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# Investment in Human Capital and Entrepreneurial Skills in Family SMEs in Lubumbashi

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**Abstract:** ***The objective of this study is to describe the entrepreneurial skills in family SMEs in Lubumbashi; then explain the relationship between basic or continuing training in entrepreneurship and these entrepreneurial skills. The main hypothesis is therefore that the degree of possession of entrepreneurial skills among the owners of family SMEs is positively linked to investment in human capital, that is to say to the degree of training achieved in entrepreneurship and the type of training of base received. The key variables of entrepreneurial skills that we have retained are entrepreneurial skills, administrative skills and managerial skills, according to the model of Deeks (1976). The results show that the owners of family SMEs in Lubumbashi have, in a large majority, a low degree of possession of the various skills. The structure of the data showed that the level of education in entrepreneurship is relatively low. It is proportional to the size of the company but inversely proportional to age and years of experience. By confirming the fact that investment in human capital is not the only factor in acquiring entrepreneurial and managerial skills, although it is for administrative skills, our study contributes to improving knowledge of the relationship between entrepreneurship training and entrepreneurial skills development. This suggests that existing theoretical models of the relationship between training and skill development should include other variables such as social, cultural and contextual order as moderating variables.***

**Keywords:** entrepreneurial skills, investment in human capital, entrepreneurial skills, administrative skills, managerial skills, level of education

## 1. Introduction

Entrepreneurship has become an important economic and social phenomenon, a subject of research as well as a field of education and teaching. Indeed, the number of schools and universities offering entrepreneurship programs and courses is growing steadily (Bachiri, 2016). The number of basic or continuing training at the level of both national and international organizations supporting entrepreneurship, public bodies, bilateral cooperation programs, federations or entrepreneurial corporations has continued to increase over the past ten years (ILO, 2021).

Indeed, from 2016 to June 2021, FEC / Katanga organized 123 training sessions for its members (FEC, 2021) with themes that revolve around OHADA accounting, taxation, subcontracting and management of SMEs, procurement, human resources, labor law and social security, customs and excise legislation.

The question of the training of entrepreneurs in SMEs in general and those of the family[1] branch has been at the center of an important debate since the 1970s. The interest in family SMEs has been motivated by its contribution to the economic growth in most of the country of the world[2]. For some, the family business helps to increase the possibilities of self-employment and employment. For others, the family business dominates the front-line economic activities on which the majority of the population depends, both formal and informal (Ahado, 1995). Whether in one trend or another, the dynamism that has characterized family businesses and its recognition as a factual basis of economic activity in both so-called developed and developing countries have led to the incorporation of this branch into models of economic growth. As a result, macroeconomic policies in most countries now increasingly take into account the potential contribution of this industry to economic growth.

The family business plays a considerable role in the economy of most countries and accounts for around 50-90% of the gross domestic product of all market economies (Kenyon-Rouviniez and Ward, 2004). Numerous studies (Cromie et al., 1995; Allouche and Amann 1995; La Porta et al., 1999; Faccio and Lang, 2002; IFERA, 2003; Morck and Yeung, 2003; Olson et al., 2003; Sraer and Thesmar, 2004) conclude that family businesses represent a significant percentage of total businesses and especially among SMEs, up to more than two-thirds of businesses in Western countries and ¾ in developing countries. The family business is also seen as a driver of innovation and economic efficiency, but also as a powerful creator of jobs and self-employment. Along with the evolution of the field of entrepreneurship, there is a growing interest in the development of training programs to encourage, foster and promote family entrepreneurship.

In the DRC for more than a decade, the government has been committed to the National Program for the Development of Entrepreneurship in the Democratic Republic of the Congo. This program aims to break with the low entrepreneurial density in the country, which is 0.00426 businesses per km² (MiniPMEetArtisanat, 2021). In 2020,

[1]By family business, we expect one where we find the following three characteristics: control of the capital by the family, the active participation of the family in the management of the business, as well as the transmission or the will to transmit the business to the next generation (Comblet and Colot, 2006).

[2] The largest family businesses in the world: Wallmart, Ford Motor, Samsung, LG Group, Carrefour Group, Fiat Group, PSA Peugeot Citroën, BMW…

OPEC[3] is launching the National Program for the Development of Entrepreneurship in Congo (PRONADEC) and the launch of the program to raise awareness and support young people in entrepreneurship. In terms of education, entrepreneurship will be a compulsory subject for pupils and students in the DRC from September 2021, according to the Minister of SMEs and Handicrafts. The measure will be applied from primary to higher education by adapting the training to the understanding of each level. It will mainly be a question of encouraging learners to embark on business creation. For this, the government will set up a semi-incubator to promote viable projects. In addition, the initiative plans to take into account out-of-school youth. These will be taken care of by the Office for the Promotion of Small and Medium-Sized Enterprises, which will be responsible for organizing training for them.

En 2021, *the Young African Leaders Initiative* (YALI), une initiative qui appuie les jeunes africains dans leur volonté de prendre en charge la transformation socio-économique de l'Afrique, a lancé un appel à candidatures pour sa 12e session de formation axée sur l'entrepreneuriat, le management public et le leadership.

La formation en entrepreneuriat peut-il accroitre la possession des compétences entrepreneuriales ? Qu'en-est-il des patrons non scolarisés ? On peut supposer qu'il existe un lien entre l'investissement en capital humain par la formation de base ou continue et les compétences entrepreneuriales.Plusieurs études empiriques indiquent que l'éducation peut favoriser l'entrepreneuriat (Karimi et al., 2012).

Pourtant, l'impact des programmes de formation à l'entrepreneuriat sur les compétences entrepreneuriales reste largement inexploré (Sánchez, 2010) surtout pour les entreprises familiales.

L'objectif de cette étude est de décrire les compétences entrepreneuriales dans les PME familiales à Lubumbashi ; ensuite expliquer la relation entre la formation de base ou continue reçues par les patrons des PME familiale et les compétences entrepreneuriales.En faisant le choix de ce sujet, nous postulons que la formation entrepreneuriale est l'un des facteurs les plus importants dans la création, la gestion, la persistance (Verstaete, 2004), la durabilité et la pérennité de l'entreprise.

Theoretical approaches and hypothesis

In neoclassical economic theory, entrepreneurial competence is generally treated as an exogenous factor, while physical capital and labor are identified as the main endogenous sources of variation in the production levels of firms. However, we agree with Schumpeter who proposes that entrepreneurial competence should rather be considered as an endogenous factor, because it is this which allows the optimal use of physical capital and labor. This is the managerial talent that the managerial entrepreneur must possess.

In this study, there is no question of validating Schumpeter's hypothesis, but rather of estimating the importance of know-how in the management of family SMEs. Based on this premise, we will try to identify the main sources of skills acquisition for players in this sector. Conceptually, this study is situated in the theory of human capital in its neoclassical view which states that education and training constitute sources of capital because they improve the productive skills of individuals and systems (Becker, 1975).

Our main hypothesis is therefore that the degree of possession of entrepreneurial skills among entrepreneurs of family SMEs will be positively linked to the degree of training achieved in entrepreneurship and the type of basic training received.

The study has four parts. In the first part, we present the theoretical model as well as the methodology through which we report the hypotheses of the study. The second part is devoted to the framework in which we situate our study by doing the internal validation of the questionnaire used. A third part consisted of the presentation and analysis of the results. Finally, the last part is devoted to the interpretation and the theoretical and practical implications of the results obtained.

Analytical framework and explanatory theoretical model

Managerial competence is measured through three indicators as proposed by Deeks (1976). According to this author, to manage his business effectively, the entrepreneur must have three types of skills which are entrepreneurial skills, administrative skills, and managerial skills. These skills are universal and defined as follows:

- Entrepreneurial skills are those associated with the rare factor and the basis of the entrepreneurial decision; they are the risk takers, the tacticians, the negotiators, etc. who are likely to engage in uncertain activities or introduce innovations into existing organizations,
- Administrative skills are instrumental. They are learned in business management training programs. This is the case of the ability to read and count which, in turn, could make it possible to know how to keep accounts and calculate the cost of the product or service sold,
- Managerial skills are skills derived from the first two. This is the ability to analyze situations within the organization and to make choices and decisions that are required.

To the extent that the characteristics associated with managerial talent can be acquired through the education system, they will be seen here as a product of education and different training rather than as individual and contextual factors, as some authors claim.

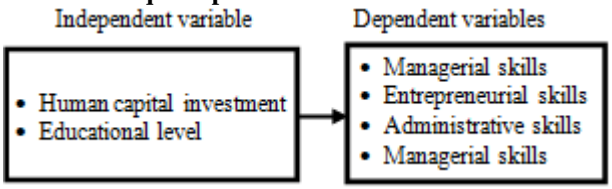
The theoretical model for testing the hypothesis is as follows:

- The dependent variable is represented by managerial skills which will be measured by entrepreneurial, administrative and managerial skills;
- The independent variable is represented by the investment in human capital measured by the level of education

[3] OPEC: Office for the Promotion of Small and Medium-Sized Enterprises, a technical body of the Congolese Government in the area of small and medium-sized enterprises (SMEs)

- The following factors are the control variables: type of education and training, type of activity, personal characteristics (years of experience, sex, age), contextual and environmental variables (socio-economic status of parents or guardian, origin of the company).

**Modèle théorique explicatif**




## 2. Methodology

Our survey was launched in March 2021 with the hope of achieving a 20% response rate and reaching a representative sample. The sample made up of 384 family SMEs that responded to the questionnaire constructed from the concepts of Deeks (1976) was tested at the significance level of 95% and 5% margin of error as to the criteria of sectoral distribution and size: it meets the statistical conditions allowing our results to be extrapolated to the study population.

The investigation unit is the owner of family SMEs with more than one employee under its management, paid or unpaid. The sample was structured by respecting the proportions of each type of activity and the number of employees.

**Table 1:** Representativeness test

| Variable | Meaning | $\chi^2$valued | Degree of liberty |
|---|---|---|---|
| Activity area | 0,818 | 11,31 | 6 |
| Number of workers | 0,521 | 1,56 | 4 |

The framework of this study is family businesses in the city of Lubumbashi in the DRC. Are considered as family businesses, all those which find the following three characteristics: the control of the capital by the family, the active participation of the family in the management of the business, as well as the transmission or the will to transmit the business to the next generation (Comblet and Colot, 2006). An owner-manager is considered to be any individual who has the following characteristics: having created his own business or having inherited and managing it. This definition of the concept presupposes that the individual is an entrepreneur in the sense that he is the one who sets up a business, has an entrepreneurial spirit and actually manages that business. The frequency among respondents (sample) for the sector distribution is as follows:

**Table 2:** Sectoral distribution of the sample

| Activity area | Sample | |
|---|---|---|
| Agriculture | 20 | 5,13% |
| Industries | 28 | 7,26% |
| Constructions | 16 | 4,11% |
| Trade | 185 | 48,18% |
| Services | 90 | 23,47% |
| Arts and crafts | 45 | 11,85% |
| Total | 384 | |

As reflected in the theoretical model, the analysis has three stages. The first step is to check whether the aptitudes associated with managerial skills are found among the owners of the economic activities concerned by this study. This verification will be done using a two-dimensional scale. This Likert-type scale will be constructed from the items (or modalities) used to identify each aptitude. The construction of the scale relating to each aptitude is based on the taxonomy proposed by Deeks (1976). Points will be assigned to each dimension of the scale. The scores relating to each item will be added together to determine the score relating to each skill making it possible to determine the degree of possession of this skill.

The second step is to determine the impact of education or training on managerial skills. The scale constructed in the first part will be the dependent variable and education measured in terms of the number of years completed will be considered as the independent variable. To determine whether the influence of education depends on the type of education, the latter variable will be broken down into dummy variables indicating types of education.

Finally, the third step consists in examining the influence of other explanatory variables (individual characteristics and contextual variables) in the development of managerial skills. For this purpose, these variables will be added as control variables to those of the second step.

To verify the study hypothesis, the following statistical tests were used with the SPSS 2020 software:

- The Fisher test allowed us to verify the significance of the multiple regression model as a whole,
- The coefficient of determination or explanation R2 allowed us to measure the proportion of variance in the dependent variable which is explained by all the explanatory variables,
- The Student test was used to selectively verify the marginal contribution of each explanatory variable.

To verify the existence of the link between investment in human capital and managerial skills, we were inspired by the skill scales of Deeks (1976). These scales were put in relation with the levels of instruction attained. This relationship was then mediated by the control variables.

An internal validation was performed using the analysis of the internal consistency of the scales. This operation consisted of validating the questionnaire by describing, using statistical methods (arithmetic mean, standard deviation, etc.), the different scales in order to check their internal consistency. This analysis was carried out according to the following steps:

Production of correlation matrices for each of the scales

At this stage, the aim was to examine the relationship between the scales. If the items were correlated, one of them was dropped from the scale. This was also the case when there was a complete lack of correlation between the items. Correlation coefficients less than 0.3 are considered weak, those between 0.3 and 0.6 as medium, and coefficients greater than 0.6 as strong. In addition, we calculate the

correlation coefficients between each item and the total items on the scale to see if each item on a scale is correlated with all of the other items on the scale. The goal of this operation was to eliminate the items which would not be correlated with the total of the items. One of the limits of this approach is that, since the item for which we calculate the correlation with the total is part of this total, it will therefore necessarily correlate with the latter. To correct this anomaly, we proceeded by calculating an adjusted coefficient which cancels out the autocorrelation (item-total without the item). It is this approach that we used to calculate the correlations in each of the scales used.

In order to assess the representativeness of the arithmetic mean of each of the scales used, we measured the homogeneity of each item.

This homogeneity is measured from the coefficient of variation[4] C.V. = δ / X where is the arithmetic mean and δ the standard deviation of the scores of the scale considered.

To measure the reliability of each of the scales, we used Cronbach's Alpha coefficient; this operation aims to verify the degree of correlation between all the items on the scale and is measured by the expression:

$$\alpha = \frac{K}{K-1}\left[1-\frac{\sum S_i^2}{S_T^2}\right]$$

Where α is Cronbach's alpha coefficient, K is the number of items on the scale, S2i is the variance of the nth item, and S2T is the variance of the scale[5]. In this study, Cronbach's Alpha coefficient is 0.78; which means that the scale made up of the items is reliable.

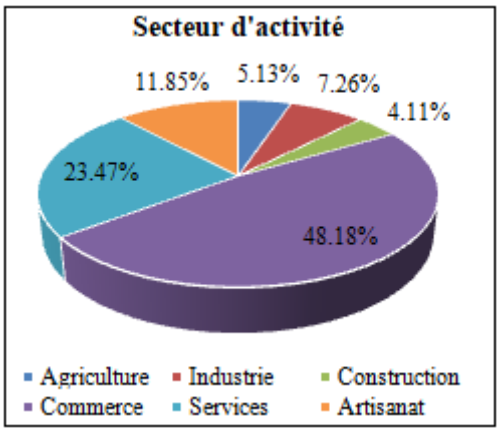
The internal validation of the questionnaire allowed us to observe, with regard to internal consistency, that the average of each of the three scales that were used to construct the scales of managerial talent is representative and that the three scales are reliable. Consequently, the degree of possession of the characteristics associated with each of the aptitudes was assessed using its scale.

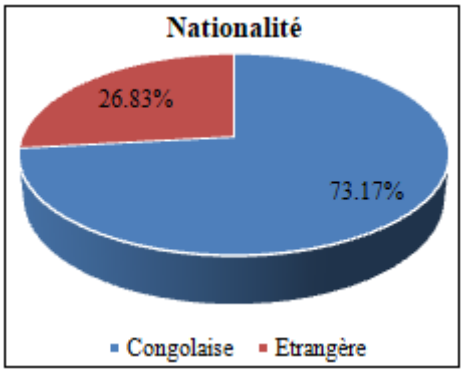
## 3. Study Results

**Descriptive results**

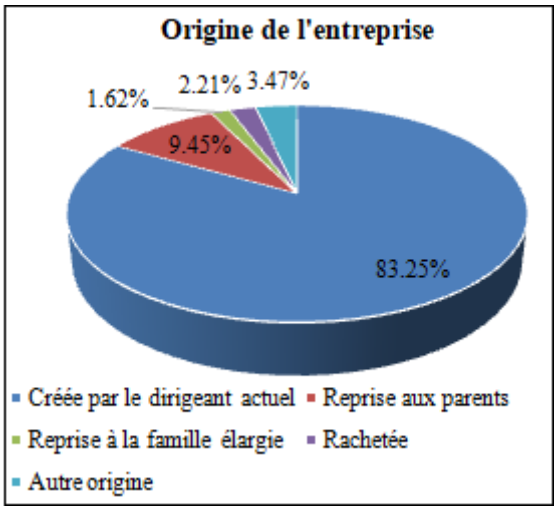
We first looked at the characteristics of the sample that can be extrapolated to the population. The results show that the average age of family SMEs in Lubumbashi is 18 and a half.

We can imagine that a small proportion of families SMEs are affected by the problem of family transmission.



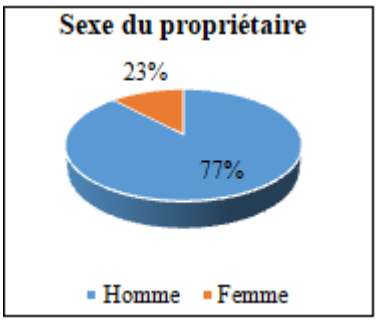




If 48.18% of family SMEs in Lubumbashi are in commerce followed by 23.47% in service; 11.85% are in crafts, 7.26% in industry, 5.13% in agriculture and 4.11% in construction; on the other hand, they are 26.83% occupied by foreigners of Indo-Pakistani, Chinese and other nationality against 73.17% of the Congolese! The average age of managers is 38 and the overwhelming majority is owners (82%).




[4] According to Baillargeon, "This coefficient of variation gives a very good idea of the degree of homogeneity of a distribution. The lower this coefficient, the more homogeneous the series of observations. A coefficient of variation of less than 15% seems to be, in many cases. of cases, an indicator of good homogeneity in the distribution of observations. "

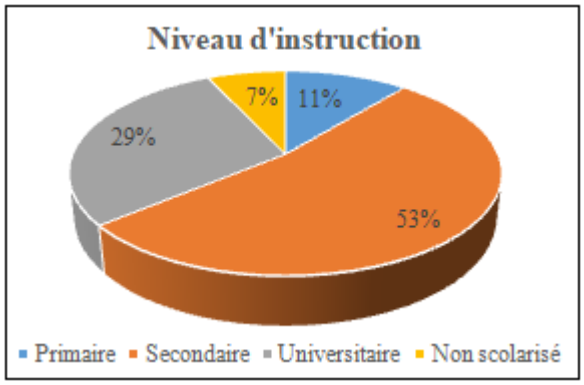
[5] According to Anastasi, a scale made up of at least 28 to 30 items is reliable when it has a Cronbach's alpha value of around 0.70. The same author points out that reliability increases with the number of items on the scale, but that the scale may vary depending on the research area. In the social sciences, lnkeles and Smith believe that a scale of at least 28 items with an alpha equal to 0.75 indicates certain reliability.




The breakdown according to the origin of the business indicates that 83.25% of family SMEs were created by the current manager while 9.45% were taken from parents; 1.62% taken over from an extended family, 2.21% bought back and 3.47% from other origins. Women are under-represented in the management of family SMEs in Lubumbashi; 23% of women own these SMEs compared to 77% of men!

In terms of the control mechanism; 61.52% of family SMEs do not have regular day-to-day accounts and 83.1% do not have a manual of accounting and administrative procedures.

As for the mode of governance, our survey shows that 87.16% of family SMEs has no board of directors. And for those with a board of directors, the members come from the family; in the sense that the leaders oppose the appointment of outside directors because they are with their families rooted.




The survey shows that 53% of owners of family SMEs in Lubumbashi have a secondary education level, 29% claim to have gone to university and 11% primary level. We also find 7% of out-of-school bosses in our survey.

**Statistical results and verification of the hypothesis**

The first step in verifying the existence of the relationship predicted by the hypothesis was the analysis of the frequency tables. This analysis allowed us to observe that the owners of family SMEs in Lubumbashi have, in a large majority, a low degree of possession of the various aptitudes compared to their scale. The structure of the data showed that with regard to the level of education in entrepreneurship is relatively low.

As for individual and contextual characteristics, the analysis showed that the owners are young and that the level of education in entrepreneurship is proportional to the size of the company, that it is proportional to the level of education of parents, guardian and the boss from whom the owner learned his trade, but that it is inversely proportional to age and years of experience.

We then performed a correlation analysis of all variables in the study in order to avoid strongly correlated variables from being included in the regression model we used for the analysis. This analysis was carried out in three stages. First, we associated the independent variable (investment in human capital measured by the level of education) with each of the dependent variables (entrepreneurial, administrative and managerial skills).

Second, we examined the behavior of the relationship established in the first step, when educational control variables are introduced. This enabled us to verify whether the relationships observed in the first stage persisted, strengthened, weakened or disappeared. In a last step, we verified the nature of these relationships in the case where all the explanatory variables were associated with each of the explained variables.

The following results were obtained:

**Table 3:** Relationship between the different aptitudes and the level of education

| | **Entrepreneurial skills** | | | | **Administrative skills** | | | | **Managerialskills** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Variables** | val | $T/H_0$ | P>\|T\| | Erreur | val | $T/H_0$ | P>\|T\| | Erreur | val | $T/H_0$ | P>\|T\| | Erreur |
| **Primary** | 0.020 | 0.07 | 0.944 | 0.288 | 0.797 | 2.49 | 0.013 | 0.320 | -0.654 | -1.52 | 0.128 | 0.429 |
| **Secondary** | 0.745 | 2.80 | 0.005 | 0.265 | 1.819 | 6.16 | 0.000 | 0.295 | 0.235 | 0.60 | 0.551 | 0.395 |
| **Universitary** | 0.750 | 2.16 | 0.031 | 0.346 | 2.970 | 7.72 | 0.000 | 0.385 | -0.509 | -0.99 | 0.324 | 0.516 |
| **Unschooled** | 0.667 | 2.11 | 0.178 | 0.387 | 2.461 | 5.14 | 0.000 | 0.318 | 0.1997 | 0.36 | 0.468 | 0.451 |
| | $R^2$ = 0.073<br>F = 7.37<br>C.V. = 9.540<br>Pr = 0.0001<br>Medium = 12.98 | | | | $R^2$ = 0.235<br>F = 28.89<br>C.V. = 11.199<br>Pr = 0.0001<br>Medium = 12.27 | | | | $R^2$ = 0.044<br>F = 4.36<br>C.V. = 8.702<br>Pr = 0.0051<br>Medium = 21.16 | | | |

When we used the level of education as the only explanatory variable, this variable appeared to be a good predictor of the degree of possession of entrepreneurial and administrative skills, but not for managerial skills (Table 3).

**Table 4:** Relationship between different aptitudes and educational variables

| | Entrepreneurial skills | | | | Administrative skills | | | | Managerialskills | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Variables | val | $T/H_0$ | P>\|T\| | Erreur | val | $T/H_0$ | P>\|T\| | Erreur | val | $T/H_0$ | P>\|T\| | Erreur |
| Primary | -0.00 | -0.01 | 0.99 | 0.55 | 0.42 | 0.69 | 0.48 | 0.61 | -1.15 | -1.43 | 1.05 | 0.81 |
| Secondary | 0.39 | 0.69 | 0.49 | 0.57 | 1.39 | 2.17 | 0.03 | 0.64 | -0.85 | -1.02 | 0.31 | 0.83 |
| Universitary | 0.30 | 0.48 | 0.63 | 0.63 | 2.22 | 3.17 | 0.00 | 0.70 | -1.79 | -1.95 | 0.05 | 0.92 |
| Unschooled | 0.32 | 0.52 | 0.55 | 0.21 | -0.35 | -0.58 | 0.56 | 0.61 | -1.13 | -0.17 | 0.86 | 0.80 |
| Specialized training | -0.46 | -1.81 | 0.04 | 0.19 | -1.47 | -2.33 | 0.14 | 0.23 | -0.24 | -0.85 | 0.39 | 0.31 |
| Experience | -0.52 | -2.29 | 0.29 | 0.26 | -0.33 | -1.47 | 0.25 | 0.29 | -0.60 | -1.80 | 0.07 | 0.33 |
| | $R^2 = 0.111$<br>F =3.82<br>C.V. = 9.44<br>Pr = 0.0001<br>Medium = 12.98 | | | | $R^2 = 0.262$<br>F = 10.90<br>C.V. = 11.11<br>Pr = 0.0001<br>Medium = 12.27 | | | | $R^2 = 0.119$<br>F = 4.15<br>C.V. = 8.44<br>Pr = 0.0001<br>Medium = 21.16 | | | |

When we introduced the educational controls, level of education continued to be a good predictor for administrative skills, and became so for managerial skills; but the influence has completely disappeared for entrepreneurial skills. In all cases, technical and vocational education and years of experience have been shown to be significant (Table 4).

**Table 5:** Relationship between the different skills and all the explanatory variables

| | Entrepreneurial skills | | | | Administrative skills | | | | Managerial skills | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Variables | val | $T/H_0$ | P>\|T\| | Erreur | val | $T/H_0$ | P>\|T\| | Erreur | val | $T/H_0$ | P>\|T\| | Erreur |
| Primary | -0.18 | -0.34 | 0.73 | 0.53 | 0.14 | 0.88 | 0.38 | 0.62 | -1.36 | -1.74 | 0.08 | 0.78 |
| Secondary | 0.12 | 0.23 | 0.81 | 0.55 | 0.30 | 2.04 | 0.04 | 0.63 | -0.86 | -1.07 | 2.28 | 0.80 |
| Universitary | -0.23 | -0.38 | 0.46 | 0.62 | 1.98 | 2.77 | 0.00 | 0.71 | -0.18 | -2.26 | 0.02 | 0.90 |
| Unschooled | -0.15 | 0.24 | 0.81 | 0.53 | -0.31 | -0.62 | 0.53 | 0.25 | -1.16 | -0.24 | 0.80 | 0.77 |
| Specialized training. | -0.27 | -0.70 | 0.48 | 0.21 | -1.15 | -2.04 | 0.04 | 0.24 | -0.34 | -1.12 | 0.00 | 0.32 |
| Experience | -0.11 | -0.24 | 0.69 | 0.23 | -0.25 | -0.74 | 0.42 | 0.22 | -0.26 | -1.13 | 0.26 | 0.30 |
| Sex | -0.08 | -0.98 | 0.32 | 0.22 | -0.32 | 0.36 | 0.72 | 0.26 | -0.60 | -0.01 | 0.00 | 0.41 |
| Cut | 0.03 | -0.60 | 0.54 | 0.28 | -0.27 | -0.72 | 1.10 | 0.30 | -0.88 | -0.95 | 0.26 | 0.28 |
| Parent situation | -0.33 | -1.51 | 0.13 | 0.19 | -0.15 | -1.10 | 0.27 | 0.22 | -0.47 | -2.28 | 0.34 | 0.33 |
| Ens. Tech. pro | -0.45 | -1.70 | 0.08 | 0.26 | -0.83 | -0.69 | 0.49 | 0.23 | 0.00 | -1.62 | 0.02 | 1.40 |
| | $R^2 = 0.288$<br>F = 3.19<br>C.V. = 8.85<br>Pr = 0.0001<br>Medium = 12.98 | | | | $R^2 = 0.357$<br>F = 4.53<br>C.V. = 10.82<br>Pr = 0.0001<br>Medium = 12.27 | | | | $R^2 = 0.285$<br>F = 3.26<br>C.V. = 7.92<br>Pr = 0.0001<br>Medium = 21.16 | | | |

When we used all the explanatory variables (Table 5), educational level was not found to be a significant predictor for entrepreneurial skills; only the control variables appeared to be important. With regard to administrative skills, the level of education proved to be the best predictor, followed by technical and vocational education and the situation of parents. For managerial skills, education was the best predictor, followed by technical and vocational education, years of experience, and socio-economic factors of parents.

It should be noted, however, that in all three cases the models are significant. For entrepreneurial skills, the explanatory power is 7% when the level of education is the only explanatory variable. This percentage rose to 11% when the other educational variables were added, and rose to 28% when all the explanatory variables were introduced. For administrative skills, the explanatory powers are 23%, 26% and 35%. For managerial skills, they are 4%, 11%, and 28%.

## 4. Discussion of results

Regarding the low level of skill possession, the results suggest, based on the theory of entrepreneurship, that the respondent owners would be entrepreneurs whose ambition is limited to subsistence activities and with little management skills. Another possible explanation for the low level of skill possession could be cultural factors. It is possible that the characteristics measuring these skills in the Congolese context are different or defined differently from those obtained by Deeks (1976) in the context in which these characteristics were developed.

Regarding the weak influence of the level of education and training on the different aptitudes, it can be explained more specifically at the level of each of the aptitudes. For entrepreneurial and managerial skills, they are not influenced by education because they are mainly inherited from the social environment. The statistical significance of the original socio-economic factors would tend to support the thesis that these types of skills are inherited.

As for the influence of technical and vocational education, we do not know whether it is because this type of training contains elements relating to these kinds of skills or if it is only an indicator that these programs are frequented by individuals predisposed to entrepreneurship.

Administrative skills are influenced by education; Even if these skills are not learned in a specific way in the Congolese school system, it is nevertheless true that the various school subjects contain the elements. The influence of technical and vocational education could well be due to

school curricula because this type of education often has a content directly or indirectly affecting administrative management.

With regard to the behavior of the control variables, their relatively important influence is explained by the fact that technical and vocational training and the original socio-economic level are the most determining variables in the degree of possession of these different aptitudes.

## 5. Conclusion

First of all, by confirming the fact that investment in human capital is not the most important factor in the acquisition of entrepreneurial and managerial skills, our study contributes to improving our knowledge on the relationship between training and the development of these skills. This suggests that theoretical models of the relationship between the training and development of these skills should include other variables such as social and contextual order as independent variables.

On the other hand, by indicating that training could be a source of acquisition of administrative skills, our study suggests that this variable should be maintained in the theoretical model for explaining the sources of acquisition or improvement of these skills. Our study therefore indicates that the nomenclature of characteristics should be reviewed: the three aptitudes associated with managerial competence should not be placed on the same scale because they are from different sources.

Secondly, our study contributes to knowledge on the methodological level. Even if the family SME sector constitutes the "real" formal and informal economy in developing countries, since it encompasses all endogenous activities, it is little known. Any such study sheds light on the functioning of this sector, as well as on the methodologies to better undertake such studies. Our study suggests that the family SME sector should not be narrowly defined or studied in isolation; therefore, the samples studied should include operators in the formal and informal sector.

Finally, let us recall that the general objective underlying this study was to describe the entrepreneurial skills resulting from the various basic or continuing training that the owners of family SMEs should have for an effective and efficient management of their business. The low level of skill possession, as well as the fact that we used a narrowly defined sample reduce the scope of our conclusions regarding the influence of training on these skills. On the other hand, some of the significant influencing control variables, such as parental status, cannot easily be addressed in terms of policy. All that can be said is that policies relating to interventions in entrepreneurship training must take into account the fact that young Congolese today will influence the situation of their children in the future.

Despite these limitations, the results still suggest some directions for action. Firstly, since the results of the study confirm the fact that some owners of family SMEs leave the school system without managerial skills, the first step of a strategy focused on the development of entrepreneurial skills should, above all, focus on raising the general level of education which should emphasize entrepreneurship at all levels; this should start with improving the performance of the school and academic system, so that more young people reach a level of basic knowledge of entrepreneurship sufficient to function effectively in their economic environment.

A second orientation is the strengthening of technical and professional concepts provided in school and academic programs in entrepreneurship. It may simply be to ensure that the learning process within the school and university system has practical elements of entrepreneurship. It emerges from this study that the hypothesis according to which basic and continuing training is the main source of the development of skills associated with entrepreneurial competence is only partially confirmed.

As for unschooled bosses, the study shows that if they lack administrative skills (accounting, business management or human resources management); rather, they have entrepreneurial and managerial skills sometimes more than those with any level of education. They said there should be a capacity building program focused on administrative skills.

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