

Determinants of SME Innovation in Togo

Kodjo KEGLO (valerekeglo@gmail.com), Doctoral student and

Faculty of Economics and Management (FASEG), Department of Management Sciences, University of Lome, Togo

Edoh KOTOKLO (edoh003@gmail.com), Faculty of Economics and Management (FASEG),

Department of Economics, University of Lome, Togo



Copyright: © 2023 by the authors. Licensee [The RCSAS \(ISSN: 2583-1380\)](http://www.thercsas.com). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution Non-Commercial 4.0 International License. (<https://creativecommons.org/licenses/by-nc/4.0/>). **Crossref/DOI:** <https://doi.org/10.55454/rcsas.3.02.2023.002>

Abstract: *The objective of this paper is to analyse the determinants of innovation in SMEs in Togo in order to identify this process and to contribute to a better definition of innovation policies. To do this, we used the Logit model on the variables of the study, based on survey data collected on 30 SMEs representing 60% of the sample. The results of this work reveal that the main determinant of innovation in Togolese SMEs is cooperation in innovation at the threshold of 1%, 5% and 5% for the forms of innovation (process, product and commercial). These results make it possible to identify a certain number of implications in terms of innovation policies both at the level of SMEs and public authorities.*

Keywords: Innovation, SME, Togo

1. Introduction

Small and medium-sized enterprises (SMEs) are formal production units that can be located in a permanent place, have relatively low employment potential and financial size, and form the core of the entrepreneurial fabric of most economies (Fjose, Grunfeld and Green, 2010). They account for over 90% of enterprises and employ approximately 60% of workers, many of whom are women and young people (Fjose, Grunfeld and Green, 2010). It should be emphasized that SMEs have enormous potential to create jobs, stimulate entrepreneurship and create an industrial fabric that is capable of adapting to the needs of large companies in their countries. It is also recognized that they could contribute more to the economic growth of the country if they could find better conditions for their development. Numerous studies affirm that difficulties in accessing finance are the main obstacle to the development of SMEs in Sub-Saharan Africa, far ahead of problems of corruption, deficient infrastructure or excessive taxation (Aryeetey, 1998; IMF, 2004; World Bank, 2006).

Seddoh (1989) notes three elements that characterize the SME in Togo: an absence of organization and integration, an absence or insufficiency of specialization, and a weakness of financial, technical and human resources. According to the latest General Census of Enterprises (RGE) of 20 June 2021 by the National Institute of Togo in charge of statistics (INSEED), the number of enterprises currently operating is 115,880; 85.5% of which are in the informal sector, and only about 14% in the formal. SMEs, like the private sector in general, are expected to play a decisive role in the implementation of the National Development Plan (NDP) and the government's 2020-2025 roadmaps, which aim to structurally transform the Togolese economy for strong, sustainable and inclusive growth, creating decent jobs and improving social welfare. In view of their size, they are increasingly the subject of scientific and governmental concerns in order to promote their development and improve their contribution to economic growth.

One of the axes for driving their growth is innovation (Edwards et al, 2005). The OECD (2005) defines innovation as "the process that leads from the idea of a new product or process to its successful commercialization". It distinguishes four categories of innovation: (i) product innovation which concerns the design of a material good, equipment, instrumentation, supplies, products or a service, which is new or technologically improved; (ii) process innovation which relates to the processes of production or distribution of the good or service; (iii) organizational innovation, which refers to organizational changes in the production of goods or services, as well as innovative behaviour; and finally (iv) market innovation, which concerns the penetration of new markets as well as changes in the relations that the enterprise has with its environment (suppliers, competitors, etc.). Whatever its form, economists generally agree that innovation is one of the means of being more efficient and acquiring a competitive advantage by responding to the needs of the market and the company's strategy. Moreover, with the globalization of trade leading to increasingly ruthless competition with low-cost production, SMEs need to focus on innovation-intensive activities in order to maintain their market share and remain competitive. Moreover, the shortening of the

product life cycle forces them to constantly redefine their strategies, leading to the need for permanent adaptability. This is precisely one of the characteristics of SMEs (Torres, 1999). In view of the above, it is important to know whether SMEs in Togo have succeeded in offering new or significantly improved products or manufacturing processes to their customers. This question leads us to reflect on the determinants of innovation in SMEs in general and specifically in Togo.

Works around the world (Rey, 2014; Loïc Belze and Olivier Gauthier, 2000; Léopold Djoutsou Wamba, Laurence Nkakene Molou, Lubica Hikkerova, 2017) affirm that innovation is an important source of growth for SMEs, but there is a lack of publications on innovation practices within SMEs and their determinants in Sub-Saharan Africa, particularly in Togo. This paper attempts to fill this gap by identifying the factors that explain SME innovation in Togo.

This article is structured in three (3) sections. The first one proposes a brief review of the theoretical and empirical literature on innovation in SMEs (section 1), the second one exposes the data and the methodology used (section 2), the third one exposes and analyses the statistical and econometric results of the model as well as their discussions (section 3), then a conclusion followed by suggestions for recommendations.

2. State of Literature on Innovation in SMEs

This section discusses the theoretical elements and empirical work on innovation in SMEs.

2.1. Elements of theoretical analysis

From the writings of Schumpeter (1942) to recent developments in the knowledge economy, including work emphasizing the collective nature of the innovation process and extending the notion of innovation networks, numerous concepts and models have been created to better understand the reality of innovation. Innovation brings together different actors in different forms of organization, supported by public policies. Among these actors, we are primarily interested in the company, which is a fundamental place where changes lead to the creation of new products, new processes and new markets (Cohendet P., 2003). The firm has two main functions in the innovation process: creation and allocation of resources. While different economic theories of the firm tend to agree on the second function, they differ in their interpretation of the resource creation function (Cohendet P., Gaffard J., 1990; Cohendet P. and Gaffard J., 1990; Cohendet P., 2003). According to traditional approaches (neoclassical approaches: agency theory, transaction cost theory), the creation of technologies takes place outside the economic sphere, and the innovation carried out in companies is nothing more than a process by which these technologies are then accepted and diffused. Evolutionary theorists, on the other hand, consider that the creation of technology is inseparable from the economic process of innovation. The constitution of resources then takes place exclusively in the economic sphere, and society plays a major role in the analysis of technological change. Technology is the result of innovation resulting from the learning processes implemented in companies. The search for and choice of technologies are determined by the routines of firms (what firms have learned), following a specific technological trajectory (path). Unlike neoclassical theory, it does not aim to study the reality of the firm, because the theory of the firm is the central object of analysis (Penrose E., 1959; Richardson G., 1972; Nelson R. and Winter S., 1982; Dosi G., 1988). Since our objective is to understand the reality of the innovation process observed in firms (with a focus on small and medium-sized firms), the cognitivist approaches of the theory of the firm seem to us to be more relevant, in particular the theory of evolution crossed with the concepts of the theory of competences.

2.2. Elements of empirical analysis

In recent years, the economic literature on the performance of innovation systems (Oslo Manual, 1992; 2005; Frascati Manual, 1994; 2002) has been enriched by recent studies characterizing the innovative capacity of actors in the innovation system (Zabala J. et al., 2007; OECD, 2009; Nordic Innovation Monitor, 2009). Nevertheless, much work remains to be done to understand the complexity of the innovation process at different levels: micro, local, regional, sectoral, national or supranational (Katz J., 2005). In particular, with regard to SME innovation, studies show the inconclusive nature of the results (Tether B., 1998; Massa S. and Tessa S., 2008).

In the analysis of the innovation process and the innovation system, three dimensions can be identified: i) the factors determining innovation, ii) the inputs and outputs and, iii) the impact of innovation (OECD, 2009).

This study falls within the first dimension of research and focuses on the factors determining innovation in SMEs in Togo. The analysis is part of this vast literature, trying to shed light on the internal factors, specific to the enterprise, and external factors specific to its environment, acting on the capacity for innovation and cooperation for innovation of SMEs.

Regarding the question of firm size, if Galbraith (1952), Soete (1979), Pavitt et al (1987), Pierre Blanchard, Jean-Pierre Huiban and Antonio Musolesi, (2011), Léopold Djoutsa Wamba, Laurence Nkakene Molou, Lubica Hikkerova (2017) have, following Schumpeter (1942), shown that large size is synonymous with innovation because of the resources available to it, for Symeonidis (1996), the hypothesis of a positive relationship between size and innovation has not always been confirmed by subsequent studies. Thus, Kamien and Schwartz (1982), Dasgupta and Stiglitz (1980), have shown that the small firm seems to be more innovative because of the existence of increasing bureaucratic costs in large firms. Furthermore, Astebro (2006) argues that small size can favor agility, a greater capacity for innovation due to the fact that it reduces the costs of replacing old technologies and promotes radical innovations. SMEs would therefore be more open to innovations to the point of challenging certain monopolies.

Innovation has long been seen as the key to the survival, growth and development of informal small and medium enterprises in general and of tailoring and carpentry workshops in particular (Veant Kalimu Lukundji et al., 2020). For this author, his objective is to gather and study the different determinants that can explain product innovation in the fitting and carpentry workshops in Bukavu in the Democratic Republic of Congo. The choice was made to focus on fitting and carpentry workshops because they are the most capable of innovating in order to meet growth and development objectives as well as competitiveness. To achieve our objective, 95 fitting and joinery workshops constituted the study sample. Logistic regression was used to analyse the data. The results of this analysis, obtained using Eviews 3.1 software, show that product innovation is positively influenced by company size and competitive pressure from external and internal markets at the 1% significance level.

The work of authors such as Léonard Nkouka Safoulanitou, Christian Zamo-Akono, Xavier Bitemo Ndiwulu (2013) aims to identify the determinants of innovation in SMEs in Brazzaville (Congo), Douala (Cameroon), and Kinshasa (DRC). It is based on a joint survey of 256 SMEs in the cities concerned, i.e. 100 SMEs in Brazzaville, 56 in Douala and 100 in Kinshasa. The econometric analysis showed that the main determinants of SME innovation are the size of the firm and the use of ICT. The latter has a greater influence on organizational innovation. The role of the size of the SME is however weak in Cameroon probably because of the weakness of financial constraints in this country compared to the other two.

The adoption of organizational innovation in enterprises requires the study of the determining factors of this type of innovation, in order to know the impact of these determinants on the competitiveness and on the global performance of SMEs and to study the relations between them. To do this, according to Said BALHADJ & Maryam EL MOUDDEN, the main objective of the article is to contextualize the theoretical results, to eliminate non-significant variables, and to specify and formulate the research problem through an "exploratory qualitative study". The latter is based on 11 semi-structured interviews with the managers of exporting SMEs in the Larache region of Morocco, which will be processed by the New Nvivo software. The results of his study reveal the effect of a moderating variable which is the size of the firm on the relationship between competitive advantage and organizational performance (Said BALHADJ & Maryam EL MOUDDEN, 2022).

Among the factors that affect the innovative capacity of SMEs, the small size of these companies is an important drawback. Hausman A. (2005) points out that SMEs have limited resources: insufficiently qualified or trained personnel (Romano C., 1990), insufficient knowledge to engage in internal research and development (R&D) activities, lack of information on technologies and markets, etc. These internal factors have a double impact on the innovation capacity of SMEs. These internal factors have a double impact on innovation: on the one hand, they slow down the innovative capacity of companies and on the other hand, they represent an incentive to engage in cooperation agreements.

Louis Raymond (2017) in his work on "R&D as a determinant of innovation in SMEs: an attempt at empirical clarification" shows that, apart from the size of the firm, the determinant of innovation that has received the most attention from researchers is research and development (R&D). Although the link between

R&D activities and innovation in SMEs has been extensively researched, it still requires further clarification and investigation. The objective of their research is to clarify and better understand the impact of R&D on innovation in SMEs by conceptually and operationally distinguishing product R&D from process R&D, process R&D from process innovation and process innovation from product innovation, taking into account the industrial sector and integrating these concepts into a research model that specifies their interrelationships. The model used in their work is empirically tested using data from 205 manufacturing SMEs. The results confirm that process innovation is a mediating factor in the impact of R&D on product innovation.

Among the traditional determinants highlighted in the extensive theoretical and empirical literature, firm size and R&D intensity also appear to be significant indicators in some developing countries (Ayyagari et al., 2007; Pamukcu, 2003; Almeida and Fernandes, 2008 and Yuriy et al., 2010; El Elj, 2012; Rahmouni et al. 2010). Indeed, large firms with economies of scale and a more favorable market position have easier access to financial resources to conduct costly R&D activities. They also have a higher profile and more experience, enabling them to cooperate both with research centres and with foreign organizations and companies. Furthermore, large companies have more means to buy or exploit patented innovations in return for royalties. Licensing is an important source for the acquisition of new technologies, particularly in developing countries (Almeida and Fernandes, 2008), although restrictions in licensing contracts in some cases hinder technology transfer (Pamukcu, 2003; Koouba et al., 2010).

LE BAS (2018) focuses his work on the factors that determine firms to construct technological innovation behaviour. He contributes to the literature on the determinants of innovation in several ways. First, he assumes that African economies are very diverse and that consequently the complex interplay of drivers on innovation behaviour needs to be appreciated according to the type of economy. He distinguishes several categories of African economies and we focus our research on middle-income African economies. The chosen economy is Cameroon. Second, he takes innovation behaviour in its diversity (product/process; simple/complex). Thirdly, it used the database produced by the World Bank for the year 2016. The econometric estimates tend to show that R&D expenditure does not explain the decision to innovate.

The work of Ibra MBAYE (2016) aims to understand the factors that determine innovation in Senegalese SMEs. To do so, he constructs logistic regressions from survey data on social norms, managerial capabilities, information and communication technologies (ICT) and firm performance in French-speaking sub-Saharan Africa: the cases of Cameroon, Côte d'Ivoire and Senegal. The results of his work reveal that the main determinant of innovation in SMEs in Senegal is innovation cooperation, which positively influences the probability of innovating in the SME. As for the investment in research and development, it increases the propensity of the SME to proceed to product innovation.

This paper contributes to enrich this literature by broadening the spectrum of analysis.

3. Data and Methodology

This section specifies the data used the definition of the variables and the methodology.

3.1. Data and definition of study variables

This study used the survey research method. Two areas (Lomé and outside Lomé) were purposely chosen for the study because of the high concentration of SMEs in these regions of Togo and according to the sector of activity (Agriculture, Industry and Service). The data for the study were obtained from a survey of Small and Medium Enterprises which are characterized by the number of staff employed, registered with the Business Formalities Centres, and engaged in manufacturing, trade and distribution, services and agro-food activities. Taking into account time, the geographical location of the SMEs, the availability of managers and the content of the study, a population of 50 SMEs was identified using a simple random sampling technique. Of these, only 30 SMEs representing 60% agreed to participate in the study. The data for the study were collected using a questionnaire and a face-to-face interview with the SME managers. The variables selected in this study are derived from the empirical review above. There are seven (7) variables including the variable of interest:

Innovation: as it is not directly observable, the *Innovi* variable is a dichotomous variable which takes the value 1 if the SME has introduced an innovation on the market and 0 if not.

Size: it represents the number of employees of the firm or the turnover achieved. Astebro (2006) argues that small size can favor a greater capacity for innovation because it reduces the costs of replacing old technologies and promotes radical innovations;

Location: specifies the geographical position of the company to carry out its activities fully and without constraints;

Sector of activity: stipulates the 3 sectors of activity in which most companies operate, namely, agriculture, industry and service;

Research and development: represents the research and development of new processes in order to be innovative. Large companies with economies of scale and a more favorable market position have easier access to financial resources to carry out costly R&D activities.

ICT: the use of information and communication technology to search for business opportunities and the readiness of the SME to cooperate in order to innovate.

Cooperation: cooperation between the SME and other partners is essential in the innovation process. According to Anderson and Lundvall (1988), the degree of interaction with suppliers of inputs and equipment is decisive in the adoption of innovation:

$$I_i^* = \gamma Z_i + \epsilon_i;$$

With Z_i = the vector of explanatory variables, γ the vector of parameters to be estimated and ϵ the error term of law $N(0,1)$.

If $I_i^* > 0$, then the SME has innovated, i.e. it has completed its innovation activity. We note I the observed variable indicating if the SME has innovated. More precisely, I is 1 if the SME has introduced a product, process, organisational and/or commercial innovation on the market.

$$\text{Or: } \begin{cases} I = 1 \text{ si } I_i^* > 0, \\ I = 0 \text{ si } I_i^* < 0, \end{cases}$$

The probability that SME i has innovated is: $P(I_i = 1) = P(I_i^* > 0) = P(\epsilon_i > -\gamma Z_i) = \varphi(\gamma Z_i)$, with φ which is the distribution function of the normal distribution.

This probability can be estimated by a Logit model which allows us to evaluate the weight of the different determinants contained in Z . This theoretical model is then used each time according to the forms of innovation.

Thus, the implementation of a form of innovation is as follows:

$$\text{Innov}_i = \beta_0 + \beta_1 \text{Size} + \beta_2 \text{Location} + \beta_3 \text{ICT}_i + \beta_4 \text{Sector} + \beta_5 \text{Cooperation} + \beta_6 \text{R\&D} + \epsilon_i$$

The main results of these surveys are presented below.

4. Results and Discussion

This section analyses on the one hand the descriptive statistics and on the other hand the results of the econometric estimations followed by a discussion.

4.1. Descriptive statistics

The aim is to present the distribution of SMEs by sector of activity and by type of innovation on the one hand, and the factors that can slow down innovation activities on the other.

4.1.1. Distribution of SMEs by sector of activity

A sector groups together manufacturing, trade or service enterprises that have the same main activity. Table 1 shows the distribution of all SMEs by sector of activity. It highlights the high concentration of SMEs in the primary (agriculture) and tertiary (services) sectors, each representing 40% of the sample, as well as in the industrial sector with a proportion of 20%.

Table 1: Distribution of SMEs by sector of activity

Business sector	Workforce	Frequency	Cumulative frequency
Agriculture	12	40	40
Industry	6	20	60
Service	12	40	100
Total	30	100	

Source: Author from survey data, 2022

4.1.2. Breakdown of SME innovation types

Innovation refers to the introduction on the market of a new or significantly improved product or process compared to those previously developed by the legal unit. Table 2 shows the innovative and non-innovative SMEs according to the form of innovation developed. In fact, although SMEs are more present in process innovation, product innovation and commercial innovation at 73.33%, 63.33% and 66.67% respectively, the fact remains that a significant proportion of them also proceed by organizational innovation at 40%. This indicates, in part, the importance of innovation in the process of organization and development of SMEs in Togo.

6

Table 2 : Breakdown of SMEs by type of innovation

	Workforce	Frequency	Cumulative frequency
Process innovation			
Innovative SME	22	73,33	73,33
Non-innovative SMEs	8	26,67	100
Product innovation			
Innovative SME	19	63,33	63,33
Non-innovative SMEs	11	36,67	100
Business innovation			
Innovative SME	20	66,67	66,67
Non-innovative SMEs	10	33,33	100
Organisational innovation			
Innovative SME	12	40	40
Non-innovative SMEs	18	60	100

Source: Author from survey data, 2022

Table 3 summarizes the statistics on innovative SMEs. It describes the explanatory variables retained in the model and indicates that the propensity to innovate of SMEs depends, among other things, on the location, R&D, the use of ICT and innovation cooperation.

Table 3: Summary of statistics

Proportion that introduced the innovation		Process Innovation	Product Innovation	Business Innovation	Organizational innovation
Business sector	Agriculture	66,67	66,67	66,67	33,33
	Industry	50,00	66,67	66,67	33,33
	Service	91,67	58,33	66,67	50,00
Size	SE	72,73	72,73	90,91	54,55
	ME	73,68	57,89	52,63	31,58
R&D		78,57	71,43	78,57	5,71
Geographic location	Lome	76,92	84,62	69,23	38,46
	Outside Lome	70,59	47,06	64,71	41,18
Innovation cooperation		77,27	77,27	77,27	36,36
Use of ICT		68,75	62,5	62,5	31,25

Source: Author from survey data, 2022

4.1.3. Factors hindering innovation activities

Among the factors likely to slow down innovation projects or activities, four main obstacles to innovation in SMEs emerge (Table 4). First and foremost, the absence of a system for financing innovation most often dissuades entrepreneurs from engaging in innovation activities. 16.67% of SMEs consider the lack of internal financial resources, as opposed to external resources, as the main obstacle to innovation. Internal financing is therefore the preferred means by which SMEs prefer to innovate. Other obstacles are the high costs of training staff in innovation, which are considered too high, and the difficulties in finding cooperation partners. The same applies to the lack of state support as an external factor.

Table 4: Factors hindering innovation activities

	Workforce	Proportion
Lack of funding for innovations	8	26,67
Too high cost of financing innovations	3	10,00
Lack of financial means	5	16,67
Market does not require new products	0	0,00
High cost of training staff in innovations	5	16,67
Lack of government support	4	13,33
Lack of process innovation solutions	3	10,00
Rigidity of management to innovations	2	6,67
Total	30	100,0

Source: Author from survey data, 2022

4.2. Results of the econometric estimations and discussion

Table 5 presents the results of the econometric estimation of the logistic regression for the four forms of innovation retained in this paper. Considering the Fisher statistic, we observe that the model is globally significant at the 1% level.

Table 5: Estimation results

Variables	Process Innov.	Product Innov.	Business Innov.	Organizational Innov.
R&D	.800 (1.068)	.185** (1.250)	2.024** (1.318)	-.428 (.973)
Size	-.692** (1.044)	-1.016** (1.305)	2.731* (1.498)	1.478 (.985)
Local	.161** (1.061)	3.815 (2.078)	-1.351** (1.178)	-.552 (1.041)
ICT	-.579** (1.010)	-1.918* (1.473)	-1.747*** (1.264)	-.521*** (.890)
Sect	-.642*** (.554)	1.029*** (.809)	.435*** (.576)	-.256*** (.890)
Coop	.995*** (.983)	3.757** (1.686)	2.265** (1.154)	-.807 (.910)
Constant	-.605 (1.040)	-3.645 (1.634)	-3.504 (1.573)	.795 (.942)
Num. Obs.	30	30	30	30
Login R ²	0,1056	0,3882	0,3480	0,1079

Note: *** significance at 1%, ** at 5%, * at 10%. Standard-error (). Source: Author from survey data, 2022

The number of observations is 30. The explanatory variables (R&D, size, geographical location, sector of activity, use of ICT and cooperation to innovate) are studied in front of the four forms of innovation (process, product, commercial and organizational). It should be noted that the explanatory variables retained in the above model are correlated respectively with the innovations by 10.56%; 38.82%; 34.80% and 10.79%. This shows once again that the addition of other variables would explain the innovations. In general, cooperation in innovation is one of the key determinants of the decision to innovate. Since the signs of the coefficients are the only interpretable information in this regression (Table 6), ICT negatively influences the

probability to innovate in SMEs while innovation cooperation positively influences the probability to innovate of the SME respectively (.995), (3.757), (2.265) and associated with standard deviations (.983), (1.686), (1.154). The coefficients of the latter are significant for the first three forms of innovation at the 1%, 5% and 5% threshold, which confirms the work of Ibra MBAYE (2016). This means that the more the SME cooperates, the more likely it is to invest in innovation activities. The difficulties often cited are related to the problems of access of SMEs to the resources necessary for innovation: financial, technological, human and informational. Cooperation may therefore appear to be a privileged means of access to innovation insofar as it is a way of exploring new avenues for renewing internal skills. The SME tries to get round the size handicap by its cooperative relations based on proximity, which reduces the level of uncertainty and facilitates action in a company with limited resources. The capacity for innovation then becomes the main survival weapon of SMEs, the major asset to be deployed during cooperation: "small firms have more to gain from innovation, because it will boost their profits more" (Brouwer M., 1998). Investment in research and development increases the propensity of the SME to carry out product and commercial innovation, as shown by the coefficients, which are positive and significant at the 5% threshold. Also, the establishment of the SME in the capital (Lomé) is associated with an innovative performance in terms of processes than in commercial matters whereas the number of personnel is associated with a better innovative performance in commercial matters and little in organizational matters.

Table 6: Estimation results and calculation of marginal effects

Variables	Process Innov.		Product Innov.		Business Innov.		Organisational Innov.	
	Coeff.	Margin effects	Coeff.	Margin effects	Coeff.	Margin effects	Coeff.	Margin effects
R&D	.800 (1.068)	.137 (.177)	.185 (1.250)	.024 (.163)	2.024 (1.318)	.270 (.151)	-.428 (.973)	-.088 (.199)
Size	-.692** (1.044)	-.118 (.175)	-1.016** (1.305)	-.133 (.163)	2.731* (1.498)	.365 (.157)	1.478 (.985)	.305 (.174)
Local	.161** (1.061)	.027 (.182)	3.815 (2.078)	.500 (.216)	-1.351** (1.178)	-.180 (.145)	-.552 (1.041)	-.114 (.211)
ICT	-.579** (1.01)	-.099 (.170)	-1.918* (1.473)	-.251 (.173)	-1.747** (1.264)	-.233 (.149)	-.521*** (0.558)	-.107 (.180)
Sect	-.642*** (.554)	-.110 (.088)	1.029*** (.809)	.134 (.096)	.435*** (.576)	.058 (.074)	-.256*** (.890)	-.053 (.099)
Coop	.995*** (.983)	.171 (.159)	3.757* (1.686)	.492 (.143)	2.265*** (1.154)	.303 (.110)	-.807 (.910)	-.166 (.179)
Constant	-.605 (1.040)		-3.645 (1.634)		-3.504 (1.573)		.795 (.942)	
Num Obs.	30		30		30		30	
R²	10,56		38,82		34,8		10,79	

Note: *** significance at 1%, ** at 5%, * at 10%. Standard-error (); Source: Author from survey data, 2022

5. Conclusion

Small and medium-sized enterprises play an important role in the Togolese economy. They represent more than 90% of the economic fabric, 85.5% of which are in the informal sector. SMEs, like the private sector in general, play a decisive role in the implementation of the National Development Plan (NDP) and the government's 2020-2025 roadmap, which aim to structurally transform the Togolese economy for strong, sustainable, inclusive growth that creates decent jobs and improves social welfare.

The objective of this article was to analyze the determinants of innovation in SMEs in Togo in order to identify this process and to contribute to a better definition of innovation policies. Specifically, the aim was to: i) examine the level of innovation in SMEs; ii) analyze the sources of innovation in SMEs; iii) identify the obstacles to innovation in SMEs; and iv) determine the factors of cooperation for innovation in SMEs. To do this, we used survey data collected on 30 SMEs representing 60% of the sample to identify factors that constitute barriers to SME innovation and to analyze the role of internal and external characteristics on the adoption of innovations within SMEs. To achieve this, logistic regression was used on the data collected using STATA 16 software. The results of this work reveal that the main determinants of innovation in SMEs in Togo are cooperation in innovation and investment in research and development. These results make it

possible to identify a certain number of implications in terms of innovation policies at both the SME and government levels. As far as SMEs are concerned, they need to strengthen their research and development activities and organize themselves better to take advantage of innovation cooperation.

In addition to these results, we note that among the factors likely to slow down innovation projects or activities, there is the absence of a financing mechanism, the high cost of training personnel in innovation, the lack of financial means external to the company and the absence of support from the State as a cooperation partner. As for the public authorities, they should work to ensure that the issue of support for innovation and the financing of SME innovation is a major concern in order to strengthen not only the competitiveness of SMEs but also their role in the economic fabric of the country.

References/Works Cited

World Bank. (2006).

Christian LE BAS. (2018). Determinants of innovation in an African middle-income economy, a reassessment of innovation models. Communication ADU (Africa Development University) Seminar, 12 March 2018 on innovation in ASW.

Cohendet P. (2003). Innovation and theory of the firm. Encyclopedia of innovation / ed. by Mustar P., Penan H. Paris : Economica.

Cohendet P., Gaffard J. (1990). Innovation and enterprises. Encyclopédie économique / ed. by GREFFE X. et al, Paris: Economica, 935-977.

Dosi, G. (1988). « The nature of the innovative process » in G. Dosi, C. Freeman, R. .

IMF. (2004).

Katz J. (2005). Indicators for complex innovation systems. SPRU Electronic Working Paper Series, 134, The Freeman Centre. Brighton: University of Sussex.

Léonard Nkouka Safoulanitou, Christian Zamo-Akono, Xavier Bitemo Ndiwulu. (2013). SMEs and Innovation: A Comparative Analysis Between Cameroon, Congo and DRC.

Léopold Djoutsu Wamba, Laurence Nkakene Molou, Lubica Hikkerova. (2017). Innovation capacity: Determining factors and effect on the performance of large companies in Cameroon. *Gestion* 2000, 53-75.

Loïc Belze et Olivier Gauthier. (2000). Innovation and economic growth: the role and challenges of SME financing. *International Journal of Small and Medium Enterprises, Economics and Management of Small and Medium Enterprises*, pp. 65-86.

Nelson R., Winter S. (1982). An evolutionary theory of economic change. Cambridge: Harvard University Press.

OCDE. (2005). Measurement of scientific and technological activities . Guidelines for the collection and interpretation of innovation data.

Pavitt et al. (1987). The Size Distribution of Innovating Firms in the UK: 1945-1983. *Journal of Industrial Economics* 35, 297–316.

Penrose E. (1959). The theory of the growth of the firm. Oxford Basil Black Well.

Pierre Blanchard, Jean-Pierre Huiban et Antonio Musolesi. (2011). Innovation in companies: between will and obstacles. *Innovation in driving companies, means and challenges*, 20-30.

Raymond, L. et St-Pierre, J. . (2007). "R&D as a determinant of innovation in SMEs: an attempt at empirical clarification. Proceedings of the Congress of the Academy of Entrepreneurship, Sherbrooke, Canada, , 1-18.

Rey, J. C. (2014). Growth, innovation and management in small and medium-sized industrial firms in Northwest Argentina: a quantitative relational model. *Management and Management*. University of Lorraine.

Richardson G. (1972). The organization of industry. . *The Economic Journal*, 82.

Said BALHADJ & Maryam EL MOUDDEN. (2022). Qualitative study on the impact of the determinants of innovation. *International Journal of Accounting, Finance, Auditing, Management and Economics - IJAFAME*.

Schumpeter. (1942). Capitalisme, socialisme et démocratie, Paris, Payot.

Seddoh, K. K. (1989). Problems and needs. Paper presented at the seminar on "Financing Small and Medium Enterprises and Crafts in West Africa". Lomé. SMEs in WAMU.

Soete L. (1979). Firm size and inventive activity: The evidence reconsidered. *European Economic Review*, 319-340.

Tether B. (1998). Small and large firms: sources of unequal innovations? *RES Policy*, 27, 725- 745.

Venant Kalimu Lukundji, Joseph Akilimali Ntererwa, Bonheur Murhula Lusheke . (2020). "The Determinants of Product Innovation in Informal SMEs". European University Publishing.

Zabala-Iturriagoitia J., V. P.-G.-S. (2007). Regional innovation systems: How to assess performance. *Regional Studies*, 661-672.