

## **The Role of Technical and Vocational Education and Training in the Development of Small and Medium Sized Enterprises in Cameroon**

Che Kum Clement \*

Received 02 February 2010; Accepted 04 April 2010

### **ABSTRACT**

*This study, a survey research, was designed and carried out to determine the role that technical and vocational education could play towards the development of small and medium sized industries in Cameroon. A population of 133 respondents, comprising 85 technical and vocational education and training educators and 48 proprietors of small and medium sized industries constituted the subjects of the survey. Three research questions were formulated to guide the study. The research instrument for data collection was a 24 item questionnaire which was face validated by three technical experts. The research questions were analyzed using mean score and standard deviation. The analysis was tested using the t-test at 0.05 significant levels. The findings showed that among other things, skills development through technical and vocational education and training is needed for the development of small and medium sized enterprises in Cameroon.*

**Keywords:** *Technical and Vocational education, Small and Medium-sized Enterprises, Technical Experts.*

---

\* Dept of Instructor Training and General Studies, Islamic University of Technology (IUT), Bangladesh. Email: [chekum@iut-dhaka.edu](mailto:chekum@iut-dhaka.edu).

## 1 INTRODUCTION

In recent years technology-based industries have increasingly globalised with change driven primarily by multinational technology-based enterprises. These large enterprises, which are extensively involved in global markets, provide the main conduit through which important technologies are integrated across nations [1]. As global competition has intensified, many small and medium-sized enterprises (SME) have also had to adopt international perspectives [2]. Even the SME whose primary orientation is domestic must be internationally competitive in order to secure long-term success [3].

Enterprise size has been one of the most significant variables influencing industrialization and the internal diffusion of innovations. Small and medium sized industrial enterprises have, in particular, been major vehicles for both employment creation and the diffusion of innovations at local and regional levels, especially in less developed economies [4]. In advanced nations, small and medium sized enterprises have also played significant roles in the diffusion and innovations, especially in the earlier phases of product and process development [5]. The relation between entrepreneurship and firm size in promoting these developments has been neither adequately acknowledged nor researched [6].

Small and medium-sized enterprises usually face unique challenges in the arena of international competition due to their limited resources and capabilities, insufficiently developed administrative procedures and methods, less formal centralized planning and control systems [7], and the lack of manufacturing know-how and access to distribution channels. SME, in particular, face additional challenges due to their accelerated time-to-market and product differentiation imperatives [8]. Small and medium-sized enterprises (SME) are those forms of small firms/businesses that are most often run by entrepreneurs. They are owned, managed and controlled by sole proprietors who contribute shares with a workforce of about fifty people. These enterprises are viable structures for the attainment of meaningful economic development in developing countries such as Cameroon. Hence the Cameroon government have been advocating and encouraging the establishment of small and medium-sized industries. In promoting and enhancing the growth of SME and the already existing ones, the government has prescribed some bank loan facilities for SME owners and specialized development institutions.

The efforts of the Cameroon government in steering, encouraging and promoting the growth of SME have been highly affected by a number of factors. Such as finance, poor management and lack of Technical and Vocational skills [9]. He explained that the under funding of projects is one of the factors that

inhibit the ability of SME to grow in Cameroon. No industry or business enterprise can exist without adequate finance for the provision of infrastructure and the employment of functional workforce. Ndangoh [9] also identified poor management skills and technological expertise as some of those factors that inhibit the growth of industries of Cameroon.

## **2 ENTREPRENEURSHIP IN SMALL AND MEDIUM SIZED ENTERPRISES**

While technological innovations has attracted much attention in recent times, its relation to the broader and very significant question of entrepreneurship in the direction of small and medium sized industries has remained considerably neglected in the economic literature. Such neglect has been one of the most pervasive features of the economic paradigm. An emphasis on unrealistic behavioral principles, compounded by Walrasian statistic analysis, and by equilibrium and optimization assumptions, have tended to view entrepreneurship as automatic, if not downright [10]. This bias has also been significant in economic development literature, where its 'macro' approach, based on national income accounting, has all but completely ignored the role of entrepreneurship as the most important factor in development. To a great extent, this neglect has been part of the Keynesian legacy and its emphasis on economic aggregates [11]. At the same time the study of economic development whether macro or micro has depended greatly on the study of flows, whereas entrepreneurship can only be considered, from this perspective as stock variable. Although production networks in high technologies, such as pharmaceuticals are becoming global, Peters and Young [12] found that life sciences firms seldom operated in global markets because of the complexity of the new drug development process. Rather they tend to take the form of several different business formats performing one or several roles in the innovation chain.

Clearly, a definition of entrepreneurship that focuses on technological innovation alone is insufficient to consider the myriad other innovative activities and roles that are part of the entrepreneurial function, and their relationship to firm size dynamics. Only when entrepreneurship is differentiated with respect to its various economic and innovative roles can it be expected to provide adequate insights on its effects on the processes of industrialization and economic change [13]. At the same time, it is obvious that enterprise size has different impacts on, and is variously affected by, each entrepreneurial role. Larger firms may thus be able to afford entrepreneurial capabilities that are virtually unknown to smaller enterprises or firms, while the larger can enjoy greater flexibility in making decisions that take better advantage of rapidly changing conditions.

Although a precise definition of entrepreneurial roles has not emerged, the historical literature on this topic has revealed diverse facets that can be used to develop a comprehensive typology [14]. Capital investment and accumulation, and the inherent risk involved, have constituted the oldest and most common role ascribed to entrepreneurship. This definition can be traced historically to Cantillon's 18 century conceptualization of the entrepreneur as the bearer of non-insurable risk. It becomes enriched in economic thinking after Adam Smith's mercantile interpretation of entrepreneurship as the provision and accumulation of capital, to the exclusion of other possible roles, a legacy that was later adopted and expanded by Marx and in our own time, by the neoclassical paradigm. Almost half a century after Smith, J.B. Say provided a distinction between investment and organizational decision-making that was largely ignored for over a century, but would be made more explicit by Schumpeter's well-known differentiation between innovative and routine decision-making.

A second but less common role assigned to entrepreneurship is that of management and product co-ordination. The role was related to the process of economic development when, in the 1950's Harbison observed that managerial and organizational capability were the most scarce skills in less developed economies. Then since the 1960s the co-coordinative role has attracted significant attention through Leibenstein's [11 X-efficiency conceptualization that focuses on organizational motivation as a major factor of economic change. The co-coordinative role becomes most obvious in the x-efficiency paradigm through the definition of 'input completing' activities, where the ability to obtain and use factors of production that are not well marketed is most seriously tested. For such factors markets may not even exist, and the prices will not usually yield the necessary signals required to anticipate quality and performance levels. It is also in this role where small and medium sized industrial enterprises have been most effective in fulfilling economic needs. Such commonplace activities as the adaptation of production processes to allow the employment of less skilled labour, or the restructuring of productive tasks to implement a new productive process, are familiar examples of this element.

Previous work on industrial studies and economic development has shown that small and medium sized industries have accounted for the larger share of manufacturing employment in most nations [15]. Small and medium sized enterprises are, furthermore, more spatially dispersed and can make a better contribution to local and regional development especially in hinterland regions, than large industries, which are usually concerned in major metropolitan areas. Small and medium sized industries are also generally more labor-intensive than

large ones and can make small workshops and factories and have been found to grow rapidly and displace household manufacturing in many industries during the second stage of development. Over the long term, these enterprises have generally been considered to be significant sources of income. While many have thought small industrial firms to be engaged primarily in traditional activities, Norcliffe and Freeman [16] have found that only a small range of such activities is actually practiced in many rural industries. A wider range of activities than has so far been thought possible in both rural (particularly resource-based and agro-processing) and urban 'informal' small industries therefore attests to, and complements, the very significant employment share of these industries. In so far as the entrepreneurial roles are concerned, it can be expected that productive co-ordination and inter-market connection may be most important for small household firms in these early stages. Investment capital is usually obtained from family or partners, and the role of institutionalized capital markets (except for some government sponsored lending programs) is generally insignificant for these industries [17]. Similarly, the invention and strategic planning are usually present only at a very rudimentary level, if at all.

The rapid growth of small and medium sized medium-sized industries can also be attributed to an increase in the amount of subcontracting and local assembly in such activities such as forging, foundry work, machine-shop processing, and agricultural equipment manufacturing. Subcontracting has, in particular, been found to improve capacity utilization while it helps large firms avoid labor problems during economic recessions, and the payment of uniform high union wages in all or most stages of the production process.

It will be very difficult for any industry to survive without the presence of trained, experienced and skilful employees in its workforce. It therefore becomes necessary that small and medium sized in Cameroon should be managed by personnel who possess adequate technical skills. The Cameroon National Policy on Education [18] confirmed that Technical and Vocational Education Institutions is preparatory environment for creating career awareness and development of skills for work in business and industries.

The development of small and medium sized industries needs the full supply of modern infrastructure such as electricity, communication facilities, water supply and good roads. According to a World Bank [19] study, it is confirmed that the cost of infrastructure such as roads, water, electricity, communication and security accounted 16-18 percent of the establishing manufacturing enterprises in Cameroon. It is also viewed that, even though infrastructure hampers the establishment of manufacturing enterprises, the development of

small and medium sized enterprises is hampered seriously by the lack appropriate technical skills of the workforce.

### **3 THE PURPOSE OF THE STUDY**

The main purpose of the study was to determine the role that technical and vocational education can play in the development of small and medium sized industries in Cameroon. The study specifically was to:

- (i) Determine the role of technical and vocational education in the development of technical skills needed for work in the small and medium sized industries.
- (ii) Determine the influence of technical and vocational education on work ethics in the small and medium sized industries in Cameroon.
- (iii) Identify the roles that technical and vocational education can play in enhancing management and marketing strategies in the small and medium sized industries.

### **4 SIGNIFICANCE OF THE STUDY**

The significance of the study is that, the findings of the study will be useful to the proprietors of small and medium sized enterprises in Cameroon and would improve their management skills and direct their minds towards identifying problems that may lead to future failures. The findings of the study will also guide owners of small and medium sized industries on the modalities for the recruitment of personnel for work in the industry. The findings may serve as guidelines to technical and vocational institutions for policy-making purposes and also for the improvement of curriculum.

The results of the study will serve as a guide to proprietors of the small and medium sized industries and prospective proprietors, and will throw more light on the importance of engaging in skilful activities in the small and medium sized industries in Cameroon. The results of the study would be useful to teachers and educators of technical and vocational education, and would guide them in preparing their learners along industrial lines by giving them those skills that are relevant to the enterprises.

### **5 RESEARCH QUESTIONS**

The following research questions were formulated to guide the study:

- (i) What crucial roles can technical and vocational education play in the development of the required technical skills needed for work in small and medium sized industries in Cameroon?

- (ii) How can technical and vocational education influence the development of appropriate work ethics for the small and medium sized enterprises?
- (iii) What roles can technical and vocational education play in enhancing management and marketing skills required in the small and medium sized enterprises in Cameroon?

## **6 THE ROLE OF TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING**

According to World Bank's [19] observation, small and medium sized enterprises in Cameroon are seriously constrained by management factors. According to them, basic management skills are needed in areas such as technical and vocational education. Some of these managers who have explained government activities often don't have enough experience and skills to impart their skills to their apprentice workers effectively. Business men in these indigenous small and medium sized enterprises often complain of constraints because of financial inadequacies, especially working capital in running their businesses. However, according to some studies, scholars have shown that these financial problems are consequences of poor planning, out modeled technology, poor entrepreneurial design and planning and efficient skills in industrial management.

Agukhe [20] observed that many indigenous small business men are often plagued with the problems of lack of confidence in their subordinates in their establishments. This distrust of subordinates has led to the restriction of authority delegated to them. One sad consequence is that these small and medium sized business men are neither able to break loose from the capsule of owner-management operation, nor are they able to run their business effectively. It becomes necessary to identify how technical and vocational education can assist these small and medium sized businessmen to acquire suitable managerial skills for the efficient running and operation of their small and medium sized enterprises.

Management is a very important factor of production in any industrial/business setting. It is important to observe that most industrial/business managers and small and medium-sized proprietors do not believe that relevant qualifications and experiences in management abilities are basic standards for the survival and growth of any industrial/business set-up, irrespective of the level of funding.

Cameroon is trying to move forward in the terms of setting up small and medium sized enterprises, but only a small fraction of these industries survive the demands of the enterprise. These lapses are attributed to insufficient

training needed in the area of technical and vocational education and also lack of required skills for working in the enterprise.

As Agukhe [20] observed it, small and medium sized enterprises in Cameroon have compelling problems, especially personnel management problems that have made it almost impossible for the achievement of greater success in the enterprise. According to him, there is a great need in this stage of the 21st century for the problem of manpower production to be effectively addressed through training and retraining of both old and new workers in the industries, especially the small and medium enterprises in order to acquaint them with the new technologies in industrial production and management. In this line, it is necessary industry and commerce should plan for the required occupational and qualification structure and should also derive from them the requirements to be met by their workforce. This will also make technical and vocational education institutions to streamline their curriculum contents with the needs of these industries. Management of small and medium sized enterprises should accommodate a design process of co-operation and sharing of responsibilities between the proprietors and workforce and also technical and vocational education institutions.

As Tomlinson [21], observed it, training of personnel engaged in technical and vocational activities have been grossly insufficient, in terms of number and variety to adequately meet the wide range of job requirements in the country. According to him, Cameroon is still highly in need of qualified and trained personnel to manage the industrial sector. This fault may be attributed to the present education system, which does not permit an appropriate development for technical and vocational personnel; even most of the institutions do not have adequate training facilities. The absence of this proper training has resulted to shortage of technical and vocational personnel, and also skilled workforce, who are required, especially, for industrial production, quality control and maintenance of industrial equipment and machinery. In the light of this, it is not surprising to see that a significant number of proprietors of small and medium sized enterprises may not have received any training in technical and vocational education or even management.

UNESCO [22] observed that only technical and vocational education could effectively address the unemployment challenges of this 21<sup>st</sup> century. Awungi [23] indicated that technical and vocational education has the real solution to the problems of unemployment in Cameroon; The Bonn [24] declaration stated that; if education is the key of social and economic development of a nation, technical and vocational education and training is the master key that opens the doors of social and economic development of these countries. According to



Che Kum [25], industrial technical and vocational education and training in Cameroon if well directed and managed, is capable of making outstanding contributions to social, cultural and economic development of the country. This refers to developing the potentials of individuals for active participation in the life of the community. In many industrial countries, the training and retraining of large number of technical and vocational skilled workers to meet the requirement of new technologies and changes in the employment structure have become an urgent task for the technical and vocational education institutions.

Even though a lot of importance has been highlighted on the importance of small and medium sized enterprises to the economy, no mention was made of how technical and vocational education can influence the growth and development of small and medium sized enterprises in Cameroon. Although the importance of skills and experiences were mentioned, no references were made to technical and vocational education as the sources for acquiring these needed skills and experiences and what area of technical and vocational education are these skills needed for the development and efficient operation of small and medium sized enterprises in Cameroon. It becomes very necessary to fill this gap by identifying the roles of technical and vocational education in the development of small and medium sized enterprises.

## **7 METHODOLOGY OF THE STUDY**

Descriptive survey research design method was used in this study and was carried out within two provinces; Littoral and southwest provinces for their industrial dominance. A population consisted of 48 proprietors of small and medium sized industries and 85 technical and vocational education teachers. The technical and vocational education teachers were drawn in the areas of industrial technical and vocational education as well as from business and commerce areas. The total number of population for the study also represented the sample for the study.

The instrument used for the study was a 24-item questionnaire developed to collect data for the study. All the 24 items had relevance to the three research questions posed for the study. The instrument was pilot tested for face validity by an expert from the Advanced Teachers' Training College for Technical Education (ENSET) Douala, and two senior technical and vocational education experts from the two provinces concerned.

A pre-test of the instrument was carried out using 6 proprietors and 8 technical and vocational education teachers within Fako and Bassa. The Pearson Product Moment correlation was used for calculating the reliability coefficient of

the instrument. The scores that were calculated gave a satisfactory coefficient of 0.63.

The mean scores and standard deviation were used to analyze the data collected using the instrument while t-test of two independent means were used to test the significance. A five point Likert-type scale was used and the items that attracted mean scores 3.50 and above were accepted while those below 3.5 were rejected. On the other hand, if the calculated “*t*” was less than the “*t*”, value of the table, it was accepted.

**Table 1:** Responses of Teachers of Technical and Vocational Education and Proprietors of Small and Medium Sized Industries on the Roles that Technical and Vocational Education can play in the Development of Technical Skills needed for Work in Small and Medium Sized Enterprises in Cameroon

Sl. no	Statements	<i>X</i>	<i>SD</i>	Remarks
1	Technical and vocational institutions are producing the required workforce needed for the development of small and medium sized industries.	3.32	1.14	Disagree
2	Lack of technical skills for employees’ of technical and vocational education and training affects their work performance.	3.76	0.93	Agree
3	Lack of relationship between small and medium sized industries and technical and vocational education and training institutions poses problems in the development of small and medium sized industries.	3.92	1.02	Agree
4	Lack of proper skills of proprietors affect the development of small and medium sized enterprises.	4.17	0.83	Agree
5	Most of the proprietors find it difficult to send their employees for training due to high training cost.	4.01	1.01	Agree
6	The number of years required for training in technical and vocational institutions is not sufficient.	3.55	1.15	Agree
7	Government does not have interest in the development of personnel for small and medium sized enterprises in Cameroon.	3.87	1.08	Agree
8	Proprietors of small and medium sized enterprises have not yet felt the impact of technical and vocational education in the industrial sector.	3.16	1.42	Agree

It should be noted that *X* – Means mean value of respondents and  
*SD* – Means standard deviation.

**Table 2:** Responses of the respondents on the influence of Technical and Vocational Education on the Development of proper Work Ethics in Small and Medium Sized Enterprises in Cameroon

Sl. no	Statements	<i>X</i>	<i>SD</i>	Remarks
1	Poor work attitudes pose hinders to the development of small and medium sized enterprises.	4.42	1.00	Agree
2	Neglect, absenteeism, indifference on the part of management will adversely affect the growth of small and medium sized enterprises.	4.13	1.05	Agree
3	Recruitment of staff in small and medium sized industries is not based on the official recruitment formalities and professionalism.	3.16	1.18	Disagree
4	Most employers of small and medium sized enterprises are not properly selected and trained and this affects the development and performance of small and medium sized enterprises.	3.63	1.14	Agree
5	Lack of workers' experience affects the development of small and medium sized enterprises.	4.00	1.00	Agree
6	Lack of in-service training, workshop and seminars affect small and medium sized enterprises.	3.98	1.08	Agree
7	Most small and medium sized enterprises fail because they are managed by untrained managers and employees	4.85	0.87	Agree
8	Lack of workers' motivation by managers affects the performance of the employees in small and medium sized enterprises.	4.12	0.97	Agree

The data in **Table.1** shows the mean distribution of the opinions of small and medium sized industries and teachers of technical and vocational education and training on the roles of TVET towards the development of technical skills needed for work in small and medium sized industries. With respect on item 1 on the table, majority of respondents disagreed that TVET institutions are producing the required workforce needed for the development of small and medium sized industries. That is also in line with item 4 of **Table.1** with a high mean value of 4.17 which respondents agreed that the lack of proper skills of proprietors also affects the development of small and medium sized enterprises. Majority of the respondents also agreed in item 5 of **Table.1** as could be seen by the mean value of 4.01 that most proprietors found it difficult to send their employees for training due to high training cost.

**Table.2** presents the responses of the respondents on the influence of technical and vocational education on the development of proper work ethics in small and medium sized enterprises in Cameroon. The data shows that most of the respondents agreed that most small and medium sized enterprises fail because they are managed by untrained managers and employees. They also agreed that poor attitudes poses hindrance to the development of small and medium sized enterprises. The high mean value of item 7 of **Table.2** is 4.85 and of item 1 is

**Table 3:** Responses of Respondents on the Roles that Technical and Vocational Education can play to Enhance Management and Marketing Skills Required in Small and Medium Sized Enterprises.

Sl. no	Statements	<i>X</i>	<i>SD</i>	Remarks
1	Well organised entrepreneurial education can help proprietors of small and medium sized enterprises acquire skills on how to develop good relationship with financial institutions.	4.0	0.99	Agree
2	Lack of in-service training, workshops and seminars in technical and vocational education affects small and medium sized enterprises in the areas of fund management and marketing adversely.	3.98	1.04	Agree
3	Relevant education qualification and management ability are very necessary for the growth of small and medium sized enterprises.	4.14	0.94	Agree
4	Incompetence in fund management is as a result of lack of proper technical and vocational education.	3.86	1.66	Agree
5	Incompetency in management and lack of appropriate industrial and technical skills affect the growth and development of small and medium sized enterprises in Cameroon.	4.12	0.96	Agree
6	Operators of small and medium sized enterprises do not consider educational qualification as a yard stick for industrial development and growth.	2.63	1.76	Disagree
7	Training in technical and vocational education institutions can produce competent and efficient workers in the areas of fund management and marketing for the small and medium sized enterprises in Cameroon.	3.76	1.22	Agree
8	There should be good relationship between government owned technical and vocational institutions and the small and medium sized enterprises in Cameroon.	3.64	1.04	Agree

**Table 4:** *t*-test analysis of the Mean Responses of the Respondents on the Roles that Technical and Vocational Education can play in the Development of Technical Skills Needed in the Small and Medium Sized Enterprises.

Sl. no	Statements	$X_1$	$X_2$	<i>t-cal</i>	Remarks
1	Technical and vocational education institutions are producing the required workforce needed for the development of small and medium sized enterprises in Cameroon.	3.63	3.21	3.43	S
2	The inability of proprietors of small and medium sized enterprises to send their employees for technical and vocational training affects their work performance.	3.83	3.74	0.46	NS
3	Lack of good relationship between small and medium sized enterprises and technical and vocational institutions poses developmental problems to small and medium sized enterprises.	4.14	3.65	2.27	S
4	Lack of proper skills of proprietors affects the development of small and medium sized enterprises.	4.38	3.83	3.22	S
5	Most proprietors find it difficult to send their employees for training due to high training cost.	4.35	3.61	4.30	S
6	The number of years required for training at the technical and vocational institutions is not sufficient.	3.74	3.33	2.07	S
7	Government does not have interest in the development of personnel for small and medium sized enterprises.	3.77	3.89	1.24	NS
8	Proprietors of small and medium sized enterprises have not had the impact of technical and vocational education for the development of small and medium sized enterprises.	3.38	3.36	0.62	NS

**Note:**  $X_1$  = Mean Responses of Technical and Vocational Education Teachers.  
 $X_2$  = Mean Responses of Proprietors of small and medium sized enterprises.  
*t-cal* = Calculated value of the significant difference.  
*t-Table* = 1.96 – standard significant value.  
S = Significant, NS = Not Significant.

**Table 5:** t-test for Mean Responses for Teachers of Technical and Vocational Education on the Development of Relevant Qualification and Managerial Ability in Small and Medium Sized Enterprises

Sl. no	Statements	$X_1$	$X_2$	$t-cal$	Remarks
1	Proper entrepreneurial education can help proprietors of small and medium sized enterprises to acquire skills on how to develop good relationship with financial institutions.	3.14	3.19	0.26	NS
2	Lack of in-service training, workshop and seminar in technical and vocational education activities affect small and medium sized enterprises in the areas of fund management and marketing.	4.12	4.09	0.96	NS
3	Relevant education qualifications and managerial skills are very necessary for the growth of small and medium sized enterprises.	4.17	3.66	2.74	S
4	Incompetence in fund management is as a result of lack of technical and vocational education skills.	3.86	3.27	3.22	S
5	Management incompetence and lack of appropriate industrial skills affect the development and growth of small and medium sized enterprises in Cameroon.	4.28	4.23	0.96	NS
6	Operators of small and medium sized enterprises do not consider educational qualification as a yard stick to the development and growth of small and medium sized enterprises.	2.83	3.76	2.81	S
7	Training in technical and vocational education institutions can produce competent and efficient workforce in the areas of fund management and marketing for the small and medium sized enterprises.	4.12	3.41	0.19	NS
8	There should be good relationship between government owned technical and vocational institutions and the small and medium sized enterprises in Cameroon.	4.36	4.28	0.57	NS

4.42 go in line with the agreements. Respondents also disagreed with item 3 of **Table.2** ( $X = 3.16$ ) that, the recruitment of staff in small and medium sized enterprises is not based on recruitment formalities and professionalism. Lack of work motivation by managers also affects the performance of workers, and also neglect, absenteeism, indifference on the part of management will adversely affect the growth of small and medium sized enterprises. This is shown in item 8 of **Table.2** ( $X = 4.12$ ) and item 2 ( $X = 4.13$ ).

**Table.3** shows responses of respondents on the roles that technical and vocational education can play to enhance management and marketing skills required in small and medium sized enterprises. The data presented in **Table.3** shows that respondents who are responded in item 3 agreed that relevant education and managerial ability are very necessary for the growth of small and medium sized enterprises and this is shown by the highest mean value of 4.14. In the same view, respondents on item 5 of **Table.3** agreed that incompetence in management and lack of appropriate industrial and technical skills affect the growth and development of small and medium sized enterprises in Cameroon as show by its high mean value of 4.12. Well organized entrepreneurial education can help proprietors of small and medium sized enterprises acquire skills on how to develop good relationship with financial institutions. This is noted as the respondents agreed on item 1 of **Table.3** with a mean value of 4.0. Respondents on item 6 of **Table.3** disagreed that operators of small and medium sized enterprises do not consider educational qualification as a yard stick for industrial development and growth.

The  $t$ -test analysis of **Table.4** reveals that the critical  $t$ -values for 3 items were less than the  $t$ -critical values for the other 5 items were also greater than the critical value of " $t$ ". This therefore implies that the 5 items are significant and the null hypothesis is rejected.

The  $t$ -test analysis of **Table.5** reveals that the calculated values of 5 items were less than the  $t$ -critical value. Therefore, the null hypothesis was accepted for these 5 items. However, the calculated " $t$ " values for the other 3 items were greater than the critical value of " $t$ ". Therefore, the null hypothesis was rejected to the other 3 items of **Table.5**.

## 8 FINDINGS

Based on the data analysis, the following results were got:

- (i) The inability of Cameroon proprietors of small and medium sized enterprises to send their workers for technical and vocational training affects the productivity of these workers.

- (ii) Lack of good relationship between small and medium sized enterprises and training institutions pose problems to the development of these industries.
- (iii) Lack of proper skills possessed by the proprietors of small and medium sized enterprises affect development of these enterprises.
- (iv) Most proprietors find it difficult to send their workers for training and retraining due to high training cost of technical and vocational education.
- (v) Training periods at the technical and vocational institutions are not adequate.
- (vi) Neglect to workers and indifference to workers' welfare on the part of the management will adversely affect the development of small and medium sized enterprises in Cameroon.
- (vii) Inadequate knowledge and experience due to lack of in-service training, workshops and seminars affect the growth and development of small and medium sized enterprises adversely.
- (viii) Relevant educational qualifications and management ability are very necessary for the growth of small and medium sized enterprises.
- (ix) Training in technical and vocational education institutions can produce competent and efficient workers in the areas of production (such as welding, fabrication, woodwork, metal construction, electrical and electronic works), fund management and marketing.
- (x) There should be good relationship between government owned technical and vocational education institutions and small and medium sized enterprises in Cameroon.
- (xi) Proper entrepreneurial education in technical and vocational education institutions can help proprietors of small and medium sized enterprises acquire skills on how to develop good relationship with financial institutions.
- (xii) There were significant differences in the responses of technical and vocational education teachers and proprietors of small and medium sized enterprises on the roles that technical and vocational education can play in the development technical skills needed in small and medium sized enterprises.
- (xiii) There were no significant differences in the opinions of the teachers of technical and vocational education institutions and proprietors of small and medium sized enterprises on the roles that technical and vocational education can play in enhancing management and marketing skills required in small and medium sized enterprises.



## **9 SUMMARY AND DISCUSSION**

The results of the study reveal that proprietors and workers of most small and medium sized enterprises in Cameroon lack appropriate skills in technical and vocational education. The findings also show that these proprietors do not lack adequate skills but scarcely send their workers for training in technical and vocational institutions. This result is in line with UNESCO (1999) which identified lack of technical and vocational skills as a major factor hindering the growth and development of small and medium sized enterprises in Cameroon.

In the area of training, it is observed that most proprietors of small and medium sized enterprises do not take delight in sending their workers for training or re-training in technical and vocational institutions. The study also revealed that lack of relevant qualifications and management abilities affect the growth and development of small and medium sized enterprises. The study also revealed that proprietors of small and medium sized enterprises lack the skills of fund management and marketing, which is one of the major problems faced by these enterprises in Cameroon. The study also found that poor work ethics is another factor which hinders the growth and development of small and medium sized enterprises. According to World Bank (1995), the lack of adequate personnel to manage industries constitute one of the greatest constraints in the development of small and medium sized enterprises in Cameroon. The Bank further emphasized that provision of industries without trained personnel to manage them will amount to wastage of resources. There was significant difference in the responses of the proprietors of small and medium sized enterprises and teachers of technical and vocational education on the roles that technical and vocational education can play in the development of technical skills for the industry. On the roles of technical and vocational education in enhancing management and marketing skills, in the small and medium sized enterprises, the proprietors did not differ much in their opinions with those of technical and vocational education teachers. This shows that the proprietors believe that technical and vocational education is essential for the growth and development of small and medium sized enterprises in Cameroon.

## **10 RECOMMENDATIONS**

Based on the findings of the study, the following recommendations were made:

- (i) Proprietors of small and medium sized enterprises should ensure that qualified and skilled personnel in technical and vocational education are employed to operate and manage their enterprises. This is because proper operation of equipment, good record keeping and keeping of financial accounts will enhance industrial growth in the country since the success of any enterprise depends on the proper operation of its activities.

- (ii) Proprietors of small and medium sized enterprises should first of all equip themselves with valuable skills, relate properly with available technical and vocational education institutions and acquaint government with up-to-date developments in the small and medium sized enterprises in Cameroon. Government owned technical and vocational education institutions should provide relevant training to employees of small and medium sized enterprises.

## REFERENCES

- [1] Karagozogu, Necmi and Martin Lindell. (1998) Internationalization of Small and Medium-sized technology based firms: An exploratory study. *Journal of Small Business Management*, Vol. 36 no. 1: pp. 44-59.
- [2] Lintvak I. (1990). Instant International: Strategic reality for small high-technology firms in Canada. *Multinational Business*, Vol. 2: pp. 1-12.
- [3] Lindell M and Necmi Karagozogu. (1997) Global strategies of US and Scandinavian R & D intensive small and medium sized companies. *European Management Journal*, Vol. 15 no. 1: pp. 92-100.
- [4] Luis Suarez-Villa. (1983) The cycle of industrial manufacturing in the frontier zone of Mexico. *Exterior Commercial*, Vol. 33: pp. 950-60.
- [5] Robert Hayes and Steven Wheelwright. (1979) The dynamics of process-product life cycles. *Harvard Business Review*, Vol. 57: pp. 127-36.
- [6] Seev Hirsch. (1967) Location of Industry and International Competitiveness. *Oxford University Press, Oxford*.
- [7] Bell J, McNaughton R, Young S and Crick D. (2003) Towards an integrative model of small firm internationalization. *Journal of International Entrepreneurship*, Vol. 1 no. 2: pp. 339-62.
- [8] Choong Lee. (2000) Development and perception of Total Quality Management in Small manufacturers: An Explorative Study in Korea. *The Journal of Business and Entrepreneurship*, Vol. 1 no. 2: pp. 339-62.
- [9] Ndangoh JE. (2001) Growth constraints on small and medium sized enterprises. *Unpublished M.Sc. Thesis, Department of Economics University of Lagos*.

- [10] Harbison, Frederick. H. (1956) Entrepreneurial organisation as a factor in economic development. *Quarterly Journal of Economic*, Vol. 70: pp. 364 - 79.
- [11] Harvey Leibenstein. (1985) Entrepreneurship, entrepreneurship training, and economics: the case of the missing inputs. *Mimeo*.
- [12] Peters E and Young S. (2006) Emerging business models for biotechnology firms and clusters: policy responses in peripheral regions in the EU. A.T. Travers and A.C. Teixeira (Eds), *Multinationals, Clusters & Innovations: Does Public Policy Matter? London: Palgrave*.
- [13] Hirschman Albert O. (1958). The strategy of economic development. Yale University Press, New Haven.
- [14] Harvey Leibenstein. (1968). General X-efficiency theory and economic development. *Oxford University Press, New York*.
- [15] Luis Suarez-Villa. (1985). Entrepreneurship and the international diffusion of innovations in manufacturing: a general approach. *Revisita Internazionale di science economiche e-commerciali*, Vol. 34: pp. 369-91.
- [16] Norcliffe GB and Freeman DB. (1980). Non-farm activities in market centres of central province, Kenya. *Canadian Journal of African Studies*, Vol. 14: pp. 503-17.
- [17] Rothwell R and Zagveld W. (1982). Innovation and small and medium sized firm: their role in employment and in economic change. *Frances Printers, London*.
- [18] Republic of Cameroon (1995). National Policy on Education. *MINEDUC, Yaounde*.
- [19] World Bank. (1995). Private Sector Development in Low Income Countries. *Washington D.C*.
- [20] Agukhe JO. (1998). Industrial Development and Technical and Vocational Education in Cameroon and Policy Perspective. Unpublished research project, 1998.

- [21] Tomilson CG. (1998). *Industrialisation in an Open Economy in Developing Countries*. Cambridge, Cincinnatus Press.
- [22] UNESCO. (1999). *Proceedings of Second International Congress on Vocational Technical and Education*. Seoul, Republic of Korea.
- [23] Awungi M. George. (1999). *Curriculum Development and Vocational Education Management*. Hope Publishers, Lagos.
- [24] UNESCO-UNEVOC Bonn. (2002) Declaration policy documents in Technical and Vocational Education. *UNESCO, Paris*.
- [25] Che Kum (1999). The evolution of Secondary Industrial Technical and Vocational Education in Cameroon. *Marshav 1999; the Aharon Ofri International Training Centre, Jerusalem, Israel*.