

# Challenges to Entrepreneurial Success in Sub-Saharan Africa: A Comparative Perspective

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## Abstract

The pursuit of entrepreneurial work has long been the focus of attention among all but governments and policy makers. It becomes a key vehicle leading to higher jobs and sustainable economic growth. At the same time, entrepreneurs have to face so many challenges on the way to success. The objective of this research was to explore and put in perspective the critical challenges entrepreneurs in Sub-Saharan Africa frequently face gaining ground to start a firm. In doing so survey data from the Global Entrepreneurship Monitor, the World Bank Doing Business, and Enterprise Survey database were employed. Descriptive statistics computed from the survey database indicated that Entrepreneurs in Sub-Saharan Africa experience the tightest laws and regulations, the poorest infrastructure and financial service. Lack of a comprehensive entrepreneurial training and small market size also emerged as critical challenges entrepreneurs in the region face. The study further prompted the need for a more rigorous and detailed assessments of the extent of disruption the challenges caused to entrepreneurship growth in the region so that policy makers and governments can determine the level of intervention required of them for a successful entrepreneurial work.

**Keywords:** Sub-Saharan Africa, Entrepreneurship, Laws and Regulations, Finance, Infrastructure

## 1. Introduction

The growing attention policy makers and governments give to entrepreneurship cannot be overstated. Entrepreneurship is at the center of a substantial and sustainable economic growth and development of a nation. Since the last two decades the engine of economic growth shifts from general knowledge generation toward entrepreneurship based knowledge generation (Audretsch and Fritsch, 2002).

Major economic growth theories (Solow, 1956; Romer, 1990) also acknowledged the importance of promoting a more entrepreneurial culture to delivering stronger and lasting growth, and providing more and better jobs. Thus, higher entrepreneurship rate is an indication that a country is at a better economic status (Acs, 2006). Entrepreneurship is at the center of poverty reduction strategy.

As a source of innovation and new jobs, entrepreneurship increases productivity that in turn boosts growth. Reynolds et al. (1999), for example, showed that one-third of the differences in national economic growth rates were attributed to differences in entrepreneurial activity. Zacharakis et al. (2000) studied sixteen developed economies and found that entrepreneurial activity explained approximately one-half of the differences in GDP growth between countries. Thus entrepreneurship is a touchstone of many economies' growth.

Empirical studies in Africa also revealed entrepreneurship as a potent employment opportunity and source of growth for the continent. For example, Okafor (2006) found that small and medium sized enterprises contributed to over 50% of employment and GDP in Africa. Recent study in Ghana and South Africa also showed the same result (Abor and Quartey, 2010). Small and medium sized enterprises contributed to 52% to 57% of GDP and around 61% of employment in South Africa, and 85% of manufacturing employment and 70% of GDP in Ghana. Similarly, they provided employment opportunities for 50% of Nigerian population (Ariyo, 2005).

In light of these facts entrepreneurship can be a viable and uncontested solution for the ever growing and educated youth population that Africa is due to face. According to the Youth and African Union Commission, by 2020 nearly three in four people living in the continent will be, on average 20 years old, and each year around 10 million youth join the labour market. In the meantime, the proportion of 20 to 24 years aged that completed secondary education will increase from 42% to 59% over the next 20 years. The number of university graduates also increased almost by 150% between 1999 and 2009; increased from 1.6 million to 4.9 million and due to reach 9.6 million in 2020 (African Economic Outlook, 2012).

At the same time, the very nature of job market is not easy for the youth to access. They are much more hurt compared to adults. The International Labour Organization (ILO) estimate indicated that of the 73 million jobs created in Africa; only 16 million jobs were for young people aged between 15 and 24. They account for 60% of all African unemployed (African Economic Outlook, 2012).

Tackling youth unemployment is, therefore, more urgent than ever for policy makers and governments in Africa. Public jobs are far short of the growing population. Study in Zambia by Brenthurst foundation (2011) showed that population growth was more than twice the job growth in the country. The GEM Uganda (2010)

report highlighted that the proportion of new jobs seekers to new jobs in the economy was around 5:1 (or 390,000:81,000). The same is true in Tanzania (ILO, 2012). There had been around 800,000 new entrants to the labour market each year compared to jobs that could afford to absorb only 40,000 or 5% of them.

In view of these facts, governments and policy makers in Africa are in agreement to enabling people to have a go at start-ups. Most countries have already had specific entrepreneurship initiatives in their long term strategic plans.

Zambia's 6<sup>th</sup> National development plan 2011-2015, South Africa's Broad-Based Black Economic Empowerment Act of 2003 and the Youth Entrepreneurship Strategy and Policy Framework 2009 included very important policy documents to drive up entrepreneurship as a key tool of innovation, job creation and development.

Some countries also gave responsibility to different ministries to coordinate entrepreneurial initiatives and policies. Mauritius has mainstreamed entrepreneurship in the activities of the Ministry of Gender Equality, Child Development and Family Welfare, and Botswana has delegated the ministry of trade and industry to coordinate entrepreneurship policy (UNCTAD, 2012a). Related to this, the Ethiopian government established the Federal Micro and Small Enterprises Development Agency in 1998 (Federal Negarit Gazeta, 1998). The country's Growth and Transformation plan, which spans from 2010/11 to 2014/15, has also incorporated enterprise development as basic strategy to spearheading development (UNDP, 2012).

Business regulatory reforms intended to invigorating entrepreneurial activity are also not uncommon for many African Countries. According to the World Bank Doing Business (2014), of the 20 economies worldwide making the most progress in improving business regulation since 2009, 9 were in Sub-Saharan Africa. The bank's latest report indicated that 74% of Sub-Saharan Africa countries have improved business regulatory environment for local entrepreneurs (World Bank Doing Business, 2015).

Despite the unarguable contribution entrepreneurship has had and the policy initiatives undertaken to promote it, a comparative analysis of its job creation rate shows that it is far below the other regions. A recent study on the relationship between entrepreneurship and income per capita in developing countries shows that each firm joining the formal sector in Africa generates 24.4 permanent jobs on average, which is less than half of the jobs created by firms in other (UNCTAD, 2012b).

The Global Entrepreneurship Monitor (GEM) Survey data on the job creation rate of entrepreneurs in Sub-Saharan Africa also evidenced the same. According to the survey, it is only 2 percent of the enterprises that created 20 and more jobs (figure1). More than 83 percent of the entrepreneurs create jobs only for five and less than five individuals. The job creation rate is distinctively low in Ghana, Uganda and Malawi. 82 percent of entrepreneurs in Malawi, and 59 percent of entrepreneurs in Ghana and Uganda run only one person businesses. The job creation prospects or expectations for growth of these enterprises are also not a different (GEM, 2012).

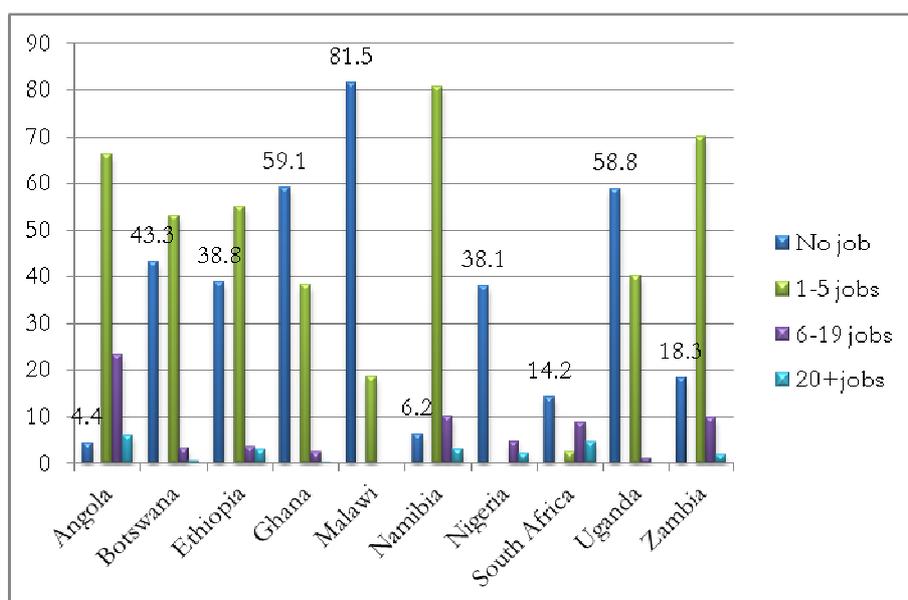


Fig.1 Entrepreneurial Employment Levels Among Ten Sub-Saharan Africa countries based on GEM database

The Entrepreneurship resource in Sub-Saharan Africa is also very scarce. The per capita firm entry or business entry density<sup>1</sup> is quite scanty. Compared to other regions, firm growth in the region is stunting. The

<sup>1</sup> Entry Density, calculated as the number of newly registered limited-liability firms in the corresponding year as a percentage of the country's working age population (ages 15-65), normalized by 1,000.

average entry density in Sub-Saharan Africa is the second lowest, tops only South Asia. It is around 2 % against 7.35% in Europe and Central Asia, and 6.44 % in East Asia and Pacific. That is, there are only around two limited liability firms registered annually per 1000 people in Sub-Saharan Africa compared to 7 limited liability firms in Europe and Central Asia and 6 limited liability firms in East Asia and Pacific. This indicates that on average, the number of limited liability firms created in Sub-Saharan Africa is almost one third of the average number in Europe and Central Asia, and East Asia and Pacific.

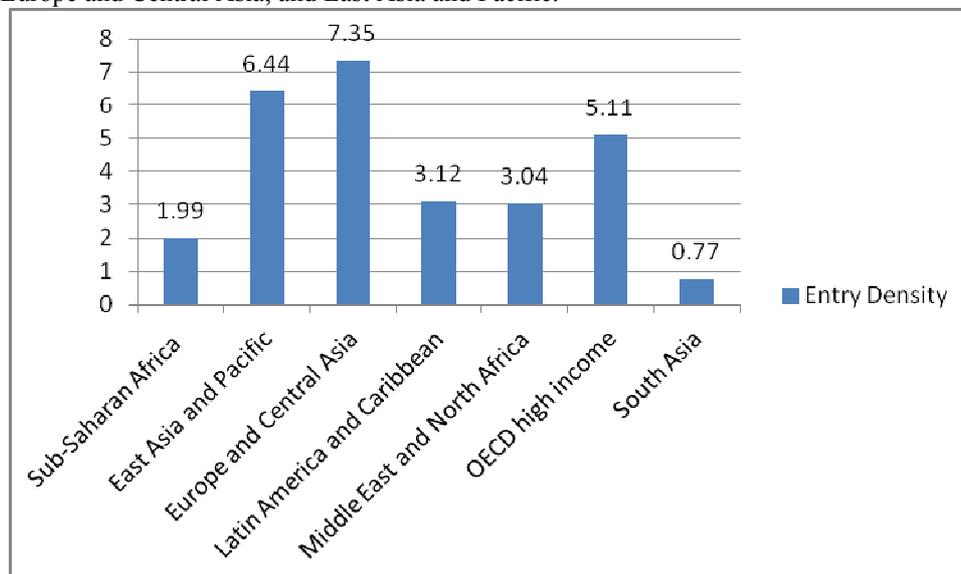


Figure 2: Entry Density by Region, 2004-2012, compiled based on World Bank Doing Business Data Base

A comparative analysis of new firms' performance also shows that the number of firms that relinquished their business is much higher than the other regions. According to Babson news on the status of Entrepreneurship in Africa, over 16% of adults in Sub-Saharan Africa discontinued a business in 2011, reaching as high as 29% in Malawi, compared to Asia, Europe and the United States that showed only 3% to 4% of the population with business stops (GEM, 2012).

In light of the previous analysis, "Why entrepreneurship growth and performance in Sub-Saharan Africa, despite the policy intervention is still meager?" was the guiding question that this paper tried to answer. This paper is the first of its kind to discuss entrepreneurship challenges in the region from a comparative and international perspective.

In doing so I used survey data from World Bank Doing Business, Enterprise Surveys, World Energy Outlook and other secondary sources. The next section discusses the basic challenges to entrepreneurial work in Sub-Saharan Africa from a comparative perspective.

## 2. A comparative Analysis of the Challenges to Entrepreneurship in Sub-Saharan Africa

Starting a firm is a daunting task constrained by varied and multifaceted factors. Overview of previous studies (Kumar, Rajan and Zingales, 1999; Blanchflower, 2004; Douglas and Shepherd, 2002; Lin, Picot, and Compton, 2000; Wagner, 2003; Minniti, Arenius, and Langowitz, 2005; Beck, Demirgüç-Kunt and Maksimovic, 2005; Beck and Demirgüç-Kunt, 2006; Beck, Demirgüç-Kunt, Laeven Maksimovic 2006; Andre´ van Stel et al., 2007; Baker et al, 2005; Shane, 2003; Beck; Djankov et al, 2010; Romer and Romer, 2010; Nicodème, 2008 ) indicated that lack of finance, cumbersome, time consuming and expensive laws and regulations, and lack of adequate infrastructure are the most robust variables impeding entrepreneurial success and growth. And Sub-Saharan Africa is no exception to this fact. Would-be entrepreneurs in Sub-Saharan Africa find themselves in a tough environment.

### 2.1. Business Regulation and Entrepreneurship

Effective and efficient regulations give entrepreneurs a better chance to flourish at the lowest possible cost. Fast and over-simplified business regulations are quite essential to unleashing the entrepreneurship potential due to of a nation.

Regulations are like traffic lights put up to prevent gridlock. Alike efficient traffic rules in a city, smart business regulations are essential to allow business transactions to flow. Tougher business regulations stunt the growth of entrepreneurial works. They soar the time and cost needed to start a business, making it less likely for such a business to take root.

Business regulation therefore should have to be flexible in the way that fits the dynamicity of market

forces. The World Bank Doing Business (2015) report notes that just as traffic systems have to adjust when a new road is being constructed, regulations need to adapt to new demands from the market and to changes in technology (such as the growing use of information and communication technology in business processes).

Entrepreneurs in Sub-Saharan Africa face many regulatory upheavals along the avenue of new firm formation.

Corruption<sup>1</sup> is one of the serious challenges entrepreneurs in Sub-Saharan Africa face on their way to meet government requirements to start business.

Building on the World Bank Enterprise Survey corruption database around 27.8 percent of firms in Sub-Sahara Africa are expected to give gifts to officials to get things done. By contrast in all countries, higher non OECD and higher income OECD, the proportion of bribery incident is lower: 19.4%, 11.6% and 8.4% respectively.

The incidence of corruption is distinctively higher in some countries. The survey data showed that 81.8 % of firms in Republic of Congo, 84.8% of firms in Guinea and 82.1% of firms in Mauritania were expected to give gifts to public officials to get things done.

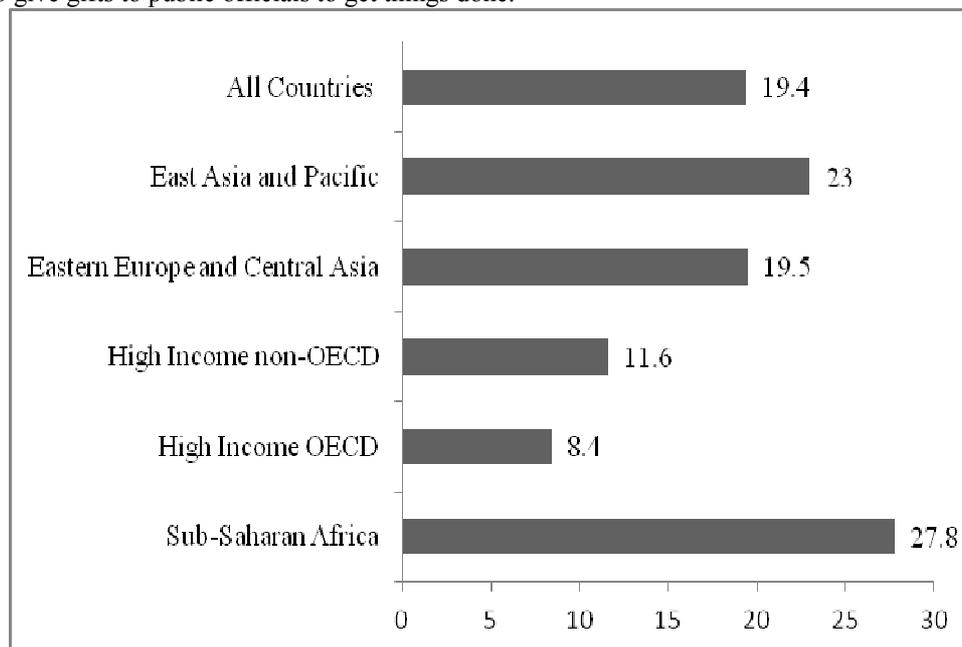


Fig3. Percent of Firms Expected to Give Gifts to Public Officials to Get Things Done compiled based on Enterprise Survey Corruption Database.

Fisman and Svensson (2007), calculate bribes and tax payments in Uganda as a function of total firm sales. They regress firm growth over a two-year period on the bribe and tax rate, instrumenting for the bribe and tax rate with industry-by-location averages. The regression results indicate that a 1 percentage point increase in bribes reduces annual firm growth by three percentage points. By way of comparison, a 1 percentage point increase in taxes reduces annual firm growth by 1 percentage point, so bribes have three times the negative impact of taxes on firm performance. This clearly evidences the higher constraining effect of bribes on firm activity than the impact of taxation.

At the same time, the effort government put into control the corruption highly prevalent and significantly constrain firm growth and survival is relatively little. As depicted in figure4, Sub-Saharan Africa takes the lowest position in the percentile rankings<sup>2</sup> of the control of corruption compared with Middle East and North Africa, East Asia and Pacific and higher income: OECD. This clearly indicates the tough challenge entrepreneurs in Sub-Saharan Africa face from highly corrupted officials to start a firm and formally operate on it.

<sup>1</sup> Incidence of corruption–bribe– is defined as the percentage of firms facing at least one bribe payment request when engaging in different transactions for public services, permits, or taxes.

<sup>2</sup> The percentile rankings indicate the rank of a country among all countries in the world. 0 corresponds to lowest rank and 100 corresponds to highest rank.

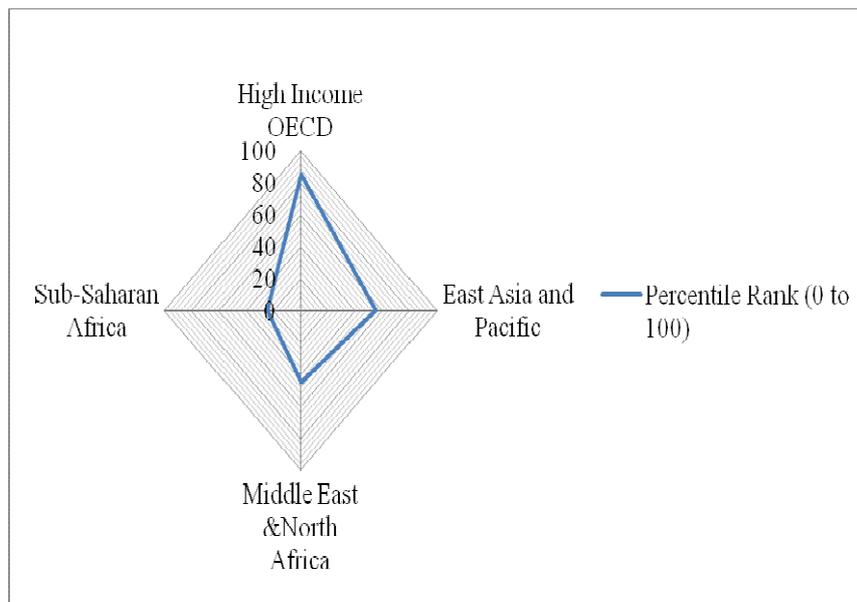


Figure4: Control of Corruption computed based on the World Bank’s Worldwide Governance Indicator database for the year 2013.

High tax rate is the other constraining factor entrepreneurs in Sub-Saharan Africa face to successfully contribute to employment and growth. The total tax<sup>1</sup> rate required to be paid by businesses in sub-Saharan Africa is much higher than comparator regions (table1). In Sub-Saharan Africa the total tax rate is 46.2 percent of the profit while it is 41.3 percent and 32.3 percent in OECD high income countries and Middle East and North Africa accordingly.

The Paying taxes report jointly published by PwC, the World Bank and IFC built on the World Bank and IFC’s global Doing Business project and the paying taxes indicator with an analysis by PwC, from the point of view of a domestic company<sup>2</sup> complying with the different tax laws and regulations confirms the previous result. All the indicators used to assess paying taxes<sup>3</sup> indicate that the highest average tax cost is in Africa, amounting to 52.9percent and the lowest is in the Middle East where the average is 23.7 percent.

A higher tax rate raises the operating costs of firms so high and in turn jeopardize the contribution entrepreneurial firms have to a diverse and dynamic economic environment. Keeping tax rates at a reasonable level is of particular importance to small and medium-size enterprises, which contribute much to growth and job creation than they add significantly to tax revenue (Douglas and Violeta, 2010). For instance, alike in Middle East and North Africa, micro, small and medium-size enterprises in Sub-Saharan Africa make up more than 90% of taxpayers but contribute only 25-35% of revenue to the region (International Tax Dialogue, 2007). Hence, imposing a huge tax rate on small and medium size enterprises contributes much to business discontinuance and informality of firms than generating impactful revenue to the national economy.

In addition to the higher tax rate, entrepreneurs in Sub-Saharan Africa are often required to deal with more complicated tax related documents. Dealing with tax related documents in the region requires spending the longest hours compared with others.

Firms in Sub-Saharan Africa spend on average 310.8 hours per year to deal with tax-related documents compared with an average high in OECD countries of 175.4 hours and 220.4 hours in Middle East and North Africa (table1).

The cost of income required by law to start a business<sup>4</sup> is also problematic. As depicted in table1 the cost required by law to start business in Sub-Saharan Africa is the highest. The cost required of entrepreneurs in Sub-Saharan Africa is 56.2 percent of income per capita compared to 28.1 percent and 3.4 percent respectively

<sup>1</sup> the amount of taxes and mandatory contributions paid by the business as a percentage of commercial profit that are not already included in the categories of profit or labor taxes

<sup>2</sup> The case study company is a small to medium-size manufacturer and retailer, deliberately chosen to ensure that its business can be compared on a like for like basis worldwide.

<sup>3</sup> The paying taxes indicator covers the cost of taxes borne by the case study company and the administrative burden of tax compliance for the company. They are measured using three sub-indicators: the Total Tax Rate (the cost of all taxes borne), the time needed to comply with the major taxes (corporate income taxes, labor taxes and mandatory contributions, and consumption taxes), and the number of tax payments.

<sup>4</sup> Starting Costs, captures all official fees and additional fees for legal and professional services involved in incorporating a business, and is measured as a percentage of the economy’s income per capita

in North Africa and OECD countries.

Entrepreneurs in Sub-Saharan Africa also face difficulty registering property. As shown in table 1, registering property in the region requires the uppermost income per capita. The cost of registering property in Sub-Saharan Africa (SSA) is 9.1 percent of property value whilst it is 5.7 percent and 4.2percent respectively in Middle East and North Africa (MENA) and OECD countries.

Table1. Doing Business Indicators compiled from World Bank Doing Database 2015

No	Indicator	SSA	MENA	OECD	
1.	Procedures(Number)	7.8	8.0	4.8	
2.	Time (days)	27.3	18.9	9.2	
3.	Cost(% of income per capita)	56.2	28.1	3.4	
4.	Paid-in min. Capital (% of income per capita)	95.6	45.6	8.8	
5.	Registering Property(% of property value)	9.1	5.7	4.2	
6.	Total tax rate (% of profit)	46.2	32.6	41.3	
	Time spent to pay taxes (hours per year)	310.8	220.4	175.4	
7	Getting Credit	Public registry coverage (% of adults)	4.5	8.7	12.1
		Private bureau coverage(% of adults)	5.8	11.6	67
		Cost of bankruptcy proceeding (% of estate value)	23	9	14
		Recovery rate (cents/dollar)	19	29.4	70.6

Similarly getting credit<sup>1</sup> is far more difficult. Based on the measures the World Bank doing business has used for the same– strength of legal rights index<sup>2</sup>, depth of credit information index<sup>3</sup>, public registry coverage<sup>4</sup> (% of adult) and private bureau coverage<sup>5</sup> (% of adults)– Sub-Saharan Africa posts the minimum value. When it recorded 4.5 percent and 5.8 percent in public registry coverage and private bureau coverage, OECD high income, and Middle East and North Africa recoded respectively 12.1 percent and 67 percent, and 8.7 percent and 11.6 percent.

In addition resolving insolvency<sup>6</sup> is challenging. The average cost of bankruptcy proceeding<sup>7</sup> in Sub-Saharan Africa is the highest while the recovery rate is the lowest of all the regions. In Sub-Saharan Africa the average cost of bankruptcy proceeding is 23 percent of the estate value while it is 9 percent and 14 percent in OECD high income and Middle East and North Africa countries respectively. On the contrary, the recovery rate<sup>8</sup> in Sub-Saharan Africa is 19 cents for one dollar where as it is 70.6 and 29.4 cents for one dollar in OECD high income and Middle East and North Africa countries respectively. The results very much clearly indicated that getting initial capital is relatively more challenging for entrepreneurs in Sub-Saharan Africa.

## 2.2 Lack of Infrastructure

Enabling infrastructure is crucial to thriving entrepreneurship. It is the base to exercising an entrepreneurial knowledge and harnessing the state of innovation in a country. Easy access to reliable and quality infrastructure increases productivity and efficiency, lowers transaction costs, betters access to markets, and sustainable growth. Entrepreneurs in Sub-Saharan Africa struggle with a low stock of infrastructure in their day to day activity.

Lack of sufficient power is one of the menaces entrepreneurs in Sub-Saharan Africa face to starting and growing business. Many businesses lack reliable power supply to operate higher value added activities that heavily depend on electricity-based technologies.

Sub-Saharan Africa has the lowest electrification rates in the world. According to the world energy outlook's (2014) special report in Sub-Saharan Africa, only 290 million out of 915 million people have access to electricity. The rate of access to energy in sub-Saharan Africa accounts only to 32% of the population though

<sup>1</sup> Explores two issues- the strength of credit reporting systems and the effectiveness of collateral and bankruptcy laws in facilitating lending

<sup>2</sup> Strength of legal rights index (0-10) measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders and thus facilitate lending.

<sup>3</sup> Depth of credit information index(0-6) measures rules and practices affecting the coverage, scope and accessibility of credit information available through either a public credit registry or a private credit bureau

<sup>4</sup> Public registry coverage(% of adults) reports the number of individuals and firms listed in a public credit registry with information on their borrowing history from the past 5 years

<sup>5</sup> Private bureau coverage (% of adults) reports the number of individuals and firms listed by a private credit bureau with information on their borrowing history from the past 5 years.

<sup>6</sup> Resolving insolvency identifies weaknesses in existing bankruptcy law and the main procedural and administrative bottlenecks in the bankruptcy process.

<sup>7</sup> Cost (% state) -the average cost of bankruptcy proceedings. The cost of the proceedings is recorded as a percentage of the estate's value.

<sup>8</sup> The recovery rate calculates how many cents on the dollar claimants (creditors, tax authorities, and employees) recover from an insolvent firm.

there has shown improvement from its 23% level in 2000. That is, around two-thirds of the population lives without electricity. Citing the Economist (2007), seen from space, Sub-Saharan Africa appears unlit at night.

The effect of limited electricity on firm functionality is self-explanatory. Insufficient and inferior power supply quite significantly jeopardizes firms to produce optimally.

As indicated in table 2, on average 4.9% of annual sales in Sub-Saharan Africa were estimated to be lost due to electrical outages against 2.5% for the world average. The number of electrical outages in a typical month was 7.8 compared with 5.5 for the world.

To deal with such unreliable supply of electricity, self generated electricity or captive power generator has become an increasingly important source of power. As portrayed in table 2, 45.8% of firms in Sub-Saharan Africa own or share a generator against 33.1% the world average.

At the same time, using back-up power generation to mitigate poor grid-based supply is so expensive for start-ups to afford to buy. In 2012, the cost of fuel for back-up generation (across businesses and households) is estimated to have been at least \$5 billion (World Energy Outlook, 2014).

Table 2: Source: Enterprise Survey: Infrastructure Database

Economy	Percent of firms identifying electricity as a major constraint	Number of Electrical outages in a typical month	Proportion of electricity from a generator (%)	Percent of firms owning or sharing a generator	Losses dues to electrical outages (% of annual sales)
All Countries	33.6	5.5	7.4	33.1	2.5
East Asia & Pacific	22.6	3.5	7.2	36.1	1.6
Eastern Europe & Central Asia	17.9	2.0	2.5	21.3	1.2
High income: non OECD	31.1	1.3	1.6	22.4	0.3
High income: OECD	21.8	0.4	0.4	13.1	0.1
Sub-Saharan Africa	44.8	7.8	12.6	45.8	4.9

The scarcity of other infrastructure such as roads also poses a massive barrier to start-up growth in the region. Sub-Saharan Africa possesses only 318000 km of paved roads that is equivalent to around two-thirds of Italy's figure (World Energy Outlook, 2014). This drives up the transport cost and impose a huge impairment to entrepreneurial activity in the region. For instance, according to Juma (2011) the transport cost on clothing export in Uganda was equivalent to 80 percent tax on the item.

The infrastructure challenge has already been a productivity trap for many Sub-Saharan Africa countries. Infrastructure shortcomings—mainly in energy and transport—are estimated to account for about 30 percent of the productivity handicap faced by Kenyan firms (Escribano et al. 2009). Similarly, infrastructure constraints account for about 42 percent of the productivity gap faced by firms in Cameroon (Dominguez-Torres and Foster, 2011).

### 2.3 Lack of Finance

Financial problem has long been one of the stout challenges entrepreneurs in Sub-Saharan Africa faced along the years. They put inadequate fund as the biggest and critical hurdle to starting a firm and compete with incumbent firms.

We used the World Bank Enterprise survey finance database to check if finance is robustly restraining factor for entrepreneurs in the region.

Table 3: Access to Finance compiled based on Enterprise Survey Finance database

Economy	Percent of firms identifying access to finance as a major constraint	Proportion of loans requiring collateral (%)	Value of collateral needed for a loan (% of the loan amount)
All Countries	28.6	77.4	193.9
East Asia & Pacific	16.7	79.8	201.2
Eastern Europe & Central Asia	17.1	82.8	205.6
High income: non OECD	26.0	76.0	180.3
High income: OECD	12.8	65.5	157.4
Sub-Saharan Africa	41.6	79.3	173.8

As indicated in table 3, getting finance is prevailed as quite a big challenge for entrepreneurs in Sub-Saharan Africa. It turned out that 41.6% of firms responded to the survey revealed access to finance as a major constraint in pursuing entrepreneurial work compared with 28.6% of the global average.

In fact without adequate finance, proper functioning and growth of firms becomes a complicated nightmare. The lack of finance makes the opportunity cost of lending much higher for entrepreneurs. Lenders demand much higher levels of collateral from entrepreneurs.

A large portion of entrepreneurs in the region revealed the disproportionate amount of collateral required of them. 79.3% of firms in the region indicated that lenders require collateral which actually is still higher than the global average of 77.4%. The value of collateral needed for a loan (% of the loan amount), though relatively lower than the global average, is quite high for new firms. Lenders in Sub-Saharan Africa require 173.8% of the loan amount compared with 193.9 % of the global average (table, 3).

In regards, most firms in the region cannot manage to get sufficient credit to start a firm. More than 59 percent of entrepreneurs fail to get credit required for starting firms<sup>1</sup> compared to 31 percent in Eastern Europe and Central Asia, and 34 percent in Latin America and the Caribbean (figure 5).

Compared to large firms, entrepreneurs, proxied by small firms, are more likely to be credit constrained. The probability of credit constrained decreases with firm size. By way of example, when 59 percent of small firms in Sub-Saharan Africa are credit-constrained, it was only 43 percent and 30 percent respectively of medium and large enterprises that are credit constrained (figure 5).

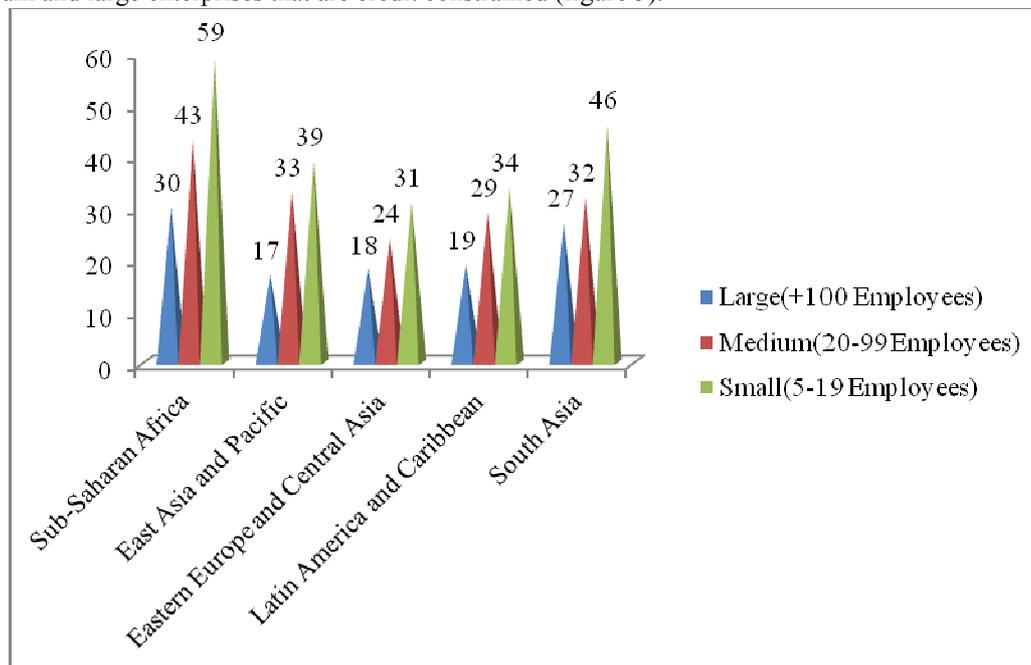


Figure 5 Percent of Credit-Constrained Firms by Size and Region computed based on World Bank Enterprise Surveys

## 2.4 Lack of Entrepreneurial Knowledge and Skills

Smart business regulation and adequate finance only do not guarantee an entrepreneurial growth and success. Entrepreneurial skills and knowledge are also fundamental for a promising entrepreneurial work. Basic entrepreneurship training ushers start-up formation and sustainability. It boosts the self confidence and self-efficacy of individuals to cope with challenges ahead. It also helps to ensure a good project proposal and secure a great pool of finance required of the entrepreneur to start a viable firm.

Prospective entrepreneurs need to be able to convince investors that they have a viable proposition and the determination and tenacity to succeed.

The entrepreneur should be competent enough to demonstrate an intimate knowledge of his/ her business model, as well as the working environment of his/her firm. He/she need to have the skills used to sell, bargain, lead, plan, make decisions, solve problems, organize and communicate (Shane, 2003). More specifically, as Paul Harris has underscored, “the entrepreneur must know something about everything and everything about something” (NIESBUD, 2013).

This didn’t look to happen for entrepreneurs in Sub-Saharan Africa. The percentage of entrepreneurs who believe that they are capable of running a successful entrepreneurial work is quite small. For instance, the percentage of entrepreneurs who believe that they have the right skills to work on new firms is 9 percent in South Africa, 14percent in Ghana and Nigeria, 19percent in Ethiopia; 22percent in Tanzania and 23percent in

<sup>1</sup> Most entrepreneurs in Sub-Saharan Africa are small enterprises that have 20 and less employees.

Kenya (Omidyar Network, 2013).

In view of this, a well structured entrepreneurial skill development programmes are of a priority in Sub-Saharan Africa. Entrepreneurship education is a critical policy tool in building the knowledge, skills, attitudes and behaviours required for entrepreneurship against the traditional education programmes that prepare students for conventional career.

For instance, according to Premad et al (2012) entrepreneurship training participants were on average 46 to 87 per cent more likely to be self employed compared with non-participants. Similarly, a survey by Jenner (2012) shows that students who participate in entrepreneurship training in their secondary school education will later start their own company three to five times more than the general population. In the same breath Clark et al (1984) found that 76percent of non-business owners taking the “Your Future Business” course subsequently opened a business. Upton et al. (1995) found that 40 percent of those who attended entrepreneurship courses have started their own businesses, while 30 percent joined family businesses and only 30 percent worked for large organizations. Study by Hornaday and Vesper (1982) indicated that 66percent of students who took a course in entrepreneurship revealed that entrepreneurship has affected the direction of their career. An assessment of a UNDP entrepreneurship training programme in Nepal<sup>1</sup> aimed at boosting entrepreneurship among poor rural women indicated that more than 70 percent of the participants’ families moved out of poverty and about 80 percent of the enterprises started under the project continue to do business today.

The ILO tracer studies on the “Know about Business Entrepreneurship Education Programme (KAB)” show also the positive effects of entrepreneurship trainings. According to the studies, in Peru, three out of four former KAB students questioned said they intended to open a business compared to one out of four of the control group. One third of those interviewed said they had drawn up a business plan, compared to one out of four from the control group. Likewise, in China, a sample survey of former KAB participants found that over 90% of business owners rated it as useful or very useful for starting a business, while former KAB students had fewer objections to employment in a small business than non KAB students, indicating that the programme had changed attitudes.

In this sense, many countries in Sub-Saharan Africa have already started the course in their higher education institutions. A recent study on the status of entrepreneurship education in higher education institutions in Sub-Saharan Africa demonstrated that over 86 percent of them started to offer courses in entrepreneurship (Kabongo, 2008).

But a thorough examination of entrepreneurship education in the region shows that the rigour and relevance of entrepreneurship training programmes are doubtful. The targets, the course content, course delivery, R&D programs and centers for entrepreneurship development face critical issues.

The course is of discriminatory in nature. It is beyond usual to teach entrepreneurship courses only to business and economics majors.

Apart from that conventional teaching and evaluation methods are quite apparent in the courses. As Dugassa (2012) has examined, the system much highly focuses on theory and lacks skills required for critical thinking, decision making, teamwork capacities, risk taking and starting businesses.

The results of a study by Kannan (2012) on the status of entrepreneurship education in Ethiopian higher education institutions up hold the findings of Dugassa. The study revealed that all the professors and 88percent of the students believed that entrepreneurship courses currently delivered in higher education institutions lack practical content, interactive classrooms or experiential learning. What’s more, most professors have not been trained in entrepreneurship— by and large they come from departments like business management and economics. Accordingly, most universities have not yet started entrepreneurship as a concentration (Kaijage and Wheeler, 2013).

In the same breath entrepreneurship development and research centers are not alluring. Only 7 percent of institutions have had entrepreneurial centers devoted to entrepreneurial development (Omidyar Network, 2013). Moreover, of the 57 colleges and universities Kabongo (2008) included in his study, only 10% of them had a course in innovation and technology.

In this aspect, the *Times Higher Education* World University Ranking based on teaching quality, research activities, knowledge transfer and international outlook affirmed this fact. For example, within the rank order of 101-400, only three universities—University of Cape Town (126th), University of Witwatersrand (226-250) and Stellenbosch University (30-350) are from Africa. This apparently points out that most African universities are far off the pitch of innovation.

The low ranking of Sub-Saharan Africa countries in the Global Innovation Index 2013—based on indicators of innovation and enablers to innovation shows also the same. Out of 142 countries only two countries (Mauritius and South Africa) achieved the rank below average.

<sup>1</sup> <http://www.undp.org/content/undp/en/home/ourwork/povertyreduction/successstories/nepal--boosting-entrepreneurship-among-poor-rural-women-.html>.

In effect, startups in the region are uncompetitive and of same sort so much that some writers call them the “me too” businesses. According to GEM (2009) survey, only 7% of Ugandan entrepreneurs revealed that they have no business competitors against 73% that have disclosed the presence of many business competitors.

## 2.5 Market Size

Market size is also an important factor determining the status of entrepreneurship in an economy. Big markets enhance opportunities for entrepreneurs as they can enter growing markets to meet excess demand that other companies cannot meet. Big markets allow the fixed costs of organizing a firm to be amortized over more sales (Shane, 2003). Previous studies (Yasuhiro et al, 2012; Addario et al, 2010) support the proposition that growing markets enhances entrepreneurial activities. Using data on Japanese prefectures Yasuhiro et al (2012) examined the effect of market size on entrepreneurship and found that a 10% increase in the population density increases the share of people who wish to become entrepreneurs by approximately 1%. A related study in Italy by Addario and Vuri (2010) indicated that larger market size has an inviting financial advantage for entrepreneurs. According to them each 100,000 inhabitant-increase in the size of the individual’s province of work raises entrepreneurs’ net monthly income by 0.2-0.3 percent.

When Sub-Saharan Africa is assessed on this basis, market size—proxied by Intra Sub-Saharan African Trade—is not encouraging to entrepreneurs. It is in its early stage for entrepreneurs to capitalize the growing population in the region. According to the United Nations Conference on Trade and Development (2013), over the period 2007 to 2011, the average share of intra-African exports in total merchandise exports in Africa was 11% compared to 50% in developing Asia, 21% in Latin America and the Caribbean, and 70% in Europe.

## 3. Concluding Remarks

The growing attention policy makers and governments give to entrepreneurship cannot be overstated. They are in agreement on the relevance entrepreneurship initiatives have to capitalize the substantial contribution entrepreneurship can bring to the economy. In regards, many countries in Sub-Saharan Africa have included entrepreneurship growth policies in their long term plans and have taken many business regulation reforms to drive up entrepreneurship.

But despite the efforts many countries exerted to nurture entrepreneurship as a prime mover to the economy, a comparative analysis of the contributions entrepreneurship brings about to the economy shows a big room for improvement. Start-up failure rate in the region is also relatively higher.

The study was framed to assess the challenges that setback entrepreneurial success and development in Sub-Saharan Africa. The results show that cumbersome laws and regulations, corruption, poor infrastructure, lack of finance, lack of strong entrepreneurial training and small market came out as basic obstacles to entrepreneurial success.

Henceforth, in order to make entrepreneurship at the center of job creation and growth, a lot is expected of all the stakeholders\_ government, research institutions, higher institutions and the public at large.

- The cumbersome laws and regulations need an impactful reform. Even though Sub-Saharan Africa is home to most of the economies narrowing the gap with regulatory frontier, still the tightest regulations exist in the same region. In regards, far more is expected beyond the simple “reform for reform” purpose only. The reforms should be flexible enough to effectuating the objects set aside of entrepreneurial firms. And business reforms should stretch to the very optimal to bring about an influx of new firms to the market.
- Entrepreneurship education in Sub-Saharan Africa is in its infancy to tackle the unemployment challenge the youth faces in the labour market. It has serious problems in its delivery. Conventional teaching methods are employed by most higher education institutions. In most cases it precludes students from non business and economics fields.

In light of this, entrepreneurship education program should have to be holistic in its target. Entrepreneurship courses should be developed and integrated across disciplines apart from business and economics fields to instill entrepreneurship awareness in the minds of students so that they can take entrepreneurship as a viable career option. And the course delivery needs to be innovative and experiential. Besides, the “who” to teach of entrepreneurship requires a serious revision. In this sense, it is required of respective countries to work more on staff development in the field of entrepreneurship.

- The descriptive analysis computed from the survey indicated that finance is one of the greatest hurdles that entrepreneurs in Sub-Saharan Africa face. Diversifying the sources of finance and the ways to access them is a huge boost to entrepreneurial work. An availability of ranges of sources of finance decreases the risks of failure to new firms in the market.
- As Infrastructure has a great impact on the overall process of an entrepreneurial activity- from production to marketing, its development should also be a high priority on the tables of the

responsible bodies.

- Enhancing regional integration is also a lively means to encourage entrepreneurs for innovation and productivity with the aim of satisfying a big market.
- Finally, as the descriptive statistical analysis doesn't really show how much disruptive effects the challenges have on entrepreneurship growth and success, the study prompts the need for a more rigorous quantitative assessment of the effects of such challenges. It also incites the need for further research on the optimal amount of intervention expected of government officials to bring about an impactful result.

## References

- Abor, J. and Quartey, P. (2010) Issues in SME Development in Ghana and South Africa. *International Research Journal of Finance and Economics*, ISSN 1450- 2887 Issue 39.
- Acs, Z. (2006). How is Entrepreneurship Good for Economic Growth? *INNOV0101FINAL.qxd 2/23/2006 11:51 AM Page 97*
- Addario, S and Vuri, D. (2010) Entrepreneurship and Market Size: The Case of Young College Graduates in Italy. *IZA Discussion Paper No. 5098*.
- African Economic Outlook. (2012) *Promoting Youth Employment*, <http://www.oecd.org/inclusive-growth/African%20Economic%20Outlook%202012.pdf>.
- Andre' van Stel, D. J. Storey and Thurik, A.R. (2007) The Effect of Business Regulations on Nascent and Young Business Entrepreneurship. *Small Business Economics*, 28:171–186.
- Ariyo, D. (2005), *Small Firms Are the Backbone of the Nigerian Economy*, accessed from <http://www.africaeconomicanalysis.org>
- Audresch, D.B., and Fritsch, M. (2002). Growth Regime over Time and Space, *Regional Studies*, 36, 113-124.
- Audretsch, D.B., Keilbach, M.C., and Lehmann, E. (2006) *Entrepreneurship and Economic Growth*. New York, Oxford University Press.
- Baker, T., Gedajlovic, E., and Lubatkin, M. (2005) A Framework for Comparing Entrepreneurship Processes Across Nations, *Journal of International Business Studies* 36, 492–504.
- Beck, Thorsten, Asli Demirgüç-Kunt, Laeven Maksimovic (2006) “How Important Are Financing Constraints? The Role of Finance in the Business Environment,” World Bank Policy Research Working Paper 3820.
- Beck, Thorsten & Asli Demirgüç-Kunt (2006) “Small and Medium-Size Enterprises: Access to Finance as Growth Constraint,” *Journal of Banking and Finance* 30, 2931-43.
- Beck, Thorsten, Demirgüç-Kunt & Vojislav Maksimovic (2005), “Financial and Legal Constraints to Firm Growth: Does Firm Size Matter?” *Journal of Finance* 60 (1): 137–77.
- Blanchflower, D.G. (2004) Self-Employment: More May Not Be Better. *Working Paper 10286*. Cambridge, MA: National Bureau of Economic Research.
- Brenthurst Foundation (2011) Putting Young Africans to Work: Addressing Africa's Youth Unemployment Crisis, *Brenthurst Discussion Paper 2011/08*.
- City of Johannesburg (2009) *Young Entrepreneurship Policy and Strategy Framework*, [http://www.joburg-rchive.co.za/2010/econ\\_dev/econdev\\_young\\_entrepreneurship.pdf](http://www.joburg-rchive.co.za/2010/econ_dev/econdev_young_entrepreneurship.pdf)
- Clark, B.W., Davis, C. H. and Harnish, V.C. (1984) Do Courses in Entrepreneurship Aid New Venture Creation? *Journal of Small Business Management*, 22(2), 26-31.
- Djankov, Simeon, Tim Ganser, Caralee McLiesh, Rita Ramalho and Andrei Shleifer. (2010), “The Effect of Corporate Taxes on Investment and Entrepreneurship,” *American Economic Journal: Macroeconomics* 2 (3): 31–64.
- (Dominguez-Torres, C. and V. Foster. 2011. “Cameroon's Infrastructure: A Continental Perspective.” Africa Infrastructure Country Diagnostic (AICD) Country Report. Africa's Infrastructure: A Time for Transformation Washington, DC: World Bank, available at [http://www.ppiaf.org/sites/ppiaf.org/files/publication/AICD-Cameroon-Country- Report.pdf](http://www.ppiaf.org/sites/ppiaf.org/files/publication/AICD-Cameroon-Country-Report.pdf)).
- Douglas, E.J. and Shepherd, D.A (2002) Self-employment As a Career Choice: Attitudes, Entrepreneurial Intentions, and Utility Maximization, *Entrepreneurship Theory and Practice*, 26(3): 81–90.
- Dugassa T. G. (2012) The Context of Entrepreneurship Education in Ethiopian Universities, *Management Research Review*, Vol. 35 ISS: 3/4, pp.225 – 244.
- The Economist, “The Dark Continent,” *The Economist*, August 18, 2007, p. 39.
- Escribano, A., A. Fosfuri, and J. A. Tribó (2009), “Managing External Knowledge Flows: The Moderating Role of Absorptive Capacity.” *Research Policy* 38 (1): 96–105.
- Federal Negarit Gazeta of the Federal Democratic Republic of Ethiopia, Addis Ababa, April 3, 1998, 4<sup>th</sup> Year No. 32. Accessed from <http://www.fsc.gov.et/resources/Negarit%20Gazeta/Gazeta-1990/Reg%20No.%2033-1998%20Micro%20and%20Small%20Enterprises%20Development%20Age.pdf>

- Fisman, R. & Svensson, J. (2007). "Are corruption and taxation really harmful to growth? Firm level evidence," *Journal of Development Economics*, 83(1): 63-75.
- Fleisig, H. Safavian, M. and De la Peña, N. (2006) *Reforming Collateral Laws to Expand Access to Finance*, the World Bank, Washington D.C.
- Foster, Vivien, and Jevgenijs Steinbuks (2009), "Paying the Price for Unreliable Power Supplies: In-House Generation of Electricity by Firms in Africa," Policy Research Working Paper 4913, World Bank, Washington, DC.
- Global Entrepreneurship Monitor, GEM Uganda 2010 executive Report, <http://www.gemconsortium.org/docs/download/644>
- (2009) Global Report, <http://www.gemconsortium.org/docs/download/265>
- (2012), Global Report, <http://www.gemconsortium.org/docs/download/2645>
- Global Innovation Index2013. *The Local Dynamic of Innovation*, 2013 Country Rankings, <http://globalinnovationindex.org/content.aspx?page=data-analysis>
- González, A., E López-Córdova and E. Valladares, "The Incidence of Graft on Developing-Country Firms", The World Bank Financial and Private Sector Development Vice Presidency Enterprise Analysis Unit November 2007, Policy Research Working Paper 4394.
- Douglas A.H., and Violeta. P. 2010. "Tax Toleration and Tax Compliance: How Government Affects the Propensity of Firms to Enter the Unofficial Economy." *American Journal of Political Science* 54 (1): 18–33.
- Hornaday, J.A. and Vesper, K.(1982) *Entrepreneurial Education and Job Satisfaction*, edited by K. Vesper et al., *Frontiers of Entrepreneurship Research*, Babson University Press., pp.526-567.
- , ILO (2012 ) *Africa's Response to the Youth Employment Crisis: Regional Report Synthesis of Key Issues and Outcomes from Eleven National Events on Youth Employment in the African region March - May 2012*, accessed on November 25/2013 from [http://www.ilo.org/wcmsp5/groups/public/---africa/documents/publication/wcms\\_184325.pdf](http://www.ilo.org/wcmsp5/groups/public/---africa/documents/publication/wcms_184325.pdf)
- , *Global Employment Trends for Youth 2013: a Generation at Risk*, International Labour Office – Geneva: ILO, 2013.
- ILO, "Tracer Studies On The Know About Business Entrepreneurship Education Programme," A synthesis report from eight studies, 2010
- International Tax Dialogue. 2007. "Taxation of Small and Medium Enterprises." Background paper for the International Tax Dialogue Conference, Buenos Aires, October.
- Jenner,C. "Business and Education: Powerful Social Innovation Partners," *Stanford Social Innovation Review* (Aug. 27, 2012).
- Juma, C. (2011) *The New Harvest: Agricultural Innovation in Africa*, Oxford University Press, New York.
- Kabongo, J. (2008) *The Status of Entrepreneurship Education in Colleges and Universities in Sub-Saharan Africa*, accessed on November 20/2013 from <http://www.decisionsciences.org/Proceedings/DSI2008/docs/545-2365.pdf>
- Kannan, A.S. (2012) Entrepreneurial Education in Ethiopian Universities, Current Trends and Gaps: the Case of Dilla University. *International Journal of Management (IJM)*. Volume 3, Issue 3, pp.121-130.
- Kaijage, E. and Wheeler, D. (2013) *Supporting Entrepreneurship Education in East Africa*, Report for Presentation to Stakeholders,
- Lin, Z., Picot, G. and Compton, J. (2000) The Entry and Exit Dynamics of Self- Employment in Canada. *Small Business Economics*, 15: 105–125.
- Minniti, M., Arenius, P. & Langowitz, N (2005) *Global Entrepreneurship Monitor: 2004 Report on Women and Entrepreneurship*. Centre for Women's Leadership at Babson College/London Business School.
- Niesbud (2013) *Entrepreneurship in Africa: Lack of capital & funds*, accessed on December 2/2013 from <http://onlineniesbud.blogspot.it/2013/09/entrepreneurship-in-africa-lack-of.html>.
- Nicodème, Gaëtan. 2008. "Corporate Income Tax and Economic Distortions." CESifo Working Paper 2477, CESifo Group, Munich.
- Okafor, E. (2006) *Africa Unchained*. Accessed on December 30/ 2013 from <http://africaunchained.blogspot.com/African>.
- Omidyar Network (2013) *Understanding Africa's Challenges to Creating Opportunity-driven Entrepreneurship*. Accessed on November 15/2013 from [http://www.omidyar.com/sites/default/files/file/ON%20Africa%20Report\\_April%202013\\_Final.pdf](http://www.omidyar.com/sites/default/files/file/ON%20Africa%20Report_April%202013_Final.pdf)
- Premand,P., Brodmann,S, Almeida.R, Grun.R, and Barouni.M (2012) *Entrepreneurship Training and Self-Employment among University Graduates: Evidence from a Randomized Trial in Tunisia*. The World Bank Middle East and North Africa Region Human Development Department December 2012.
- Republic of South Africa (2004) South Africa's Broad-Based Black Economic Empowerment Act of 2003. *Government Gazette*, Act No. 53, 2003.

- Republic of Zambia (2011) *Sixth National Development plan 2011-2015: Sustained Economic Growth and Poverty Reduction*, [http://siteresources.worldbank.org/INTZAMBIA/Resources/SNDP\\_Final\\_Draft\\_20\\_01\\_2011.pdf](http://siteresources.worldbank.org/INTZAMBIA/Resources/SNDP_Final_Draft_20_01_2011.pdf)
- Republic of Tanzania, Small and Medium Enterprise Development Policy, Ministry of Industry and Trade, Dar es Salaam, April 2003.
- Reynolds, P.D., Hay, M., and Camp, S.M. (1999), *Global Entrepreneurship Monitor, 1999 Executive Report*
- Romer, Christina, and David Romer. 2010. "The Macroeconomic Effects of Tax Changes: Estimates Based on a New Measure of Fiscal Shocks." *American Economic Review* 100: 763–801.
- Romer, P. M (1990) Endogenous technological change. *Journal of Political Economy* 98, S71–S102.
- Shane, S. (2003) *A General Theory of Entrepreneurship. The Individual– Opportunity Nexus*. Cheltenham: Edward Elgar, 2003.
- Solow, R. M (1956) A Contribution to the Theory of Economic Growth. *Quarterly Journal of Economics* 70, 65–94.
- UNCTAD (2012a) *Entrepreneurship Policy Framework and Implementation Guidance*. Accessed on December 30/2013 from [http://unctad.org/en/PublicationsLibrary/diaeed2012d1\\_en.pdf](http://unctad.org/en/PublicationsLibrary/diaeed2012d1_en.pdf)
- (2012b) *Entrepreneurship and Income Levels in Developing Countries*, accessed from [http://www.afdb.org/fileadmin/uploads/afdb/Documents/Knowledge/Income%20Level%20and%20Entrepreneurship%20in%20Developing%20Countries\\_01.pdf](http://www.afdb.org/fileadmin/uploads/afdb/Documents/Knowledge/Income%20Level%20and%20Entrepreneurship%20in%20Developing%20Countries_01.pdf)
- UNCTAD (2013) *Economic Development in Africa— Intra-African Trade: Unlocking Private Sector Dynamism*. United Nations, TD/B/60/4.
- UNDP, "Entrepreneurship Development Programme in Ethiopia Project Document," Addis Ababa, Ethiopia, June 2012 accessed from <http://www.undp.org/content/dam/undp/documents/projects/ETH/EDP%20ProDo%20c.pdf>
- "Nepal: Boosting Entrepreneurship Among Poor Rural Women," <http://www.undp.org/content/undp/en/home/ourwork/povertyreduction/successstories/nepal--boosting-entrepreneurship-among-poor-rural-women-.html>
- Upton, N., Sexton, D., and Moore, C. (1995) Have We Made a Difference? An examination of Career Activity of Entrepreneurship Majors Since 1981. *Frontiers of Entrepreneurship Research*.
- World Bank, Doing Business Report (2014) *Starting a Business*. Accessed on December 17/2013 from <http://www.doingbusiness.org/data/exploretopics/starting-a-business>.
- (2015) "Going Beyond Efficiency" accessed on December 10/2014 from <http://www.doingbusiness.org/~media/GIAWB/Doing%20Business/Documents/Annual-Reports/English/DB15-Full-Report.pdf>
- World Bank Group and PwC, "Paying Taxes 2014: The Global Picture," November 19, 2013 accessed from <http://www.doingbusiness.org/~media/GIAWB/Doing%20Business/Documents/Special-Reports/Paying-Taxes-2014.pdf>.
- World Economic Forum "Education and Skills 2.0: New Targets and Innovative Approaches," Geneva, Switzerland, 2014.
- World Energy Outlook Special Report: A focus on Energy Prospects in Sub-Saharan Africa accessed from [http://www.iea.org/publications/freepublications/publication/WEO2014\\_AfricaEnergyOutlook.pdf](http://www.iea.org/publications/freepublications/publication/WEO2014_AfricaEnergyOutlook.pdf)
- Yasuhiro, S., Tabuchi, T., and Yamamoto, K. (2012) *Market Size and Entrepreneurship*. Oxford University Press.
- Zacharakis, A.L., Bygrave, W.D., Shepherd, D.A., (2000). *Global Entrepreneurship Monitor: National Entrepreneurship Assessment: United States of America. Kauffman Center for Entrepreneurial Leadership, Kansas City.*

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