ($\beta=0.340$, $t=3.596$, $p=0.000$), and poverty reduction ($\beta=0.522$, $t=6.129$, $p=0.000$). The study also revealed a significant positive relationship of SMEs development with job creation ($\beta=0.371$, $t=3.110$, $p=0.002$), income generation ($\beta=0.485$, $t=5.083$, $p=0.000$), and poverty reduction ($\beta=0.353$, $t=3.397$, $p=0.001$). This means all variables are significant at a 5% level since p-value is less than 0.05 and the T-value is greater than 1.96 as shown in Table 4. Therefore, all hypotheses were supported.

The Assessment of the Model's Explanatory Power

The study examined the model's explanatory power through evaluating R^2 as shown in Table 5.

The study examined the coefficient of determination (R^2) of the endogenous construct(s) that represents the variance explained in each of the endogenous constructs and is a measure of the model's explanatory power (Hair et al., 2021). R^2 values of 0.75, 0.50, and 0.25 can be considered substantial, moderate, and weak, respectively (Hair et al., 2021). According to Table 5, the study shows that 46.1% of job creation, 56.7% of income generation, and 63.7% of poverty reduction are explained by factors studied. In this study, the model's explanatory power can be considered moderate since the value of R^2 of two endogenous construct(s) is greater than 0.50 or 50% although the value of R^2 of job creation is 46.1% which is also considered an average in consistent with Chin's (1998) R^2 value of 0.67 which is

considered substantial, 0.33 average, and 0.19 weak. This means that entrepreneurship training and education and SMEs development moderately explain 46.1%, 56.7%, and 63.7% of the variance in job creation, income generation, and poverty reduction respectively.

The Assessment of the Model's Predictive Power

The study also assessed the model's predictive power by checking construct cross-validated redundancy.

As shown in Table 6, the study assessed the model's predictive power using Stone-Geisser's Q^2 value (Geisser, 1974; Stone, 1974) which measures the model's out-of-sample predictive power by checking construct cross-validated redundancy. Q^2 value greater than 0 suggests that the model has predictive relevance for a certain endogenous construct, while a value of 0 and below indicates a lack of predictive relevance (Chin, 1998). The Q^2 values of this study confirmed greater than 0 which shows that the model has predictive power. According to Manley et al. (2021), predictive relevance (Q^2) is considered meaningful when Q^2 values > 0.0, medium when $0.25 < Q^2$ values < 0.50, and large predictive relevance when Q^2 value > 0.5. Therefore, The Q^2 values of this study confirmed $0.25 < Q^2$ values < 0.50 which shows the predictive relevance of this model is medium.

Discussion of the Results

This study is about entrepreneurship development as a tool for job creation, income generation, and poverty reduction. The study examined the contribution of entrepreneurship training and education to job creation, income generation, and poverty reduction. The study also examined the contribution of small and medium enterprises to job creation, income generation, and poverty reduction. The study set the significance level at $\alpha = 0.05$ for hypotheses testing, and the p-value was used to determine if the null hypotheses should be rejected or accepted. This study tested six hypotheses including entrepreneurship training and education and job creation; entrepreneurship training and education and income generation; and entrepreneurship training and education and poverty reduction. The study also tested the hypothesis of small and medium enterprises development and job creation, income generation, and poverty reduction.

Hypothesis 1 assumed a significant positive relationship between entrepreneurship training and education and job creation. Therefore, the study applied PLS-SEM to test the hypothesis. The results indicated a significant positive relationship between entrepreneurship training and education and job creation at $\alpha = 0.05$ (p-value $= 0.003$). Therefore, the hypothesis was supported. *Hypothesis 2* also proposed that there is a significant positive relationship between entrepreneurship training and education and income generation. The result showed a significant positive relationship between entrepreneurship training and education and income generation at $\alpha = 0.05$ (p-value $= 0.000$). Therefore, the hypothesis was supported. *Hypothesis 3* assumed a significant positive relationship between entrepreneurship

training and education and poverty reduction. The study found a significant positive relationship between the two variables at $\alpha = 0.05$ (p-value = 0.000). Therefore, the hypothesis was supported. *Hypothesis 4* proposed a significant positive relationship between small and medium enterprises development and job creation. The result revealed a significant positive relationship between small and medium enterprises development and job creation at $\alpha = 0.05$ (p-value = 0.002). Therefore, the hypothesis was supported. *Hypothesis 5* similarly proposed a significant positive relationship between small and medium enterprises development and income generation. The results indicated a statistically significant positive relationship between small and medium enterprises development and income generation at $\alpha = 0.05$ (p-value = 0.000). Therefore, the hypothesis was supported. *Hypothesis 6* assumed that there is a significant positive relationship between small and medium enterprises development and poverty reduction. The study found a significant positive relationship between small and medium enterprises development and poverty reduction at $\alpha = 0.05$ (p-value 0.001). Therefore, the hypothesis was supported.

The study examined the contribution of similar studies on the subject and found this study is consistent with the study conducted by Ajagbe et al. (2015) on building a sustainable future for Nigeria through an administered questionnaire to collect the primary data. The findings from the study revealed that there is a significant relationship between entrepreneurship development and unemployment reduction. This study is also in line with the study conducted by Ugoani and Ibeenwo (2015) on entrepreneurship development and employment generation in Nigeria; the result showed a strong positive correlation between entrepreneurship development and employment generation with a coefficient of correlation ($r = 0.901$, $p = 0.00$ at $\alpha = 5\%$). The study supports Nor (2021) who examined the correlation between entrepreneurship development and poverty alleviation through income by using entrepreneurial training/education as the independent variable and income as a dependent variable and found a significant positive relationship between entrepreneurial training/education and income generation ($r = 0.451$, $p = 0.000$ at $\alpha = 5\%$). The study supports the study conducted by Al-Haddad et al. (2019) on the role of small and medium enterprises (SMEs) in employment generation, income generation, and economic growth, Their study found a significant positive relationship between SMEs and unemployment reduction ($r = 0.518$ and $p = 0.000$). The result of their study also showed a significant positive relationship between SMEs and an increase in income level ($r = 0.241$ and $p = 0.000$). This study is also consistent with research conducted by Hussain et al. (2014) on entrepreneurship development and poverty alleviation through reviewing the literature. Their study revealed innovations; entrepreneurship training and education; youth and women participation; and micro, small, and medium enterprises are key tools for entrepreneurship development to stimulate employment and alleviate poverty.

Conclusions

Despite the efforts and the progress on the status of youth and women employment in many emerging economies, there still needs to be more interventions to work on various thematic areas, including employment creation, skills development, and poverty reduction. Therefore, this study examined the relationship between entrepreneurship training and education and job creation, income generation, and poverty reduction as well as the relationship between small- and medium-sized enterprises development and job creation, income generation, and poverty reduction. The study found that entrepreneurship training and education and small and medium enterprises development have a significant positive relationship with job creation, income generation, and poverty reduction. The results of this study are important as they reveal the significant impact of entrepreneurship training and education and small- and medium-sized enterprises development on job creation, income generation, and poverty reduction. The findings support the results of other studies (Ajagbe et al., 2015; Ifeoma et al., 2018; Ben Slimane & M'henni, 2020; Nor, 2021; Chineze et al., 2021) as they show the overall contributions of entrepreneurship training and education on employment creation and poverty reduction. The study also complements the results of Etuk et al. (2014), Al-Haddad et al. (2019), and Maow (2021) as it reflects the roles played by small- and medium-sized enterprises in job creation, poverty reduction, and economic growth. This study strengthens the previous literature on entrepreneurship development by presenting a deeper understanding of entrepreneurship development, small- and medium-sized enterprises development, and theories related to entrepreneurship development including human capital theory, opportunity-based theory, risk-taking theory, and need for achievement theory. It also examines the empirical relationship between entrepreneurship training and education, as well as small- and medium-sized enterprises development and job creation, income generation, and poverty reduction. The findings imply that entrepreneurship development is an alternative way to tackle some of the socio-economic problems that hinder developing countries, especially unemployment and poverty problems. The entrepreneurship development programs create employment through the startup of new businesses or the expansion of existing ones; create new markets, new industries, new technology, new institutional forms, new jobs, and net increases in real productivity; and increase income which enhances the standards of living for the population and leads to the poverty reduction. The findings also provide practical implications for the government, international organizations, and owners and managers of SMEs, as well as policymakers who are interested in SMEs and entrepreneurship development. Therefore, from a policy perspective, promoting the entrepreneurial development initiatives of a country should be an essential part of any government attempts to boost social and economic development.

The findings of this study have practical implications for practitioners, entrepreneurial educators, and policymakers alike and have a variety of practical implications to help develop significant entrepreneurial activities. Therefore, the

findings of the study suggest the following implications: first, considering the significant positive relationship between entrepreneurship training and education, as well as the relationship between small- and medium-sized enterprises development and job creation, income generation, and poverty reduction, it is recommended that governments consider entrepreneurship development as a strategic tool for job creation, and poverty reduction for the youth and women, to boost economic prosperity in the country; it is also recommended that governments establish entrepreneurship training and education centers to provide training for the youth and women entrepreneurs, as well as the owners and the managers of small- and medium-sized enterprises. Second, the findings suggest that practitioners coordinate and sustain the efforts of international development organizations and their local partners towards enhancing entrepreneurship training and education to reduce unemployment and poverty problems in the country. Third, the study's findings have significant implications for academics and practitioners in the entrepreneurship development field. It highlights the importance of integrating entrepreneurship development programs into national development plans. It also highlights the importance of promoting students' symposium programs to enhance youth entrepreneurial competence, knowledge, and skills. Furthermore, academics should enhance the students' basic knowledge of entrepreneurship to increase their interest in entrepreneurship careers as well as entrepreneurship education regardless of their field of study.

This study has limitations related to the sample, the respondents, the instrument used, and the variables examined. First, the sample size was small. Therefore, the sample size needs to be increased to maximize the opportunity for application and generalization of results. Second, the respondents were undergraduates, fresh graduates, and other entrepreneurs who benefited from the entrepreneurship training and education provided by SIMAD Innovation Lab, the International Labour Organization (ILO), and the Irise-hub. Therefore, other respondents who benefited from entrepreneurship training programs provided by other institutions should be included. The limitations related to the data collection instrument were related to the usage of Likert scales. All the scales of the items used were weighted from 1 to 5. Therefore, the scales used for measuring the variables could be improved to have larger or fewer scales and to generate more appropriate and updated items from another perspective. The study has also another limitation related to the variables examined; this study examined only two variables namely entrepreneurship training and education, and small- and medium-sized enterprises development, and their relationship with job creation, income generation, and poverty reduction. So, other variables could be incorporated into further studies to investigate their contributions to job creation and poverty reduction for the youth and women.

This study was conducted on entrepreneurship training and education, small and medium enterprises development, and their contributions to job creation, income generation, and poverty reduction; therefore, further research is essential in four main areas. First, due to emerging technology, future research should consider on the role of digital entrepreneurship in job creation for the youth and women. Second, future studies can utilize digital skills and their roles in job creation for the youth. Third, due to the significance of small- and medium-sized enterprises in job creation

and economic growth, it seems a very useful contribution to understand their critical success factors in emerging economies. Fourth, due to the importance of entrepreneurship training and education for the youth and women entrepreneurs, as well as the managers and the owners of small- and medium-sized enterprises, the role of higher education institutions (HEIs) in promoting entrepreneurship development is another essential study area.

Data Availability The datasets of this study are available from the corresponding author upon request.

Declarations

Ethical Approval This article does not contain any studies with human participants or animals performed by the author.

Conflict of Interest The author declares no competing interests.

References

Abdullahi, A. M., Khelghat-Doost, H., & Hassan, M. S. (2021). Impact of small entrepreneurship development on poverty alleviation: Empirical study from Mogadishu, Somalia. *Journal of Somali Studies, 8*, 33–51.

Adebayo, N. A., & Nassar, M. L. (2014). Impact of micro and small business entrepreneurship on poverty reduction in Ibadan metropolis, South Western Nigeria. *International Review of Management and Business Research, 3*(3), 1603–1626. www.irmbrjournal.com

Adofu and Ocheja (2013), Alleviating poverty through the use of entrepreneurship skill acquisition in Kogi State, Nigeria. International Open Journal of Economics Vol. 1, No. 2, PP: 14–23

Adenutsi, D. E. (2023). Entrepreneurship, job creation, income empowerment and poverty reduction in low-income economies. *Theoretical Economics Letters, 13*(06), 1579–1598.

Agency, U. S., Development, I., International, M. C., Order, E. T., Learning, Y., Contract, A. I. D., & Government, U. S. (2020). *USAID/Somalia youth assessment*. 1(January).

Agri, E. M., Nanwul, D. A., & Acha, O. F. (2017). Promoting entrepreneurship for poverty reduction and sustainable development in Nigeria. *Journal of Business Management and Economics, 8*(1), 38–46. https://doi.org/10.1109/SADFE.2009.7

Ajagbe, M. A., Fadeyi, O., Oke, A. O., & Isiavwe, D. T. (2015). *Building Sustainable Future for Nigeria through Entrepreneurship, 5*(3), 42–49. https://doi.org/10.6007/IJARAFMS/v5-3/1740

Al-Haddad, L., Sial, M. S., Ali, I., Alam, R., Khuong, N. V., & Khanh, T. H. T. (2019). The role of small and medium enterprises (SMEs) in employment generation and economic growth: A study of marble industry in emerging economy. *International Journal of Financial Research, 10*(6), 174–187. https://doi.org/10.5430/ijfr.v10n6p174

Anne, N. (2014). Factors affecting the performance of small and medium enterprises in the Jua Kali sector in Nakuru town, Kenya. *IOSR Journal of Business and Management, 16*, 80–93.

Arenius, P. (2003) Women in entrepreneurship. *Women in Entrepreneurship*, *April 2003*, 1–28.

Audretsch, D. (2012). Entrepreneurship research. *Management Decision, 50*(5), 755–764. https://doi.org/10.1108/00251741211227384

Bakhouche, A. (2022). Assessing the innovation-finance nexus for SMEs: Evidence from the Arab Region (MENA). *Journal of the Knowledge Economy, 13*(3), 1875–1895. https://doi.org/10.1007/s13132-021-00786-x

Bernstein, A. T., & Carayannis, E. G. (2012). Exploring the value proposition of the undergraduate entrepreneurship major and elective based on student self-efficacy and outcome expectations. *Journal of the Knowledge Economy, 3*(3), 265–279. https://doi.org/10.1007/s13132-011-0041-z

Ben Slimane, S., M'henni, H, 2020, Entrepreneurship and development: Realities and future prospects, Published by ISTE Ltd and John Wiley & Sons, Inc.

Bhurtel, A. (2015). Technical and vocational education and training in workforce development. *Journal of Training and Development, 1*(July), 77–84. https://doi.org/10.3126/jtd.v1i0.13094

Bruni, A., Gherardi, S., & Poggio, B. (2004). *Gender and entrepreneurship: An ethno- graphic approach*. New York: Routledge.

Cala, C., Arauzo-Carod, J.-M., & Manjon-Antolin, M. (2015). The determinants of entrepreneurship in developing countries. *Departament D'Economia – Creip*, 1–27.

Charles, M. (2015). Entrepreneurship development and entrepreneurial orientation in rural areas in Malawi. *African Journal of Business Management, 9*(9), 425–436. https://doi.org/10.5897/ajbm2014.7552

Cheng, M. Y., Chan, W. S., & Mahmood, A. (2009). The effectiveness of entrepreneurship education in Malaysia. *Education and Training, 51*(7), 555–566. https://doi.org/10.1108/00400910910992754

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295–358). Erlbaum.

Chineze, J., & J., Uche R., E., & Gabriel E., E. (2021). Effect of entrepreneurial education on unemployment reduction among students in Nigeria. *Business and Management Research, 10*(2), 16. https://doi.org/10.5430/bmr.v10n2p16

Chuma-Mkandawire, S. (2004, October 25–27). National Economic Consultative Forum. Report on the Policy Implementation Workshop for SMEs

Collier, P. (2007). Poverty reduction in Africa. *Proceedings of the National Academy of Sciences of the United States of America, 104*(43), 16763–16768. https://doi.org/10.1073/pnas.0611702104

Dilger, R. J. (2020). Small business administration and job creation (updated). *Key Congressional Reports for September 2019: Part VII*, 95–127.

do Adro, F., Fernandes, C. I., Veiga, P. M., & Kraus, S. (2021). Social entrepreneurship orientation and performance in non-profit organizations. *International Entrepreneurship and Management Journal, 17*(4), 1591–1618. https://doi.org/10.1007/s11365-021-00748-4

Drucker, P. F. (1985). *Innovation and entrepreneurship: Practice and principles*. New York: Harper and Row Publishers.

European Commission. (2020). Social enterprises and their ecosystems in Europe. Comparative synthesis report. Authors: Carlo Borzaga, Giulia Galera, Barbara Franchini, Stefania Chiomento, Rocío Nogales and Chiara Carini. Luxembourg: Publications Office of the European Union. Available at https://europa.eu/!Qq64ny

Etuk, R. U., Etuk, G. R., & Michael, B. (2014). Small and medium scale enterprises (SMEs) and Nigeria's economic development. *Mediterranean Journal of Social Sciences, 5*(7), 656–662. https://doi.org/10.5901/mjss.2014.v5n7p656

Ezeani, N. S. (2012). The teacher and skills acquisition at business education curriculum at university level in Nigeria. *International Journal of Ghana, 3*(1), 30–33.

Fernández-Guadaño, J., & Diez, R. M. (2023). Social entrepreneurship impact in ten EU countries with supportive regulations. *Journal of the Knowledge Economy*, *0123456789*. https://doi.org/10.1007/s13132-023-01513-4

Geisser, S. (1974). A predictive approach to the random effects model. *Biometrika, 61*(1), 101–107.

Hair, J. F., Hult, G. T. M., Ringle, C., Sarstedt, M., Danks, N., & Ray, S. (2021). Partial least squares structural equation modeling (PLS-SEM) using R: A workbook. In *Springer*.

Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review, 26*(2), 106–121. https://doi.org/10.1108/EBR-10-2013-0128

Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research: Updated guidelines. *Industrial Management and Data Systems, 116*(1), 2–20. https://doi.org/10.1108/IMDS-09-2015-0382

Hussain, M. D., Bhuiyan, A. B., & Bakar, R. (2014). Entrepreneurship development and poverty alleviation: An empirical review. *Journal of Asian Scientific Research, 4*(410), 558–573. http://www.aessweb.com/journals/5003

Ifeoma, A. R., Purity, N. O., & Yusuf, A. E. (2018). Effect of entrepreneurship development on poverty alleviation in Nigeria. *Journal of Business and Management*, *20*(2), 80-87.

ILO. (2012). *Youth employment interventions in Africa: A mapping report of the employment and labour sub-cluster of the regional coordination mechanism (RCM) for Africa*.

ILO. (2021). Global employment trends for youth 2020: Africa. *Extract*, 4–6. Index, H. D. (2016). *The ILO in Somalia and decent work*. *January*, 16.

Jwasshaka, S. K., & Fadila, N. (2020). Minimizing unemployment of graduates through technical education and Training: Meta-analysis approach in Nigeria. *International Journal of Academic Research in Business and Social Sciences, 10*(2), 34–44. https://doi.org/10.6007/ijarbss/v10-i2/6858

Kastelli, I., Siokas, G., & Tsakanikas, A. (2023). Entrepreneurial absorptive capacity as enabler of knowledge intensive entrepreneurship: An empirical investigation. In *Journal of the Knowledge Economy* (Issue 0123456789). Springer US. https://doi.org/10.1007/s13132-023-01465-9

Kenya National Youth Policy. (2012). Ministry of Home Affairs, Heritage and Sports. Available at:http://www.africanchildforum.org/clr/policy%20per%20country/kenya/kenya_youth_2012_en.pdf.

Kilele, A.K.M. (2008). Kenya National Bureau of Statistics (KNBS). Kenya facts and figures 2008 Available at http://www.knbs.or.ke/index.php?option=com_phocadownload&view=category&id=20&Itemid=1107. Accessed:2015–10–01.

Kusa, R., Duda, J., & Suder, M. (2021). Explaining SME performance with fsQCA: The role of entrepreneurial orientation, entrepreneur motivation, and opportunity perception. *Journal of Innovation and Knowledge, 6*(4), 234–245. https://doi.org/10.1016/j.jik.2021.06.001

Makatiani, A. (2006). South African SMEs face challenge and opportunity in 2006. Retrieved from http://www.amso.org/resource/article/South/20African/20SMEs/20face/20challenge/20and/opportunity/20in/202006. Accessed in 2021–08–01

Mamo, W. B. (2023). Growth determinants of micro and small enterprises (MSEs): Evidence from entrepreneurs in the Eastern Region of Ethiopia. *Journal of the Knowledge Economy, 14*(1), 138–160. https://doi.org/10.1007/s13132-021-00859-x

Manley, S. C., Hair, J. F., Williams, R. I., & McDowell, W. C. (2021). Essential new PLS-SEM analysis methods for your entrepreneurship analytical toolbox. *International Entrepreneurship and Management Journal, 17*(4), 1805–1825. https://doi.org/10.1007/s11365-020-00687-6

Manzoor, F., Wei, L., & Sahito, N. (2021). The role of SMEs in rural development: Access of SMEs to finance as a mediator. *PLoS ONE*, *16*(3 March 2021), 1–18. https://doi.org/10.1371/journal.pone.0247598.

Maow, B. A. (2021). Küçük ve Orta Ölçekli İşletmelerin (KOBİ'ler) Somali'deki Ekonomik Büyüme ve İstihdam Yaratılmasına Etkisi. *İktisat Politikası Araştırmaları Dergisi - Journal of Economic Policy Researches*, *8*(1), 45–56. https://doi.org/10.26650/jepr818861

McClelland, D. C. (1961). *The achieving society*. Princeton, NJ: Van Nostrand.

Miço, H., & Cungu, J. (2023). Entrepreneurship education, a challenging learning process towards entrepreneurial competence in education. *Administrative Sciences*, *13*(1). https://doi.org/10.3390/admsci13010022

Mitra, J., Abubakar, Y. A., & Sagagi, M. (2011). Knowledge creation and human capital for development: the role of graduate entrepreneurship. *Education+ Training, 53*(5), 462–479. https://doi.org/10.1108/00400911111147758

Misango, S. B., & Ongiti, O. K. (2013). Do women entrepreneurs play a role in reducing poverty? A case in Kenya. *International Review of Management and Business Research, 2*(1), 87.

Mohd Shariff, M. N., Peou, C., & Ali, J. (2010). Moderating effect of government policy on entrepreneurship and growth performance of small-medium enterprises in Cambodia. *International Journal of Business and Management Science*, *3*(1), 57-72.

Nor, A. I. (2021). *Alleviating Poverty through Youth and Women Entrepreneurship Developments, 13*(11), 37–46. https://doi.org/10.7176/EJBM/13-11-05

Nunnally, J. C., & Bernstein, I. (1994). *Psychometric theory* (3rd ed.). New York: McGraw Hill.

Nwachukwu, O. P. (2014). Poverty reduction through technical and vocational education and training (TVET) in Nigeria. *Developing Country Studies*, *4*(14), 10–14. http://www.iiste.org/Journals/index.php/DCS/article/viewFile/14053/14361.

NYP, S. (2017). *The National Youth Policy of The Federal Government of Somalia* (pp. 1–31).

Ogidi, E. J., & Okonkwo, C. C. (2021). Entrepreneurial development and poverty reduction in Jos North Local Government Area, Plateau State. *African Journal of Business and Economic …*, *1*(7), 45–56. https://www.ijaar.org/articles/ajbed/v1n7/ajbed-v1n7-Jul21-p1726.pdf

Ogundele, O. J. K., Akingbade, W. A., & Akinlabi, H. B. (2012). Entrepreneurship training and education as strategic tools for poverty alleviation in Nigeria. *American International Journal of ContemporaryResearch, 2*(1), 148–156.

Okereke, H. K., & Okorafor, M. O. (2011). Entrepreneurship in education concepts and constraints. *African Journal of Education and Development Studies, 4*(1), 196–207.

Olaniyan, D. A., & Okemakinde, T. (2008). Human capital theory: Implications for educational development. *European Journal of Scientific Research, 24*(2), 157–162.

Olayinka, I., Olusegun, A. K., & Babatunde, S. J. (2015). *Entrepreneurship and Poverty Reduction in Nigeria: An Empirical Analysis, 17*(3), 16–19. https://doi.org/10.9790/487X-

Omogbolahan, A. S. (2012). *Entrepreneurial education as a tool for reducing unemployment in Nigeria* (Vol. 12, pp. 5690–5699). 5th International Conference of Education, Research and Innovation (Iceri 2012).

Patricio, Lurdes D. (2023). Aligning entrepreneurial universities' HE Innovate dimensions with entrepreneurs' needs: A graduate entrepreneur-centered perspective. *The International Journal of Management Education*. https://doi.org/10.1016/j.ijme.2023.100882

Robert, B. (1991). Economic growth in a cross section of countries. *Quarterly Journal of Economic, 106*(2), 407–414. https://doi.org/10.2307/2937943

Sambo, W. (2016a). Factors affecting youth entrepreneurship development within Kibera, Kenya: The perspective of entrepreneurship education. *Problems and Perspectives in Management*, *14*(2). https://doi.org/10.21511/ppm.14(2-2).2016.09.

Sambo, W. (2016b). Factors affecting youth entrepreneurship development within Kibera, Kenya: The perspective of entrepreneurship education. *Problems and Perspectives in Management, 14*(2–2), 331–338. https://doi.org/10.21511/ppm.14(2-2).2016.09

Semegn, A. A., & Bishnoi, N. K. (2021). Analysis of effect of microfinance on the performance of MSEs in Amhara National Regional State. *Ethiopia. Journal of Entrepreneurship, 30*(1), 153–178. https://doi.org/10.1177/0971355720974822

Simiyu, J. (2010). *Entrepreneurship education as a tool to support self-employment in Kenya*. the UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training.

Simpeh, K. N. (2011). Entrepreneurship theories and empirical research: A summary review of the literature. *European Journal of Business and Management, 3*(6), 1–9.

Singer, A. E. (2006). Business strategy and poverty alleviation. *Journal of Business Ethics, 66*, 225–231.

Stone, M. (1974). Cross-validatory choice and assessment of statistical predictions. *Journal of the Royal Statistical Society, 36*(2), 111–147.

Ugoani, J., & Ibeenwo, G. (2015). Entrepreneurship development and employment generation in Nigeria: A study of the national directorate of employment. *Independent Journal of Management & Production (Ijm&P)*, *6*(3). https://doi.org/10.14807/ijmp.v6i3.308.

World Bank. (2002). *Socio Economic Survey* . 1818 H Street NW, Washington, DC 20433, USA.

World Bank. (2016). *Socio economic survey. Somali poverty profile*. NW, Washington, DC, 20433, USA: World Bank. https://doi.org/10.1596/28470

Yadav, V., & Unni, J. (2016). Women entrepreneurship: Research review and future directions. *Journal of Global Entrepreneurship Research*, *6*(1) https://doi.org/10.1186/s40497-016-0055-x