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TVET and Economic Development in Cameroon: Lessons from China

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Abstract

Several existing studies have proved the strong impact of Technical and Vocational Education and Training (TVET) on the economic development of a country. The success of the economy in many countries including China has been attributed to the ability to link TVET with the national economic development strategies. In these countries, TVET is considered pivotal for solving national challenges towards sustainable development, thus attracting more emphasis on its effective coordination. In Cameroon, TVET is characterized by lack of funding and inefficient management system, which have resulted the skills deficiency and mismatch between qualification provided and the labor market demand: key constituents of the low productivity and economic stagnation in the country. Using the document analysis method and field visitations as well as interview, this study examines the impact of TVET on the economic development in Cameroon, exploring the state and structure, challenges and implementation of TVET, taking references from China's successful experience in knowledge and skills development through TVET in the past decades. Recommendations are made on how China's successful experience in the area of funding, linkage of TVET with industries and provision of incentives to make TVET attractive to students can be lessons for Cameroon in her quest for sustainable development.

Keywords: TVET, sustainable development, Cameroon, China

1. Introduction

With a population of a little over 23million in 2016 (UN Population Division, 2017), Cameroon, located on the West African coast, is known as "microcosm" of Africa as many cultural diversities over all the Africa can be found in the country. Economically, the country is confronted by a high unemployment rate among youths which represent more than 60 percent of the total population; and low productivity due to the inadequacy of training and low quality in education provision. Research findings have shown that Cameroon does not have the required financial means to finance TVET at a level that can support quality training. The country's expenditure on TVET is less than 3%, while this is on average of 15% in developed countries (Grijpstra, 2015).

Though TVET is seen as the main driver to the national economy in Cameroon, yet there is no national policy to provide a framework for value added and effective delivery. Thus, the established TVET institutions remain low and functioning in worst conditions. The consequence is a weak skills training system with obvious impact on the society. The country's GDP Annual Growth Rate averaged 4.64 percent from 2003 until 2016, which is relatively low compared to other Sub Saharan countries such as Ghana, which has a more robust skills training system and has a GDP Annual Growth Rate averaged 6.84 percent from 2000 until 2017(World Bank, 2017b).

The state of youth unemployment reflects the weak status of Technical and Vocational education in Cameroon. It is crucial for Cameroon to respond to the challenges posed by her TVET system in order to meet the development needs in view of the UNESCO declaration that knowledge and skills education need to play pivotal role in developing a new generation of individuals who will face the challenge of achieving sustainable socio-economic development throughout the globe (ECOSOC, 2001). There is strong need to find successful model to adopt which is compatible with the existing realities in Cameroon. The choice of China was informed on the one hand because it has experienced almost the same history in poverty alleviation and education development with many developing countries including Cameroon, on the other hand, China has known many successes in her

TVET implementation, which remarkably reflects on the socio-economic development of the country.

The role of TVET in economic development has been an area of increasing attention in many literatures over the years. TVET first emerged in the context of the industrial (Anderson, 2011) revolution in Europe and North America as part of a philosophy of 'productivism' (Anderson, 2011). Growth, development, and poverty reduction have been described as dependent on the knowledge and skills that people acquire, rather than the number of years that they sit in a classroom (Word Bank, 2011). Furthermore, on issues related to youth unemployment and growth of the informal sector, there have been calls echoing that TVET should be an integral part of the Education for All concept (Phillip Hughes, 2005). These are pointers to the significance of TVET as a contributor to the sustainable socio-economic development of modern societies, as it provides platform which enables the development of the productive capacity of the learners as well as their societies.

Since the open up of the People's Republic of China in 1978 to the outside world, China's accomplishments have been remarkable with development in different areas such as infrastructure, high-tech manufacturing, e-commerce, education including TVET sector and is now one of the world leader economically. Further, China's advancement in technology during the period between 1990s to 2010s coincided with the focused implementation of TVET commencing from 1996. The country's ambitious goal is that of becoming an innovation-oriented society by 2020 and a world leader in science and technology by 2050 (MOE, 2006). As knowledge and skills is essential to science and technology development, China's investment on Technical and Vocational Education and Training has become more intense. In this sense, TVET is a major component in Chinese education system, in view of its impacts on the enhancement of training qualified skilled work force which necessary boost the economy. As a result of the strong correlation between the proportion of TVET students and the per capita income of the country, China has taken steps to further strengthen its policy guidance regarding the Technical and Vocational Education and Training and to bolster partnership with employers and private sector (ADB, 2009). These efforts have placed China's current vocational education and training system to frontline as one of the best practices of the world's most advanced systems to which it aspires (Stewart, 2015).

This paper explores the status and challenges of TVET in Cameroon, the role of TVET in the bolstering of the country's socio-economic development, the implementation of TVET in Cameroun and the successful model of China's TVET and recommendations were made on how to improve the TVET delivery in Cameroun based on lessons from China.

2. Conceptual framework

2.1 The Meaning of TVET

The acronym TVET was officially initiated during the World Congress on Education in Republic of Korea in 1999, to qualify training and educational activities related to Workforce Education. According to UNESCO, Technical and Vocational Education and Training involves studies ranging from the general education, the study of science and technology to the acquisition of knowledge and understanding, attitudes and practical skills relating to occupation in diverse sectors of economic life. Therefore, TVET has increasingly be recognized as an education and training that equip individuals with knowledge and skills indispensable for the world of work. Many literatures have been describing TVET as a system that allow people be more productive in various economic fields (Pavlova, 2014; Santosh, Devi, & Gandhi, 2014).

2.2 Economic development:

The concept of Economic Development has been in existence for centuries, and has been central for many economists around the world. Key concepts raise when discussing of economic development generally are modernization, globalization and particularly industrialization. Economic development is directly related to environment and environmental issues in the sense that it includes the building, improvement and renovation of the environment (Schumpeter & Backhaus, 2003). Economic development has been defined as efforts aiming to enhance the economic well-being and quality of life by the creation and/or retention of jobs and supports of incomes growing and the tax base. Economic Development could be linked to the transition from primary-based to industry-based economy, the adoption of new technologies, and the general improvement of people living standards.

3. The TVET in Cameroon and its Challenges

3.1 The implementation of TVET in Cameroon

In its role to help individuals fully participate in the society, TVET in Cameroon is intended to produce

workforce for diverse employment sectors and to increase the understanding of technology. In its strategies, TVET is recognized as an important means to the professionalization of Cameroonian education system. Further, TVET provides formal and non-formal training aiming to improve productivity and has centralized its activities under the Ministry of Employment and Vocational Education. Other ministries responsible for the Technical and Vocational Education (formal education especially) in Cameroon are the Ministries of Basic Education, Secondary Education, and higher education as well. Other ministries involved are the ministries of Agriculture, Culture, public works and Youth. For instance, the ministry of public works is responsible of civil engineering schools; the Ministry of Agriculture oversees apprenticeships; and the Ministry of Youth develops youth training programme. In Cameroon, TVET is categorized into three classes: rural craft, domestic science, and technical and vocational high schools. The high school's graduate students have access to higher professional training programme at undergraduate and postgraduate levels respectively. The rural craft institutions deliver two-year courses to drop out or students who may be too old for high school, in pottery, agriculture, carpentry, and masonry. The language of instruction in different TVET institutions are the official languages in Cameroon (French an English). The Technical and Vocational Education in Cameroon is structured as followed:

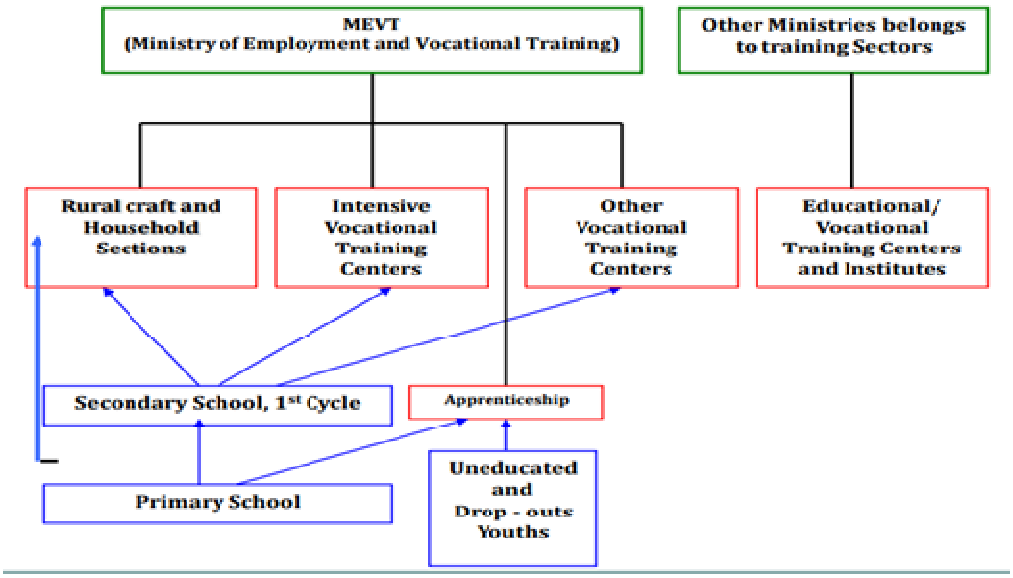

Figure 1. The structure of TVET in Cameroon (World Bank, 2010)

In Cameroon, TVET is mainly financed by the central government, the development assistance community, private donors, and students' registration fees. Because of the economic crisis, education financing has drastically decreased. Therefore, the total budget of education declined leading to the sharing of funding with vocational education given paltry portion. In the year 2000, only 1.93% of GDP was allocated for education in Cameroon. A significant decline when compared to what was allocated in 1983 (3.5%), which is the highest allocation of GDP to education in the country.

In 2015, it was estimated that about 39 billion CFAF was needed to build an efficient TVET system in Cameroun (Ministry of Employment and Vocational Training/ Cameroon, 2012), but despite the efforts at raising funds from different stakeholders, the available fund was far from the target amount. The crisis in financing TVET has been attributed to the demographic growth which increase demand for schooling, the increasing number of youth unemployed, inefficiency in the use of the available resources, the increase in teacher salaries among others (Che, 2007). Also, TVET is more expensive to fund than the regular education system. The costs for technical education is about 36 percent more expensive than the first cycle of general secondary education and 66 percent more expensive than the second cycle of general secondary education (Sosale & Majgaard, 2016).

Due to inadequate funding, TVET remains underdeveloped in Cameroon and less attractive to students. By 2012, the gross TVET enrolment only accounted for 4.9 percent in secondary education and 7.68 per cent of total higher education enrolment.

In the area of training in the TVET system, though the Ministry of Education emphasizes human development and training to cultivate in every individual necessary skills and capabilities for building an emergent economy by 2035, training efficiency is still very low. Therefore, fewer than 1000 technicians and 200 engineers are trained every year by Cameroonian TVET institutions. In 2016, the Ministry of secondary Education launched the project to enhance the training quality in TVET. The four-year project aimed to initiate institutional conditions for an efficient training system, as well as to increase the link between employment and training. Furthermore, the project also targets to reduce underemployment from 76% to 50% of workforce by 2020. But from the results after the first two years of implementation, the project is far from achieving its targets (National Strategy for Education and Employment 2013-2020/ "Document de Stratégie du Secteur de l'Education et de la Formation 2013-2020'').

4. Problems of TVET in Cameroon

Technical and Vocational Education in Cameroon is confronted by many problems impacting on its education provision: lack or inadequate training infrastructures, inadequate training, mismatch between training delivered and the labor market needs, gender disparity, low efficiency in management are the main problems confronted by the TVET system in Cameroon.

4.1 Poor infrastructure

In six decades, the Cameroon population has grown rapidly, and the trend is expected to continue between 2010 and 2020 (National Institute of Statistics; 2013). Young people represent more than 60% of the population, leading to a high demand for education, and requiring Cameroon's answers in terms of infrastructures and equipment, allocation of human, financial and material resources. Therefore, in response to this situation, the TVET witnessed expansion institutions in recent years, with the construction of technical secondary and tertiary institutions around the country. In 2012, the number of technical schools reached 456 both public and private, and progression in term of enrollment estimated at 75% (Kom, 2012). This growing number of learners has called for more investment in TVET sector to respond to the teaching and learning needs. However, due to the economic limitations in the country, TVET is faced with shortage of basic infrastructure which impact hugely the education provision. It has been observed that 57.2% of technical schools do not have any workshop; many tertiary colleges do not have functional laboratories; learning and teaching materials are old and 4.4% of schools are made up with make-shift materials. The existing infrastructure are inadequate and nonspecialized, with insufficient maintenance. At the time of Information and Communication Technologies, 24% of secondary institutions, including TVET institutions, do not possess functioning computers available for students (National Institute of Statistics; 2010). In a research investigated in the "Expansion Policy of Secondary Technical Education as a Correlate to the Acquisition of Basic Technical Skills by Students in Cameroon", Efande found that the available equipment in workshop in certain technical secondary schools were too old, furnished in the early sixties and mostly obsolete at the moment (Efande, 2015). The problem of lack of infrastructure inhibits the opportunities to receive good practice and acquire the necessary skills for their development. Many of the students interviewed at the Douala Institute of Technology, who were on internship in a Chinese company in Yaoundé during the course of the research complained about the inability for them to have enough practical experience due to lack of infrastructure in their institution.

4.2 Poor Linkage with the Labor Market

There is a weak relation between the training delivery in the TVET system in Cameroon and labor market needs. Research shows that TVET in Cameroon does not adequately provide the qualification required by the world of work. Pointers to the mismatch include a general lack of practical training elements in courses, and the low involvement of the private sector in TVET training as well(World Bank, 2015b). This disconnection is a major reason for the high youth unemployment in the country as the gap between TVET system and its target to reduce unemployment continues to widen. One of the professors interviewed in Yaoundé Polytechnic University cautioned on educating "for the sake of education" and emphasized the need to provide education to "endow individuals with skills enabling them to contribute to their society".

Employment opportunities for young people are mainly available in the informal sector, but the sector remain grossly undeveloped. The skills training system for nurturing techniques and skills that can support micro-enterprises, and endow graduates with highly competitive and dynamic skills to respond to the local, and global network of production, trade, and technology has continuously been abandoned.

4.3 Poor Management

In well-functioning TVET system, financial transfers, political interventions, rules and regulations concerning performances and outcomes are clearly set up and implemented to ensure a quality of administration management (World Bank, 2015b). The management of TVET in Cameroun is dominated by a lack of transparency in finance, teacher recruitment, and political interference. According to the Transparency International(2016), Cameroun has been identified as having one of the highest reports of "petty misuse of funds" and the country is ranked 145/176 on the developing countries corruption index. Financial transfer from the central administration to the regions and sub-divisions are low and inadequately managed. The funds provider (the central government to regional, then regional to TVET institutions) makes transfers without any clear system of reporting or accounting. Mismanagement in Cameroun's TVET sector reflects in resources wastages as school sites are selected without recourse to the country's needs. The wasting of resources in turn contributes to reduced investment in schools and classrooms equipment, offices and, insufficiency in teaching and learning infrastructures. Moreover, another crucial issue of mismanagement in TVET administration is the lack of transparency in the recruitment and distribution (at the end of training) process of teachers. The process is highly disproportionate and inequitable, mostly based on favoritism, and nepotism.

4.4 Poor Quality Teaching and Training

Learning and training quality are sensitive areas of action in any education system. Vegas & Petrow, (2007), writing about education quality in developing countries, argue that expansion of educational opportunities has not markedly reduced poverty, income inequality, and underdevelopment possibly due to the poor quality of education. This depicts the situation in Cameroon where the poor-quality learning and training in TVET system is prevalent with poorly designed curriculum not well oriented towards practical employment demands. Key factors contributing to poor-quality learning and training include teachers with inadequate qualification. Lack of qualified teachers is also due to limited number of professionals and lack of direct contact of teaching staff with industries and job market which does not enable them to update their knowledge with the transforming market for providing teaching relevant to the employment market. Also, teachers are accorded low status in Cameroon which makes TVET educators have less interest in pursuing any qualification, but rather prefer to do their own businesses.

Furthermore, adequate teaching manuals, sufficient training document, well-developed training curriculum are missing to deliver quality education in TVET system. The TVET curriculum is still basically theoretical, lacking real contact with the world of employment. In 2007, the Ministry of Employment and Vocational Training in conjunction with the Ministry of Secondary and Tertiary Education implemented a project of curriculum development putting emphasis on the skill-based approach. However, by 2012 only 15 training course programme has been developed according to the Skills-Based Approach and approved (Kom, 2012), demonstrating the inadequacy of learning programme and professionals that could provide input for the efficient curriculum development, which will increase productivity, creativity, adaptability, and employability among the youth.

4.5 Access / Equity

As women represent more than a half of total population in Cameroon(UN Population Division, 2017), their education for skills becomes indispensable towards the diversification of economy and creation of jobs. There is critical gender imbalance in Cameroun's TVET system as women enrollment in technical and engineering programs is very limited compared to that of men. The limited number of women enrolled in TVET are enrolled in programmes related to food, health, and service sectors, and this is largely due to some social considerations limiting women to their traditional tasks. This lead to performance gap between men and women entrepreneurs, depicting women by low potential and low productivity with attendant negative impact on the economy. Apart from the persistent challenges of violence, sexual harassment, low social status accorded to women and especially in entrepreneurship, women are discouraged from pursuing studies in technical fields.

Creating more skills for adopting and adapting technologies has been identified as a main factor for Cameroun's structural transformation (Sosale & Majgaard, 2016). This transformation could only be possible if both men and women without any discrimination are entirely included in the process. Women education and training does not only transform their own life, but the entire society, thus, it is necessary to have an inclusive knowledge and skills training programme for the transformation of the country. Moreover, demands for skilled workers in Cameroun necessitates eradicating traditional and boost efforts in the promotion of women in TVET.

5. TVET and its Impact on the Economic Development of China

5.1 The State and Administration of TVET in China

TVET in China is set by Vocational and Technical Education law of the People's Republic of China adopted in 1996. The policy focuses on the promotion of TVET at the secondary level and especially in rural areas; the expansion of total enrolment of TVET institutions and improvement of the quality of education; the improvement and coordination between secondary and post-secondary TVET and general education; the adjustment of courses and curricula to make them well-targeted at practical employment needs; the improvement of the quality of teaching personnel; and finally on the promotion of better cooperation between industries, employers and TVET institutions. The main departments in charge of Vocational school in China are the Ministry of Education (MOE) and the Ministry of Human Resources and Social Security (MOHRSS).

5.2 TVET Structure in China

In China, TVET system structured includes: the Junior and Senior Vocational Schools (SVS), Secondary Technical Schools(STS), Skilled Workers Schools (SWS) providing School-based vocational education, Higher Vocational Colleges (HVC), and Senior Skilled Workers Schools (SSWS).

Vocational schools provide clear thought on crafts and commercial vocations, while the skilled workers schools emphasize industrial vocations. The courses last 3 – 4 years and end up with a leaving certificate. The tertiary level provides 2-3 years at vocational college targeting to prepare graduate students for practice-oriented positions in production.

The Junior secondary technical vocational schools pave the way to senior Secondary School students' holder of a leaving certificate or a rating certificate according to the MOHRSS vocational standards, and are normally located in rural areas where the economy is less developed. Secondary technical or specialized schools(STS), secondary vocational high schools(SVS), and adult high schools, which constitute 3/4 of the senior secondary level, are under the MOE. The skilled workers schools(SWS) which represent only 1/4 of different schools work under the Ministry of Human Resources and Social Security (MOHRSS). The most popular courses at secondary level are manufacturing, civil engineering, information technology, and retail and hospitality.

The Higher Vocational Colleges at the post-secondary level, run under the Ministry of Education(MOE). The post-secondary TVET institutions comprise Higher Vocational Technology institutions and higher technology specialized schools; Five-year higher vocational programmes provided in general secondary specialized schools; Short-term vocational colleges with the features of being vocational, local, and practical. Higher vocational education provided in certain general higher education institutes and adult higher education institutes. Reformed general specialized education schools emphasize on higher vocational technology talents.

5.3 Admission in TVET

China put more emphasis on enrollment in TVET in line with the country's move towards more innovative and knowledge-based society, which requires more skilled workers. The Ministry of Education 2013 statistics report indicates that, among out of 13 million students enrolled into all kinds of upper secondary schools, 5.4million enrolled in vocational education schools, and out of 13 million graduates from all upper secondary schools, 5.5 million graduated from vocational education schools (Ministry of Education of the People's Republic of China, 2013). This demonstrating the remarkable progress in enrolment in TVET sector in China. Moreover, the 2009 State Council report targeted the annual new enrolment of tertiary TVET institutions to reach 3 million, the total enrolment of 10 million; and trainees of all off campus TVET courses attain 150 million persons (Shi, 2012)

5.4 Training

Training in Technical and Vocational Institutions in China aims to:

- Create connections from skills acquisition to a lasting career through lifelong learning opportunities.
- Bring skills awareness into the classroom by creating hands-on learning opportunities for youth.
- Help educators and industries to develop training systems and practices to remain relevant for the future needs of skilled professionals.
- Give students the educational tools they need to discover and pursue a skill.
- Support institutions and educators to develop new and innovative ways of teaching, upcoming workforce the skills in demand.

Through the development of contextual-based innovative approaches, China develops its TVET training programme aiming to be relevant for sustainable development. China's TVET training program is continuously updated, and is viewing curriculum as dynamic process, due to the changes that occur in the society in consonance with the argument for "total" education program which does not limit the learning experiences of

individuals only to the school but society as well" (Bilbao, Purita P., 2008). The training programme is based on National Competence Standards for Work, developed with contributions from industries and enacted by relevant Ministries(Bai, B. & Geng, 2014). At senior secondary vocational schools for instance, the program is designed such that one- third comprises general academic competences defined at the national level by the Ministry of Education, another one- third defined content associated with the particular occupation, finally, the remaining one-third defined again with respect to the occupational field is determined locally at the school level with the help of local enterprises (Santosh, Devi, & Gandhi, 2014).

5.5 Financing

The government is the main actor in public TVET institutions finance, while private institutions are funded independently. The total national finance of TVTE in 2006 is RMB 113.526 billion(Wenjin Wang, 2010). Nevertheless, financing in post-basic education (secondary and higher education) is funded by many stakeholders such as the government, enterprises, relevant sectors, and civil society as well.

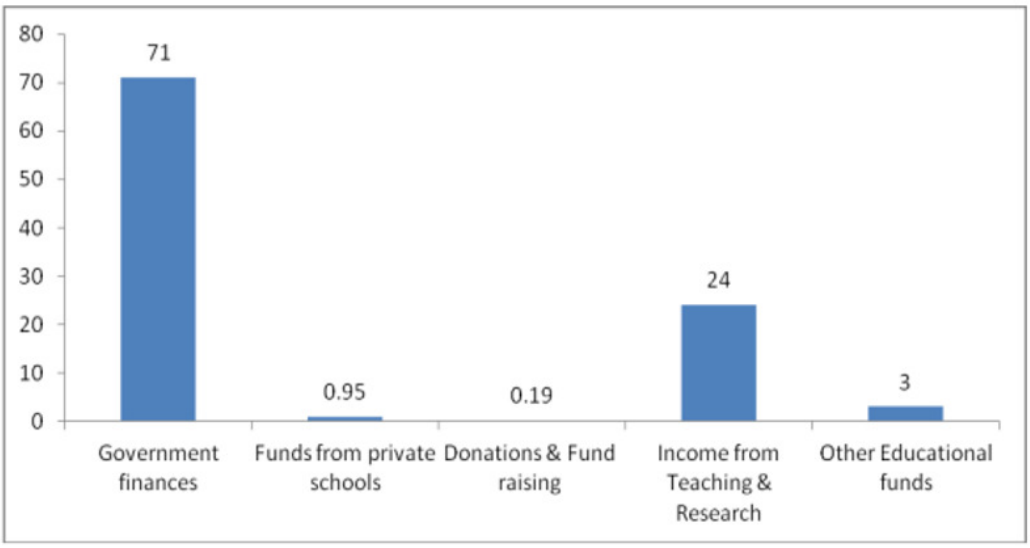

Figure 2: Sources of funding for Vocational Schools (ADB, 2009)

The Chinese vocational education law indicates that an enterprise shall shoulder the expenses for vocational education of persons it plans to employ. Therefore, measures are taken to enable enterprises to provide more support to their target TVET institutions and their students. During this research investigation in some vocational institutions in China, and through an interview with one of the teachers in Yongkang Vocational School, the author found that many enterprises come to this institution looking for prospective staff from the students who are about to graduates, and sometimes give financial support to these students they intend to employ in the future. Moreover, according to one of the teachers in Jinhua Polytechnic College, through partnership with enterprises, the institution received learning infrastructures. For instance, Jinhua Polytechnic College received machines, and cars from their partner to ensure teaching practice for students of auto mechanics major.

In China, enterprises, non-governmental organizations (NGOs), as well as other public organizations or individual citizens are strongly encouraged by the State to provide funds or scholarships to support TVET provision. Above all, all the earnings collected by TVET institutions are used for development purposes.

6. Impact of TVET on Socio-economic Development of China

In China, TVET is conceived as a key element for achieving the country's economic growth and the quest for sustainable development. The development of TVET system has hugely contributed to the 'rise and shine' of the Chinese society, in terms of employment opportunities, poverty alleviation, technology development and innovation.

6.1 Employment Opportunities

The strategies adopted by China in the provision of employment-driven TVET system have contributed to employment for Chinese youths and significantly improved the labor market outcomes. During 1990-96 (with the implementation of TVET Law in 1996), China's economic growth was rapid, with a remarkable aspect that

the growth process has been associated with very high growth of labor productivity in industry (Ghose, 2005), partly due to the development of TVET. Between 1990 and 2011, the employment situation in China improve significantly as shown below:

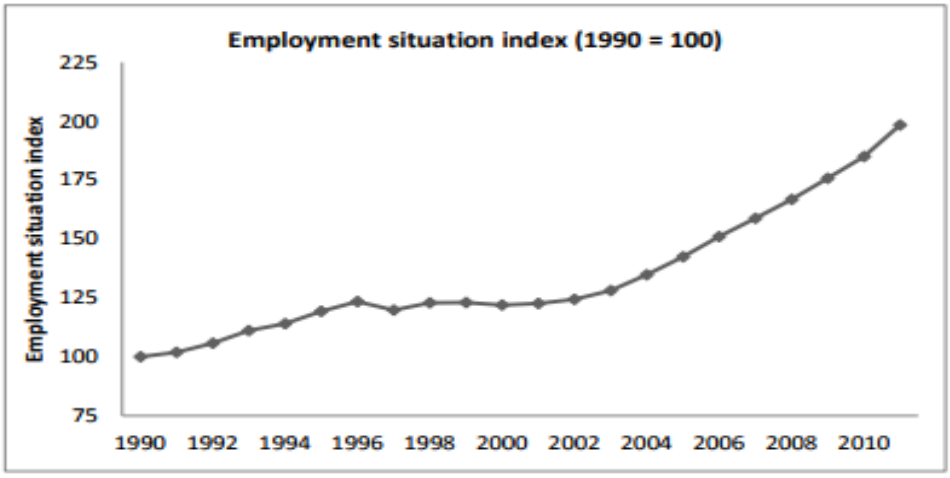

Figure 3: Employment situation index (1990=100), 1990-2011 (ILO, 2015)

The employment rate of secondary vocational school graduates reached 96.85% in 2012. Among 3 million secondary vocational school graduates, 57.6% of those graduates got employed in the services sector (ILO, 2015; Tang & Shi, 2017)

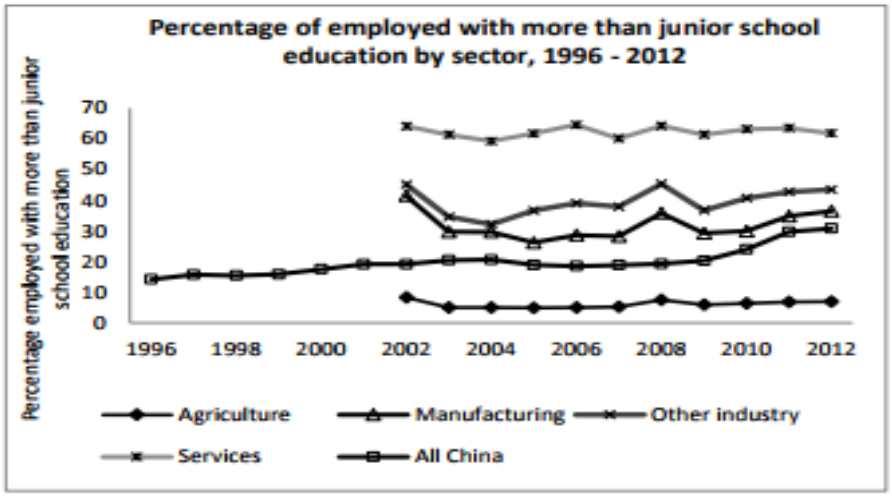

Figure 4: Percentage of employed with more than junior school education by sector, 1996-2012 (ILO, 2015)

From 2008 to 2016, the employment rate of university graduates in China was estimated at 91.6%; bachelor graduates accounting for 91.8%, and High vocational college graduates 91.5% (World Bank, 2017). This is to say the education strategies and particularly the Technical and Vocational Education contributed consistently in promoting employment in the whole country.

When looking at social transformations that accompany economic development, the changing structure of employment that accompanies economic growth is of importance (ILO, 2015; Royal Economic Society, 1975). TVET in China also give opportunities to young people to develop their capabilities to be self-employed. Graduates of TVET institutions can receive loans from the government with subsidized interest in order to assist

the applicant in setting up new business. Also, the government supports the development of Medium and Small-Scale Enterprises (SMEs) to promote employment through:

(a) Reduction and exemption of taxes and administrative charges; security-backed loans and discount interest are also available if the graduate meets specified qualification.
(b) Subsidy of social insurance depending candidates' qualification.

This has resulted in the growing number of self-employed in China, and they are estimated to become a more powerful economic and political force (Yueh & Hall, 2007). According to China's National Bureau of Statistics (NBS), the percentage of self-employment in total workforce has grown to 12.5 percent in 2009. In 2015, around 5.6 million people in Hebei province in China were self-employed, and many came from different Technical and Vocational Education institutions including post-secondary, adult training centers, informal training centers, and so on.

6.2 Poverty alleviation

Poverty alleviation is one of the biggest challenges for international community in the twenty-first century. The employment and job creation opportunities made available through TVET have not only helped the individuals, but also helped in alleviating poverty in their communities; especially, in the rural areas. Skill training in China is used as tool for empowerment leading to the acquisition of marketable technical talents and useful productive competencies. TVET provided platform for training in technical areas such as Agriculture production, Poultry, Manufacturing, Food production, and Dairy products as well. As Dr. Yang Jin, Head of the Central Institute for Vocational and Technical Education (CIVTE) pointed out, almost 80% of all vocational institutes are located in rural areas of China. These vocational structures play a key role in offering a way to get out of poverty, especially for the youth, women and members of ethnic minorities (Janne Leino, 2017). There are 386 agriculture schools in the country providing training and certification for farmers. The training includes entrepreneurship combined with classroom instruction and field work. The delivery of Vocational Education training in agricultural related activities, helped in solving many issues relating to the well-being of the citizens, the reduction of rural-urban migration, improvement of agricultural output and increased competitiveness of the Chinese farmers in the market.

6.3 Creativity, Innovation, and new Technology development

Advances in technology, information and communication in the twenty-first century triggered the need for new skill to respond to the challenges of modern economy worldwide. The implementation of new manufacturing process, new modes of work, using new technologies have led to skills intensification, and a growth in the need for higher order skill and productivity. In order to brace up to the challenges of new technological development, China's TVET was designed in various forms including the scientific and technological tracks which promote educational innovation, up to-date educational technology and the acquisition of independent skills in an e-learning environment as well. In China like in other countries, technical knowledge through TVET is coupled with creative skills and career guidance (Jiang, 2012). It allows the innovation in quality technological solutions which allows the country to keep up with the constantly changing technological world.

In China, TVET has played a great role in providing high quality skilled workers for her industrialization, urbanization and, internationalization development projects. Advancement in the country's information technology industry has been able to bring transformation to the huge population and even restructured the Chinese economy as well. These developments have been linked to the development of Technical and Vocational Education program in line with the country's development plan. This focus on developing TVET has helped placed China among the technologically developed countries in the world.

To accentuate its involvement in TVET, China by the Hong Kong Special Administrative Region (known by its great technology worldwide), set up a strategic development plan started in 2014, namely economic development, innovation and technology industries, vocational education and environmental protection, aiming to respond to the global challenge posed by climate change and carbon emissions, health, poverty, environmental degradation, and so on (The Government of Hong Kong SAR, 2016). Because of the acknowledgement of the role of TVET in contributing to building a better future, with abundant highly qualified human resources, China targets to have 39 million high-skilled workforces by 2020 including 10 million technicians and senior technicians who will be more relevant, connected and multi-dimensional (Jiang, 2012).

7. Lessons for Cameroon from China's experience

As mentioned above, many research have already demonstrated the crucial role of TVET in the economic development. In China as in many developed countries, it has been a recognition of a valuable co-relation of TVET with the economic growth. With the development of TVET, China has known many successes in Science and Technology domain, and which increased considerably the well-being of Chinese population. Even though

the Chinese TVET system is confronted to many challenges today due to the country realities and its struggle towards the modern economy, but its route is a source of inspiration for many developing countries regarding china poorest economic status just 30 years ago.

Through many studies and practical experiences in different countries have noted the difficulties in transferring vocational concepts from one country to another; however, learning from a successful system to develop creativity and innovation, based on local realities and country priorities, could be a practical solution to solve TVET challenges in Cameroon. Therefore, reconstructing TVET system in Cameroon needs a comprehensive reform of institutions ranging from management practices to the organization of teaching and learning. If Cameroon targets to become an emerging economy by 2035 as declared in the country's development strategy, then Cameroon could take advantage of its good relations with China to deepen educational cooperation in TVET development fields, then gain more from the Chinese experiences.

First of all, at management level, it is crucial for the Cameroon's government to ensure that funding put on TVET be utilized correctly as the effectiveness and efficiency of the finance management has been questioned in the country. Of the paltry sum of fund allocated to TVET, a large portion does not get to its targeted destination with the rest lost through corruption. China's experience in efficient management of fund allocation to TVET could be adopted in the management of TVET funds in every level of governance.

Secondly, emphasis should be put on linkage between industry and TVET. In China, enterprises are strongly encouraged be more involved not only in financing and infrastructure provision, but also in the curriculum development which allow them to find their interest in TVET sector and benefit from program through efficient and sufficient workforce employability, and high labor productivity. In Cameroon, such practice could be adopted to enable enterprises to achieve their production targets, and help the country to meet its development objectives as well as allow citizens to move from Poverty to Prosperity. Moreover, the government could encourage enterprises actively participate in TVET development by the allocation of land at subsidized prices, for setting up TVET institutions and in cases like these, the government should extend incentives to enterprises involved in such projects.

Thirdly, with regard to the impact on the socioeconomic growth, TVET should be given more attention in the national education strategy by the provision of some incentives to make TVET attractive for students. For instance, lowering education fees across the board will encourage more students, especially the poor, to enroll in TVET programs as it is the case in China education policy where the government strongly contribute to the education of students coming from poor family background. Therefore, this will be a practical solution towards the challenge to increase enrolment in Cameroon's TVET institutions.

During this research process, many students from different TVET colleges and training centers complained about the government's position towards their entrepreneurship initiatives as they were neglected, thereby, causing many frustrations to the students. To avoid this and facilitate job creation and entrepreneurship initiatives, the government in conjunction with enterprises could provide loans or grants to these valiant students, and subsidized their projects, nurtured and matured with the expertise of the enterprises. Moreover, there is need to establish official linkage between teaching staff and private and public enterprises in order to enable teachers to update their knowledge for a quality teaching learning process.

Overall, a country economic development demands to be supported by workers' effectiveness and higher productivity, and depends on adding more value and delivering better outputs. As it has been the case in Ethiopia where more values have been added to the Technical and Vocational Education and Training through the educational cooperation with China, which has helped Ethiopia to considerably reduce the national poverty rate moving from the highest poverty rates in the world in 2000 to 29.6% in 2014(IMF, 2011; World Bank, 2015a). Nowadays, Ethiopia is gradually advancing and is rapidly moving towards industrialization. Cameroon could benefit from this win-win cooperation with China as mentioned President Hu Jintao during an official visit in Yaoundé in 2007, to add more values to its TVET development, and come up with solutions to its social and economic problems.

8. Conclusion

According to human capital concept, knowledge and skills are the most important force to drive modern economies (Becker, 1994). Based on Confucius' assertion that "Memorizing knowledge only, no matter how much you learn, won't educate a capable person, who could perform the tasks adequately" (Wenjin Wang, 2010), so China actively invested in Technical and Vocational Education and Training which enabled the country to educate young responsible citizens with high performance and high productivity. For Cameroon to solve her problems on TVET development, it would be worthy to refer to the Chinese TVET model in different stages taking cognizance of the existing realities in the country. Thus, this study concludes by arguing that if the

TVET at all levels of government in Cameroon are well coordinated; if overall implementation is backed up by coherent TVET development policy; if there is a proper linkage of TVET with the labor-market; if there is a strong involvement of employers in TVET curriculum content development; if there is a comprehensive and effective reform of the current curriculum in TVET; and if there is an enhancement in the resources allocation to TVET, then the Technical and Vocational Education in Cameroon could definitely help the country solve her biggest challenges to increase employment opportunities, reduce poverty and bolster the economic development of the country.

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