

Gender and Firm Performance in Cameroon

Steve Douanla Meli
and
Clément Nodem Meli

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By

Steve Douanla Meli
*Faculty of Economics and Management,
University of Yaounde II-Soa, Yaoundé, Cameroun*

and

Clément Nodem Meli
*Faculty of Economics and Management,
University of Dschang Dschang, Cameroon*

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Abstract

This study analyses the contribution of women to the performance of Cameroonian companies. Based on data from the Cameroon Enterprise Survey, carried out in 2016 by the World Bank Group, the analysis focuses on three levels in organisations: the level of employees, of management and, finally, of business ownership. Existing literature on this subject supports the idea that there is a simultaneous effect between the presence of women at all levels in the company and performance. The results of a linear regression reveal a positive and significant effect of the presence of women in management positions on business performance as measured by the growth in turnover. Indeed, a one percentage point increase in the number of women in corporate leadership contributes an average of 61% to improved corporate performance when measured by growth in turnover. However, whichever performance measure is adopted, the analysis does not reveal any significant influence of the presence of women at the employee level on the performance of Cameroonian companies. Finally, the analysis of the differences in performance between companies owned by women and those owned by men indicates a performance gap, an average of 2.2% in terms of turnover growth, and an average of 0.8% in terms of growth in the number of employees, in favour of female-owned businesses.

Key Words: *Gender, Performance, Business*

1. Background and problem

At a time of globalisation, companies feel concerned about, and are even evaluated on, the interaction they have with their environment. Growing emphasis is placed on the term Corporate Social Responsibility (CSR). We talk about companies as a reflection of society. Therefore, the issue of professional equality between men and women is rightly a key concern for businesses. Indeed, several empirical investigations, particularly in developed countries, have set out to highlight the effects of professional equality, through the participation of women on the prosperity of businesses. It is more than an ethical issue. Professional equality has become an imperative for most companies wanting to thrive in a competitive environment. In this regard, Burke and Davidson (1994) show that companies that reduce the obstacles for women in business benefit in terms of enhanced performance and productivity. Beyond being a factor of social dynamism, professional equality between men and women can be justified to be an economic and managerial issue.

However, it is clear that the overall situation of women in business is still much worse compared to that of men. Indeed, there are still many disparities between women and men, whether in terms of the functions they perform, the sector of activity, or the remuneration received. According to the 2016 report of the International Labour Organization (ILO) on global trends in women's work, the employment rate of women is still significantly lower than that of men. Almost 72% of men are employed compared to only 46% of women. The latter are strongly represented in self-employment (notably family work) and informal jobs, characterised by low wages. Unlike men, they work mainly in the service sector where, since 1995, their participation rate has changed significantly, from 41.1% to 61.5%; and also in the health and education sector, which employs almost a third of women in the labour market.

These disparities in the labour market are even more pronounced when one looks at African countries. In sub-Saharan Africa, for example, there is a global gap of 17 percentage points between the participation rate in the active population of women and that of men, that is 53% and 70%, respectively (World Bank, 2015). In Cameroon, the results of the second General Census of Enterprises (RGE-2) conducted in 2016 by the National Institute of Statistics (INS) indicate that, compared to men, women are still less likely to be employed in companies. In fact, only 43% of women are employed in companies, and only 44% of them hold a permanent job. This difference in participation is also noticeable when looking at the size of firms. They are still

poorly represented in large firms (there are two male employees for every woman in large firms against almost one male for a woman in very small companies). A look at entrepreneurship exposes more gender disparities in Cameroonian companies (62.8% of companies are created by men compared to only 37.2% by women). In terms of management, 57.3% of companies are run by men against 42.7% by women.

Gender attitudes and practices in the labour market in Cameroon are rooted in a traditional patriarchal system that limits the economic advancement of women. Indeed, although the employment trends of women have improved somewhat (RGE-2), the sociological and cultural burdens still relegate Cameroonian women to second place by reducing their activities, mostly in order to fulfil family commitments and due to maternity constraints (Cloutier, 2010). Prejudices, traditions and customs still limit the employment of women in companies and their promotion to managerial positions. Beyond these sociocultural barriers are economic barriers, including lack of equity and lack of access to institutional credit, which still severely limit women's entrepreneurship in Cameroon. These barriers amply testify to the persistence of disparities in participation by gender in the labour market in Cameroon. This is despite the efforts made by public authorities in favour of gender equality and the advancement of women with a view to achieving not only Millennium Development Goals 1 and 3 (MDGs), but more generally Objectives 5 and 10¹ of the Sustainable Development Goals (SDGs) adopted by the General Assembly of the United Nations, aimed at ensuring equal opportunities between women and men in all sectors, and in particular in the field of employment.

Despite the existence of a set of legal and regulatory mechanisms, consisting not only of national legislation, but also of international and regional legal instruments aimed at promoting and protecting the rights of women in the labour market, professional equality remains a real challenge for Cameroonian authorities, who nevertheless continue to develop strategies aimed at encouraging much greater participation of women in the labour market. It is from this perspective that an action plan for the development of female entrepreneurship (PAN-DEV) will be published, under the aegis of the Ministry for the Promotion of Women and the Family (MINPROFF). This action plan will be based on a number of axes, in particular: encouraging the creation of businesses by women, facilitating their access to resources, and even guaranteeing them access to training and the market. This government strategy has led to the creation of a Ministry of Small and Medium-sized Enterprises, Social Economy and Handicrafts, which has committed to making female entrepreneurship one of the pillars of the private-sector development, a strategy whose contribution to economic growth is well established. It has also led to the decision to create two public banks, notably the Cameroon Rural Financial Corporation (agricultural bank) and the Cameroonian Bank of Small and Medium-sized Enterprises (SMEs), whose role is to promote access to finance for SMEs and income-generating activities. In addition to these government structures, informal structures such as promoter's family circle the tontines (village, business or friends), the professional environment (such as colleagues, customers and suppliers), contribute to supporting female entrepreneurship in Cameroon (Nkakleu et al., 2010).

However, it is clear that if some government measures are slow to be set up, like the Cameroon Rural Financial Corporation that was not established until several years after the decision to do so, others have mixed results. For example, the Cameroonian SME Bank which, although functional since 2015, is still struggling to fulfil its primary role of financing the activity of SMEs, as women are mainly responsible for the development of SMEs in the Cameroonian context. All these shortcomings point to the ineffectiveness of the various strategies undertaken by public authorities. In addition, as in the case of women entrepreneurs presented by Lee-Gosselin et al. (2010), Cameroonian women entrepreneurs tend to perceive government programmes as administratively burdensome, which discourages them from taking an interest in them. In addition, they believe that these programmes do not sufficiently meet their demands and that the time taken to fulfil their requirements is sometimes too long. Finally, these programmes would not adequately target their needs concerning access to finance, training and information, but would also be ill-suited to the SMEs that women mostly own or manage.

According to Kamdem (2011), two main factors can characterise the support for female businesses in Cameroon. The first relates to the considerable importance that female promoters attach to local structures and networks (such as friends and acquaintances who are members of tontines). The second highlights the predominance of informal support structures over formal structures.

The current context seems to be gradually moving away from the traditional patriarchal model that favours the exclusion of women from economic activity. According to the last General Census of Population and Housing (RGPH-2005) women make up more than half of the Cameroonian population (49% men and 51% women). Failure to integrate them into economic activity can therefore represent a major obstacle to development and social progress in an economic environment characterised by permanent change. It, therefore, becomes necessary to consider women's contribution to business performance in the Cameroonian context. This study contributes to and investigates the issue of professional equality between men and women in companies, and the organisational consequences in terms of performance, by focussing exclusively on Cameroonian companies where the contribution of women is significant in view of the special place they occupy in the development of business. To do so, the following question is posed: Can women's work enhance business performance beyond social considerations? In other words, is the presence of women in companies a driver of performance? Throughout this analysis, the presence of women is assimilated (as in several studies that will be presented here) into the role they play in the company, i.e to the work they carry out to improve the performance of companies.

The analysis of the influence of the presence of women in Cameroonian companies focuses on three levels of participation, of which the first is at the level of workers employed in companies. The relationship between the proportion of women in companies (rate of feminisation of companies) and the performance of these businesses is explored. Such an analysis leads to a different one from those

comparing mixed enterprises, that is to say, those that have the same proportion of male and female employees, with non-mixed enterprises or companies, in which one of the groups is overrepresented. At the management level, there is a question about the relationship between the presence of women in company management and the company's performance. Such questioning leads to an explanation of the effects of the glass ceiling on the performance of Cameroonian companies. Finally, at the level of business creation, an investigation is based on the fact that the emergence of the entrepreneurial potential of Cameroonian women is still slowed down by the existence of a certain number of obstacles, in particular lack of access to resources for female entrepreneurs, and more specifically, their lack of access to formal financial mechanisms (AfDB/ILO, 2009). Even internationally, the difficulty in accessing resources among female entrepreneurs seems to be acute (Brush et al., 2010). Such an investigation not only helps to explain poor performance of companies owned by women, but also to capture the impact of the policies implemented by the authorities to promote female entrepreneurship in Cameroon.

Following from the main research question, the following secondary questions arise:

1. What influence does the proportion of women in the workforce have on business performance?
2. What influence does the presence of women in management positions have on business performance?
3. Are there differences in performance between female-owned and male-owned enterprises?

In addition to the need to act to promote professional equality and encourage greater access of the female workforce to organisations, one of the challenges of the presence of women in companies is political. Continued disparities between men and women in the labour market call into question the very foundations of democracy and undermine its founding principles, namely freedom and equality. This poses a major societal problem as it tarnishes the credibility of institutions. The second, and one of the greatest challenges, is economic. It is important to mention that the absence of equality policies in the labour market has far-reaching economic effects, although these are sometimes difficult to measure. It results in substantial economic and social costs, in particular, overinvestment of people in searching for a job, discouraging or not adequately investing in women's human capital, and overinvestment of companies in the search for qualified labour.

This study is undertaken from both the theoretical and empirical perspectives. According to gendered theories of organisations, the presence of women significantly impacts the performance of a company and can be both positive and negative. The empirical motivation comes from the growing attention paid to the gender composition of the workforce, managers and even boards of directors of companies. The proportion

of women employed by businesses, including those in managerial positions, is still very low in most developing countries. Some countries, like Cameroon, are setting up mechanisms or actions to facilitate the entry of women into businesses and, more generally, female entrepreneurship. Therefore, if it can be shown statistically that more women at all levels of Cameroonian business have positive effects on performance, there can be a strong argument for having more women in business.

Our investigation into women working in businesses is therefore carried out from the angle of their contribution to the performance of Cameroonian businesses. Therefore, the main objective of this study is to empirically analyse the link between the presence of women in Cameroonian companies and the performance of those firms. Specifically, the objectives are to analyse the:

1. effects on performance of the presence of women as part of the workforce employed by companies;
2. effects on performance of the presence of women in the management of enterprises; and
3. performance gaps between female-owned and male-owned enterprises.

To achieve these objectives, it is necessary to examine the theoretical and empirical explanations that underpin the contribution in terms of performance, of women's work in companies (Part II), before proceeding to an empirical analysis of their contribution to the performance of companies in the Cameroonian context (Part III) and, finally, to present the results obtained from this analysis (Part IV).

2. Literature review of women's contribution to business performance

Theoretical foundations

A review of the literature shows that two main theories are most often used to determine the link between the presence of women in business and business performance: the theory of resources and skills (Tywoniak, 1998) and the theory of human capital (Becker, 1975), which are used to establish this link in this study.

The first, originally developed in the work of Edith Penrose (1959), considers the enterprise as a set of resources and skills, translated by management into strengths and weaknesses (Tywoniak, 1998). Resources are understood here as any strength or weakness of a business; all the tangible and intangible assets of a business. Skills are understood as the ability to deploy resources to achieve a desired goal (Amit and Schoemaker, 1993).

The main contribution of this theory is that it places resources and skills at the heart of the company's strategic reasoning. The company must, therefore, acquire resources that allow it to maintain or obtain a sustainable competitive advantage. Our study on the contribution of women to business performance fits into this theoretical framework for several reasons. First, we start from the premise that the integration of women into business is a key resource. Our study will show the link between this resource and the performance of companies. Secondly, this approach is consistent with the assumption that differences in business performance increasingly come from how to mobilise and increase specific resources (Hansen and Wernerfelt, 1989).

In the literature, the theory of resources is mostly mobilised in the workplace to highlight the link between the presence of women employed in the workforce and business performance. Some argue that it can have negative effects on companies, while for others, under certain conditions, it contributes to improving the performance of teams. According to the latter category, women can improve not only decision-making, but also group dynamics in the workplace. It also promotes creativity in companies. The existence of differences in behaviour between men and women has been subject to many debates, and has given rise to a body of research to highlight this. Unlike men, women are seen not only to be more risk-averse or less competitive, but also a little more altruistic. However, even if these behaviours attributed to women can sometimes explain the weak presence of women in management positions, they can stimulate collective performance. By way of illustration, the absence of very

competitive behaviour among the employed workforce can contribute to improving team spirit, which can have a positive effect on the economic performance of the company.

The second theory (Becker, 1975) completes the supposition regarding resources. It postulates that any person at the head of an organisation brings a body of knowledge, skills and experience to it. It is this set of assets that contributes to the performance of the organisation. However, the question that arises is whether women have the required human capital to run an organisation. The search for an answer to this question is fundamental to many debates between supporters and opponents of gender equality.

Opponents of gender equality theoretically justify gender inequalities and legitimise discrimination in organisations. One explanation by these proponents is that women's careers are very often interrupted by family constraints (such as cooking, and caring for children and the elderly) and bearing children, which drive the companies to, in a rational way it is argued, invest less in their development and not give them positions of responsibility. Also, skills, knowledge, working conditions and especially physical needs can influence women's preferences, sometimes causing them to self-discriminate. This often materialises in the choice of jobs and positions that are less constraining or in sectors of activity that they consider more compatible. These preferences, added to outdated social and cultural norms, contribute to gender disparities in business. According to Becker (1975), individuals seek higher-paying jobs, not only because of their different qualities, but also because of their preferences and obligations. All people choose to invest in human capital by weighing up the expected level of income after training and the opportunity costs related to this accumulation of human capital. Thus, if there are fewer women in companies, who are routinely poorly paid compared to men, it could explain their low productivity.

Advocates of gender equality argue that women communicate better than men, bring new ideas, pay more attention to issues raised in governing bodies (Carter et al., 2003, Adams and Ferreira, 2003) and especially limit risk (Jianakoplos and Bernasek, 1998). The presence of women in a company is no longer just an ethical and social issue, but an important factor for the competitiveness of the company. For Burke and Davidson (1994), organisations that focus on women's career development and access to management positions gain performance and productivity benefits. In addition, these companies are more attractive to customers and investors because they project a more favourable image; Farrell and Hersch (2005) even think that the feminisation of companies is primarily aimed at improving their image in order to attract new investors and clients. Conversely, it can be assumed that female managers would be more in tune with female clients. Indeed, from a marketing point of view, the very first argument allowing a link between woman and performance is that the presence of women in firms would enable them to be more compatible with the demographics of clients and thus understand their preferences and expectations (Cox and Smolinski, 1994; Morrison, 1992). Employing women would, therefore, help companies to understand their clients' requests and respond to them more effectively.

We propose that the presence of women at all levels of the firm (employed, management and ownership), according to the theory of resources and skills, should be an important resource that could contribute to business performance. It is from this that the secondary objectives of the study are derived.

Literature review

The presence of women in business as a major economic issue has been taken into account for the first time in Anglo-Saxon literature through the influence of their activity on the performance of businesses. Consequently, numerous studies attempt to establish the link between female presence at different levels in the company (work teams, management positions, boards of directors, owners) and performance. Regardless of the performance measures adopted (such as Return on assets (ROA), Return on equity (ROE), Return on sales (ROS), Tobin's Q, added value, increase in turnover or employment), two main hypotheses emerge. The first and most prevalent supports the idea of underperformance of companies owned and/or run by women (Ahern and Dittmar, 2012; Matsa and Miller, 2013), the second assumes equality or even a higher level of performance among companies owned and/or run by women (Watson and Robinson, 2003). The latter hypothesis is justified by arguments that female entrepreneurs or managers not only have profitability and growth objectives just as ambitious as men (Scott, 1986; Kalleberg and Leicht, 1991; Buttner and Moore, 1997), but also have slightly increased growth prospects than their male counterparts (Minniti et al., 2006).

However, due to the lack of accessibility of data, this work focusses more on the presence of women in decision-making positions, or the level of corporate ownership. Indeed, research highlighting the influence of female directors/owners on corporate performance is found to be a little more prevalent in the literature compared to those trying to establish this link in terms of the number of employees. This can be explained by the importance given to the issue of professional equality in management bodies of companies. In fact, women are still in the minority in terms of corporate management positions and property ownership. In the next section we present some of these works followed by the main findings.

Women in management and corporate performance

Many academic works have attempted to highlight the link between the presence of women in management bodies of companies and the performance of those companies in different contexts, particularly looking at the presence of women on boards of directors. This was explored in a work by Dang and Nguyen (2014), which examines the impact on financial performance of the presence of women on the boards of 120 of the largest French companies by employing a regression model. Taking as a measure the percentage of women on the board of directors, the study finds that the presence of women has no significant effect on the financial performance

of companies as measured by Tobin's Q. However, the use of traditional ordinary least squares estimates reveals a positive and statistically significant influence of a female presence on boards of directors on performance measured by ROA. Similarly, Jasmin et al. (2012), based on time series data from 151 German firms over the period 2000–2005, attempt to determine the relationship between the proportion of women in boardrooms and business performance. The authors establish a positive correlation between performance measured by firms' ROE and the proportion of women in boardrooms. The study shows that the higher the proportion of women in boardrooms, the more successful the companies are. The study notes, however, that the composition of the board of directors only enhances the performance of the company if the proportion of women is large enough. In other words, this proportion must reach a critical mass of 30%.

Using linear regression models, Belghiti-Mahut and Lafont (2010) analyse the link between the presence of women in top management of 110 French companies and their financial performance. Their study seeks to determine the influence of the presence of women on the financial performance of those companies by looking at the percentage of women on the boards of directors, the percentage of women on management committees and the percentage of women in managerial positions (not necessarily on management committees). The authors conclude that the presence of women on boards of directors, management committees and managerial positions has a positive and significant influence on the performance of women measured by Tobin's Q. This result is confirmed by Gulamhussen and Santa (2010) who analyse the impact of gender diversity on boards and specialised committees on the performance and risk of OECD banks. The authors apply the OLS and two-stage least squares (2SLS) methods on their sample of 461 observations and find that women's participation on the board (both the presence of women and their proportion on the board) has a positive influence on the accounting performance measured by the ROA and ROE, and the stock exchange, measured by Tobin's Q.

Contrary to the conclusions of the studies discussed, many authors have demonstrated a negative influence or a lack of effect on performance when considering the presence of women in management bodies of companies. One of the most cited studies is that of Schrader et al. (1997), which focusses on the negative influence of the presence of women in the management of companies. The authors are interested in the statistical relationship between the presence of women in the management of 200 large US companies and the financial performance of those companies. On the basis of a linear regression, the authors point to a negative link between the percentage of women in top management and on boards of directors of US companies and the financial performance of the latter. In other words, for all financial performance measures selected for their study (return on assets (ROA); financial profitability (ROE), and net profit margin (ROS)), the authors show that companies with high numbers of women in top management and on boards of directors have high performance ratios. However, the study finds no correlation between the high percentage of women at the management level of the companies studied and financial performance. The

authors explain this result by the low proportion of women occupying these positions at the time of data collection, which makes it impossible to establish a statistically significant relationship.

In a study conducted on 395 financial companies in Pakistan, Mirza et al. (2012) attempt to highlight the impact of the presence of female managers on corporate performance as measured by ROA and ROE. Based on a linear regression model, this study shows that the proportion of women in both the boards of directors and among company executives is negatively related to performance. The authors explain this result by the fact that the presence of women at the top of the company gives a negative sign to investors because of sexist prejudices against them. This would suggest that women would be very emotional, aggressive, less confident and less risk averse. These attributes would discourage investors and, consequently, result in the underperformance of the companies. A similar result is found in Salim's (2011) work on the link between the presence of women on boards of directors and the financial performance of 169 companies listed on the Indonesian stock exchange. Based on a linear regression model, this study also points to a negative relationship between the proportion of women on boards of directors and the financial performance of companies measured by ROA.

In a carefully conducted study of causality, Adams and Ferreira (2009) show that the positive correlation between the presence of women on boards of directors and the performance of companies becomes a zero or even negative relationship when using methods to account for the endogeneity of the female presence variable. By exploiting data on corporate director networks, their study reveals variations in the proportion of women on corporate boards that are unrelated to performance, and finds a negative effect on the financial performance of companies. The authors also show that a greater proportion of women on boards of directors increases men's participation in board meetings, increases board oversight of company management, and increases the likelihood of dismissing leaders whose performance would be considered insufficient. In brief, the authors show that the presence of women on boards of directors affects the functioning of companies by making their governance stricter, but does not have a systematic positive effect on their economic or financial performance. The conclusions of this study are confirmed by Ahern and Dittmar (2012) and Matsa and Miller (2013), whose work highlights a decline in the economic and financial performance of Norwegian companies, when the proportion of women on boards increases.

Carter et al. (2010) provide evidence of a lack of effect on performance due to the presence of women in management bodies of companies. The authors analyzed the linkage based on a sample of 2,563 firms observed over a period of five years (1998 to 2002). By applying a multiple regression method, this study shows that the number of women at board level has no statistically significant impact on the financial performance of companies as measured by Tobin's Q and ROA. The work of Smith et al. (2006) leads to the same result. Based on a sample of 2,500 firms observed over 1993–2001, the authors examine the relationship between women's presence and

the performance of Danish firms. They found no statistically significant relationship between the presence of women on boards and the performance of companies as measured by several accounting standards (gross value added/sales, ordinary income/net assets, and net profit after tax/net assets).

Business performance gap by gender of owner

In general, empirical work analysing the differences in performance between companies owned by men and those by women agree on the existence of a performance gap between these two categories of companies, with those owned by women faring the worst (Muravyev et al., 2009; Coleman and Robb, 2009, 2012; Sanditov and Verspagen, 2011; Kasim and Akampumuza, 2018). This result is due to the fact that these studies are for the most part focused on companies operating in the service sector and retail trade (Fairlie and Robb, 2009), which is often characterised by low investment (Nissan et al., 2012) and weak growth compared to the manufacturing and construction sectors.

The works of Kasim and Akampumuza (2018) analyse the performance gaps between male-owned and female-owned firms in Rwanda, based on data collected from households and national enterprises. The decomposition of business performance (measured here by turnover growth) using the Oaxaca method (1973) allowed the authors to conclude that there is a difference in performance of 48.9%, with companies owned by women faring the worst. This performance gap can be explained not only by a lower capital investment of companies owned by women, but also these companies' low demand for and access to formal credit. This last explanation is fully corroborated by the Coleman and Robb (2012) study, which shows that female entrepreneurs are more likely to finance their businesses with their own funds and less likely to use external capital compared to their male counterparts. Muravyev et al. (2009) find that bank loan applications from female-owned businesses are less likely to be successful than those from male-owned businesses, thus highlighting the existence of discrimination against female-owned businesses in terms of access to bank credit. From the same perspective, a comparative analysis of access to credit for production in the Cameroonian context (INS, 2010) shows that Cameroonian women are less likely than men to obtain credit for production. This situation considerably limits the possibility that they will invest and obtain profits. One of the main causes mentioned here is the traditions and customs that still prevent Cameroonian women from inheriting land.

However, while some studies recognise the existence of discriminatory actions (in particular the prejudice of bankers towards female entrepreneurs) in connection with the problem of access to credit/financing for female entrepreneurs (Lafortune and St-Cyr, 2000; Orhan, 2001), the majority conclude that there is no discrimination in the process of granting credit/financing to entrepreneurs of both genders (Coleman, 2000), and highlight several obvious reasons for this difference. Among other things, the small size of female-owned businesses and the fact that they had not been established for

long is a limitation for access to credit/financing because banks are generally reluctant to lend to small businesses; just as donors prefer to lend to larger, more established businesses. As women are mainly owners of micro-businesses, they are therefore at a disadvantage vis-à-vis the financing standards of financial institutions. Finally, they have a shorter credit history and collateral to offer to financial institutions.

Using the same method of decomposition, Essers et al. (2018) provide new empirical evidence of the performance gap between male-owned and female-owned firms in the Ethiopian context. Based on a wide range of manufacturing companies, this study concludes that there is a difference of 12% in the level of total factor productivity between these two categories of companies (with companies owned by women worse off). According to the authors, this difference can be explained by factors such as the small size of female-owned enterprises, their capital endowments or that they are in much less productive sectors of activity.

Fairlie and Robb (2009) analyse the performance of female-owned businesses and compare them to male-owned businesses. Using regression estimates and the Oaxaca (1973) decomposition technique, the authors explore the contribution of human capital (including work experience) and financial capital to explain the low survival rate of firms owned by women, low profits recorded by women, and low employment and sales in those firms. The authors find that female-owned enterprises are less successful than male-owned businesses because they not only have less seed capital, but also less human capital acquired through work experience in the industry they operate in. The authors also find evidence that female business owners work fewer hours and may have different preferences regarding the goals of their businesses, which impacts their performance.

Conversely, the work of Mwishu (2016) in assessing the influence of women on entrepreneurial performance in the Democratic Republic of Congo, which was based on survey data from SMEs and those of the World Bank (2006; 2010) using the Oaxaca (1973) and Blinder (1973) methodology, finds that female-owned businesses perform better in terms of annual sales growth. Indeed, the analysis reveals a performance gap in terms of annual sales of 18.05% in favour of companies belonging to women.

Table 1 summarises the foregoing, taking into account not only women's performance and performance measures adopted by these studies, but also the size of the samples used and the main results obtained from this review.

Table 1: Summary of work on women's contribution to business performance

Author	Measuring presence of women	Performance measurement	Sample/ country	Main findings
Dang and Nguyen (2014)	Percentage of women on the board	Tobin's Q, ROA	120 largest French companies	No significant effect on the financial performance of companies as measured by Tobin's Q; positive and significant influence on performance measured by ROA
Jasmin et al. (2012)	Percentage of women on the board	ROE	151 German companies	Positive and significant influence on performance measured by ROE
Belghiti-Mahut and Lafont (2010)	Percentage of women on the board; percentage of women on the executive committee; percentage of women in management	Tobin's Q	110 companies	Positive and significant influence on performance measured by Tobin's Q (regardless of number of women present in company)
Gulamhussen and Santa (2010)	Percentage of women on the board	ROA, ROE, Tobin's Q	461 OECD banks	Positive influence on accounting performance measured by ROA and ROE and stock market measured by Tobin's Q
Schrader et al. (1997)	Percentage of women in top management; percentage of women on the board	ROA, ROE, ROS	200 big American companies	Negative influence on performance (regardless of number of women present in company and measure of performance); absence of correlation between percentage of women in management and business performance
Mirza et al. (2012)	Percentage of women on the board; proportion of women managerial staff	ROA, ROE	395 financial companies in Pakistan	Negative influence on performance

continued next page

Table 1 Continued

Author	Measuring presence of women	Performance measurement	Sample/ country	Main findings
Salim (2011)	Percentage of women on the board	ROA	169 Indonesian companies	Negative influence on performance
Ahern and Dittmar (2012); Matsa and Miller (2013)	Percentage of women on the board	ROA, ROE	Norwegian companies	Decline in economic and financial performance
Smith et al. (2006)	Percentage of women on the board	Gross value added/ turnover	2500 Danish companies	No statistically significant relationship
Kasim and Akampumuza (2018)	Female owners	Growth of turnover	Rwandan companies	Difference in performance of 48.9%, with female-owned companies worse off
Essers et al. (2018)	Female owners	Total factor productivity	Ethiopian manufacturing companies	Difference in performance of 12%, with female-owned companies worse off
Fairlie and Robb (2009)	Female owners	Human capital; financial capital		Female-owned businesses less successful than male-owned as they have less start-up and human capital acquired through work experience in the business sector
Mwisha (2016)	Female owners	Growth in annual sales	SMEs in the DRC	18.05% performance gap for female-owned enterprises

Source: Part of literature review on the contribution of women to business performance

Although these works remain subject to confirmation, notably through empirical studies such as the present research, they indicate for the most part that the presence of women in companies can influence their functioning and directly or indirectly affect their performance. Therefore, in light of this empirical review of the literature, we propose to confirm or reject the following hypotheses:

H1: There is a positive and significant relationship between the proportion of women in businesses and business performance.

H2: There is a positive and significant link between women's presence in management and their performance.

H3: Businesses owned by women are less successful in terms of turnover growth and employment growth compared to those owned by men.

3. Methodology for analysing the contribution of women to business performance

This section presents the method adopted in this study. These methodological elements focus on the specification of the model, then on the description of the study variables, and finally on the presentation of data.

Model specification

Econometric analysis of relationship between gender diversity and business performance

To verify the first two hypotheses, we adopt an analytical approach inspired by the works of Belghiti-Mahut and Lafont (2010), while making some modifications for the Cameroonian context. Although this approach mainly poses a problem of causality in that it does not make it possible to affirm with certainty that the presence of women is the cause of the companies' performance, it makes it possible to establish a clear link between the feminisation of companies (at different positions) and the performance of these companies.

As a result, we postulate a simple linear regression model defined as:

$$y_i = \beta_i X_i + \varepsilon_i \quad (1)$$

with y_i the dependent variable, which represents the performance of business i . X_i is the vector of the explanatory variables of the model of analysis (variables relating to the presence of women in companies and control variables). β_i is the vector associated with the parameters to be estimated and ε_i is the error term or residue.

The specification of the basic econometric model presented above is given by the following equation:

$$PFR = \beta_0 + \beta_1 PRF + \beta_2 VCTL + \varepsilon \quad (2)$$

where **PFR** is the business performance variable represented by turnover growth and employment growth; **PRF** is the vector of variables representing the presence of women in the company; **VCTL** is the vector of control variables and ε is the error term. The measures of these different variables are presented in detail in the section devoted to the description of study variables.

However, the simultaneity of effect between the participation of women and the performance of companies leads to a problem of endogeneity. To remedy this, the analysis of the effect of women's participation in business performance requires the introduction of instrumental variables. The regressions presented in Tables A.2 and A.3 in the Appendix not only identify the correlation between the two dimensions of women's participation analysed in this section, but also identify instruments for selecting the performance function. Therefore, the results show that variables such as the percentage of permanent full-time employees who had completed high school and the proportion of businesses headed by women, on the one hand, have a directly significant effect on the proportion of women employed in companies. On the other hand, the proportion of companies owned by women significantly influences the percentage of women in business management. These variables can therefore be used as instruments for selecting the performance function. In fact, they are strongly correlated with variables representing the participation or presence of women in businesses (statistically significant at 1%), but nonetheless not correlated with performance variables.

The estimation of Equation 2 using the 2SLS method, which represents a more robust method of analysis, made it possible to control for this endogeneity problem and to achieve objectives 1 and 2 of this study through the interpretation of the signs and significance of the coefficients associated with the different variables of interest.

Econometric analysis of performance gaps between female-owned and male-owned firms

To verify the third hypothesis, we opt for an analytical approach based on an Oaxaca-Blinder decomposition model as adopted in the works of Kasim and Akampumuza (2018) and Essers et al. (2018), to explain performance gaps between male-owned and female-owned firms in the Rwandan and Ethiopian contexts, respectively. Although the lack of consideration of preferences, as well as the impossibility of establishing a causal relationship and the standard nature of the analysis (analysis based on averages) are the main limitations of this method, the robustness of the results obtained by the latter makes it a method widely used in the literature to explore the factors that may explain wage inequalities or productivity gaps between men and women in the labour market (Oaxaca, 1973; Blinder, 1973; Fortin, 2008; 2011; Kilic et al., 2014).

We estimate the performance log of female-owned businesses as follows:

$$Y_f = \beta_{f0} + \sum_{j=1}^J \beta_{fj} X_{fj} + \varepsilon_f \quad (3)$$

where Y_f is the log of business performance held by women; β_{fj} represents the vectors of the coefficients to estimate; X_{fj} is the matrix of independent variables retained in the model specification; and ε_f is the error term. The performance of firms owned by men is presented in Equation 4. We think that $E(\varepsilon_f) = E(\varepsilon_h) = 0$.

$$Y_h = \beta_{h0} + \sum_{j=1}^J \beta_{hj} X_{hj} + \varepsilon_h \quad (4)$$

Taking into account the performance log of female-owned firms, Equation 4) is written as:

$$E(Y_f) = E\left(\beta_{f0} + \sum_{j=1}^J \beta_{fj} X_{fj} + \varepsilon_f\right) = \beta_{f0} + \sum_{j=1}^J \beta_{fj} E(X_{fj}) \quad (5)$$

Equally, Equation 5 can be written as:

$$E(Y_h) = E\left(\beta_{h0} + \sum_{j=1}^J \beta_{hj} X_{hj} + \varepsilon_h\right) = \beta_{h0} + \sum_{j=1}^J \beta_{hj} E(X_{hj}) \quad (6)$$

The productivity gap (D) between female-owned and male-owned firms can be written as $D = E(Y_f) - E(Y_h)$. As a result, the productivity gap is represented by Equation 7, which is obtained by subtracting Equation 5 from Equation 6 as follows:

$$D = \beta_{f0} + \sum_{j=1}^J \beta_{fj} E(X_{fj}) - \beta_{h0} - \sum_{j=1}^J \beta_{hj} E(X_{hj}) \quad (7)$$

Adding and subtracting $\sum_{j=1}^J \beta_{fj} E(X_{hj})$ on the right-hand side of Equation 7 allows us to write the decomposition equation of the following productivity:

$$D = \underbrace{\sum_{j=1}^J [E(X_{fj}) - E(X_{hj})] \beta_{fj}}_{\text{The endowment effect}} + \underbrace{\beta_{f0} - \beta_{h0} + \sum_{j=1}^J [(\beta_{fj} - \beta_{hj}) E(X_{hj})]}_{\text{The structural effect}} \quad (8)$$

Equation 8 presents the form of the decomposition of the Oaxaca Blinder model that we use in this study. The first term of this equation is the endowment effect. This is the explained component of the performance gap between men's and women's businesses. In other words, this component represents the differences in observable characteristics (relative to companies and/or owners), which explains the difference in performance between the two categories of companies. The second term represents the structural effect. This component assesses the presence of discrimination in the performance gap between the two categories of enterprises. The first term of this structural component $(\beta_{f0} - \beta_{h0})$ represents the unexplained differences in performance between the two groups of firms due to unobservable characteristics. The second term $(\sum_{j=1}^J [(\beta_{fj} - \beta_{hj}) E(X_{hj})])$ represents the differences in the slope coefficients.

The estimation of Equation 8 allows us to achieve objective 3 of this study. However, such an estimate may be subject to selection biases, which can be the result of the low female participation rate found in the sample.

4. Description of variables

Dependent variable

The dependent variable of this analysis model is business performance (PFR). This can be measured using several indicators, as illustrated in the empirical literature presented in this study, comprising: ROA, ROE, ROS, (Kolsi and Ghorbel, 2011; Adams and Ferreira, 2009; Campbell and Minguez-Vera, 2008); Tobin's Q (Belghiti-Mahut and Lafont, 2010; Carter et al., 2010); and growth in sales or turnover, or growth in number of employees (Delmar, 1997; Ardishvili et al., 1998). These are the most frequently-used indicators employed in the empirical literature to measure business performance. However, while the first four measures (ROA, ROE, ROS, Tobin's Q) are widely criticised for reflecting only the past performance of companies, growth in turnover and employment have the advantage of reflecting the short and long-term performance of a business and are easy to obtain. While these two variables are generally favoured in many studies, they do not theoretically justify the use of one or the other. However, these variables are not only considered more objective performance indicators (Delmar, 1997), but also as indicators of entrepreneurial success (Dunkelberg and Cooper, 1982). Measured in the literature by the relative change in value of sales (growth in turnover) and change in the number of permanent employees (growth in number of employees) in a company over a period of time (Mwisha, 2016; Kasim and Akampumuza, 2018), these variables provide information on the economic and social performance of companies, respectively, in terms of job creation (Kinda and Loening, 2010). However, the two performance measures have the major disadvantage of not taking into account the risk of the company because they do not reflect market expectations on the future profits of the company (Belghiti-Mahut and Lafont, 2010).

The available data includes information on the performance of companies in terms of the number of employees and total annual turnover. These two variables also contain retrospective information of up to three years (number of permanent full-time employees in fiscal year 2013 and total annual turnover in that same year) before the year of the survey. In addition to permanent full-time jobs, we also have information on temporary or seasonal full-time jobs at the time of the survey. However, since we do not have data on this variable for the past three years, we cannot calculate the growth in the number of employees for temporary or seasonal jobs. Therefore,

using information on the total number of permanent full-time employees and on annual sales, both in the last financial year and in the previous three financial years, performance measures can be calculated for each company. Thus, the growth in the number of employees is measured in this study by the difference between the number of permanent full-time employees (the latter reflects the long-term performance of the company to the end of the fiscal year (current year) and the number of permanent full-time jobs three years before the survey year. Likewise, turnover growth here is measured by the difference between turnover at the end of the fiscal year and turnover recorded three years before the survey year.

The growth in number of employees and that of turnover will be calculated, respectively, by the following:

$$CE_{it} = (\ln(NE_{it}) - \ln(NE_{it-3})) / 3 \quad ; \quad CV_{it} = (\ln(CA_{it}) - \ln(CA_{it-3})) / 3 \quad (9)$$

where CE_{it} is the growth in number of employees of company i in period t ; NE_{it} is the number of permanent full-time employees of enterprise i in period t ; NE_{it-3} is the number of permanent full-time employees of enterprise i in period $t-3$. Likewise, CA_{it} represents the growth in turnover or sales of company i in period t ; CA_{it} is the turnover of company i at period t , and CA_{it-3} is the turnover of company i in period $t-3$.

Independent variables

This study aims to analyse the impact of women's participation on business performance. In other words, we examine the relationship between the presence of women in companies and the performance of women at three levels, including as: employees, management and owners. Thus, for the variables representing the presence of women in enterprises (PRF), we first distinguish the presence of women in the workforce employed, then the presence of women in the management of enterprises and, finally, the presence of women as business owners. We consider the presence of women in terms of number of employees because although the existence of different behaviours between men and women remains a subject for debate (Cornet and Cadalen, 2009), the recent literature in social science highlights the existence of gendered differences in behaviour in companies that would be more effective vectors of collective success, even if they would not favour access to management positions in companies. Several studies have thus highlighted the contribution of women to the performance of work teams in business through those attributes that are specific to them. In particular, the so-called feminine qualities. Thus, women would have specific qualities that would be vectors of collective performance in companies. These qualities can therefore serve as a basis for the argument that the presence of women at this level in the company can influence performance. It is from this perspective that several studies have attempted to relate business performance to the proportion or percentage of women employed. For example, the work of Hoogendoorn et al. (2013) finds better performance of work teams with a large proportion of women

compared to those largely dominated by men. In this study, we retain as a measure of the presence of women at this first level of the firm, the variable proportion of women in the workforce. It refers, as its name suggests, to the proportion of women employed in enterprises, but excludes women occupying the posts of manager or director. The available data provide a great deal of information on female jobs in businesses, including the number of permanent full-time female employees and the number of temporary or seasonal employees of the same gender during the fiscal year. Given that one of the dependent variables retained in this analysis is the growth of permanent and full-time jobs, the proportion of women is measured by the ratio between the number of permanent full-time female employees and the total number of permanent full-time jobs.

We then consider the presence of women in the management of companies. Indeed, the management of the company represents the key to performance. It's the company's decision-making centre. However, one of the most observable disparities between men and women in the corporate world is the lack of women in leadership or management positions. Therefore, the relationship between their presence at this level and the performance of companies constitutes a particular problem, which requires analysis. It therefore becomes important to analyse the influence on performance of the presence of women at this level of the company. Furthermore, there is no guarantee that the gender differences in behaviour documented in the literature to explain the performance of working groups also have an influence on the level of company management. Some research even, rightly or wrongly, cite these so-called feminine qualities to explain the lack of women observed in the management of companies because they do not favour individual careers. Based on the question relating to the gender of the main manager of the company (is the main manager of the company a woman?), we used as a measure of the presence at this second level of the company the percentage of women in business management. Several studies have attempted to establish a relationship between performance and the percentage of women present in business management. This is the case with the work of Schrader et al. (1997), who attempt to establish a statistical link between the percentage of women in management or executive positions and the performance of large American companies. These authors show that companies with a high percentage of female managers perform well. However, the authors find no significant correlation between this high percentage of women in managerial or administrative positions and the financial performance of the companies studied.

Finally, we envisage the presence of women at the level of business ownership because, although there are still large disparities between men and women in terms of entrepreneurship, in recent years, there has been a global evolution of female entrepreneurship. In Cameroon, this evolution is undoubtedly attributable to the numerous mechanisms and measures put in place by public authorities to promote female-owned and/or female-led businesses. It is, therefore, of interest to analyse the situation of female entrepreneurship in order to see the impact of these measures. In addition, several studies have shown that most businesses in the world are owned

by men. Indeed, according to Reynolds et al. (2002), men are about twice as likely as women to participate in entrepreneurial activity. We therefore consider this variable to measure the relative importance of female-owned businesses. Based on the question about the gender of the business owner (are there any women among the business owners?), we therefore retain the percentage of women business owners as a measure of female entrepreneurship.

Control variables

In addition to the independent variables, control variables that can explain business performance in the Cameroonian context are outlined in this section.

The **professional experience** of the principal is measured by the number of years of experience of the latter in the business sector of the company. The theory of human capital teaches that the accumulation of experience and knowledge by a manager is at the heart of good performance of the company for which they are responsible (Westphal and Zajac, 1995). Terjesen et al. (2008) postulate that women accumulate valuable experience through their participation in the management of small and medium-sized enterprises. The work of Mwishu (2016) points to a positive influence of the professional experience of the main executive of the company on the performance measured by the growth of the annual sales of the company. For the author, an increase in the professional experience of the top manager of one more year leads to an increase in annual sales of about 1.82% in male-led firms. However, there is no significant influence on female-led businesses.

For **business characteristics**, we use the following variables: The age of the firm measured by the number of years that the business has been in operation (M'hamid et al., 2011).

The **size of the business**, which is measured by the number of full-time permanent employees of the company, is subdivided into three variables that are all binary. These three variables are defined as: small size = 1 if the business is small and 0 if not; average size = 1 if the company is medium and 0 if not; and big size = 1 if the company is large and 0 if not. The work done by Adams and Ferreira (2003) explains that the recruitment and promotion of women in decision-making positions is encouraged by large companies, as they are more accountable, especially to investors. These authors conclude that there is a positive relationship between the presence of women in top management and the size of the company.

The **business sector** is defined as: Manufacturer = 1 if the business is engaged in industry or manufacturing and 0 if not; retail = 1 if the business is in retail and 0 if not; and other services = 1 if the firm is in other services, and 0 if not. The specificity of the business sector of the company is critical in the analysis of the presence of women in the companies because many works, in particular those of M'hamid et al. (2011), show that there are fewer women in firms in the manufacturing sector compared to those in services.

Access to credit is the variable that indicates whether credit has been obtained to finance the activity of the company. It takes a value of 1 if the company has benefited from a line of credit or a loan from a formal financial institution, and 0 if not. Taking into account companies' access to credit is crucial because, unlike men, female entrepreneurs very often face problems with access to credit during the start-up, survival and growth phases of their businesses (Mead, 1994).

The **self-financing** variable refers to the financing of the activity of the company by the owner's own funds. It takes a value of 1 if the owner finances the company's activities and 0 if not.

The variables official registration of the company, recruitment of skilled workers, losses due to theft, investment in security, power outage, possession of an electricity generator, and advice in the management of activities are all dichotomous variables of control used in this analysis.

5. Data source

The main source of data used in this study is from the Enterprise Survey (ES), which was conducted in 2016 in Cameroonian companies by the World Bank Group and its partners. It consists of a representative sample of 361 non-agricultural, private, formal-economy enterprises located in the central, coastal and western regions. On the basis of a questionnaire administered to owners and senior managers of companies, the survey provides information on several aspects of the business environment. This is both helpful and useful for businesses, which play a determining role in the prosperity or otherwise of the private sector of the Cameroonian economy. In general, the questions contained in the survey are intended to address concerns about infrastructure, finance, trade, regulations, taxes and business licenses, corruption, informality, access to finance, innovation, and work and perceptions of barriers to doing business.

More specifically, the sectorial coverage included the manufacturing sector and most companies in the service sector. Businesses in the utilities, health care, financial services and government sectors were not included. The size of the companies is determined by number of employees: 5 to 19 employees for small businesses (SE), 20 to 99 for medium-sized businesses (ME), and 100 or more for large businesses (LE). Companies with fewer than five employees were not included in the survey. Not considering these very small enterprises is limiting when one takes into account that the productive fabric of Cameroon is marked by a predominance of companies employing three people at most (RGE-2, 2016).

The ES also collected information on the characteristics of enterprises, including age measured by years of employment, and information on women's participation in employment at different levels in companies. In accordance with the measures adopted in the literature, the participation of women was recorded by the percentage of women employed in enterprises, the percentage of women in management positions and the percentage of female business owners.

The workforce information relates in particular to the number of permanent full-time employees, the number of temporary full-time employees, and the number of employees by gender. The ES provides ample information on positions occupied by women in companies, including the number of permanent full-time female employees, and the number of temporary or seasonal female employees. Similarly, questions relating to the gender of the chief executive and business owner allows calculating the percentage of female managers and business owners.

To assess the performance of companies, the ES provides the opportunity to calculate performance measures for each company based on answers to questions concerning annual sales and the total number of permanent full-time employees in the companies. It, therefore, allows us to measure this performance through two relevant indicators: annual growth rate of the number of employees and annual growth rate of actual sales (growth in turnover). Indeed, the questions about the number of permanent full-time jobs and annual turnover achieved not only during the current fiscal year, but also in the fiscal year 2013 (i.e., almost three years before survey), makes it possible to calculate the growth of permanent full-time jobs and turnover. With regard to access to financial resources, the ES provides information on the sources of financing for companies as well as on the characteristics of their financial transactions.

The survey also took into account numerous other factors, in particular, physical infrastructure (such as access to electricity, water and telecommunications); crime (theft, arson or vandalism) and informality (percentage of firms facing competition from unregistered firms and Percentage of currently registered firms that began operations by being formally registered); or obstacles to the business environment (such as duration of obtaining a business permit, duration of power outages and corruption).

6. Results

Descriptive statistics

Table 2 presents the descriptive analysis of some relevant variables used in this study. In general, it highlights the low participation of women, whether at the level of entrepreneurship, management of companies, or the workforce (employees).

Table 2: Description of some relevant variables in the sample (%)

		Women	Men
Business ownership	Manufacturing sector	30	70
	Retail sale	35	65
	Other services	47	53
	SE	35	65
	ME	36	64
	LE	46	54
All owners		37	63
Business management	Manufacturing sector	9	91
	Retail sale	22	78
	Other services	17	83
	SE	22	78
	ME	11	89
	LE	6	94
All directors		16	84
Permanent employees	Manufacturing sector	1	99
	Retail sale	27	73
	Other services	21	79
	SE	23	77
	ME	14	86
	LE	6	94
All permanent employees		10	90
Temporary employees	Manufacturing sector	20	80
	Retail sale	37	63
	Other services	47	53
	SE	26	74
	ME	44	56
	LE	32	68

continued next page

Table 2 Continued

		Women	Men
All temporary employees		34	66
Permanent production employees*	SE ME LE	11 33 11	89 67 89
All permanent production employees*		13	87
Permanent non-production employees *	SE ME LE	12 19 15	88 81 85
All permanent non-production employees*		15	85
Employees of female-owned enterprises	Permanent Temporary Production No production	13 34 12 17	87 66 88 83
Employees in enterprises with a female director	Permanent Temporary Production Non-production	32 47 23 6	68 53 77 94
Proportion of companies that offered formal training to permanent workers*	Owners Directors	45 14	55 86
Professional experience of chief executive		13	87
Business access to financing	Owners Directors	40 6	60 94
Business turnover	Owners Directors	37 3	63 97
Growth in number of employees	Owners Directors	2,6 3,1	1,8 1,9
Sales growth/turnover growth	Owners Directors	24 22	15 18
Sales growth/turnover growth	Manufacturing sector Retail sale Other services SE ME LE		19 16 20 17 14 28
Growth in number of employees	Manufacturing sector Retail sale Other services SE ME LE		2,6 0,7 2,9 2,4 -1,3 5,5

Source: Authors

Note: * Indicators calculated for the manufacturing sector only.

An analysis of the distribution of the sample by gender of business owner highlights a still slow progression of female entrepreneurship in Cameroon. As shown in Table 2, the landscape of Cameroonian companies is still marked by a low representation of female-owned businesses. Only 37% of Cameroonian business owners are women, while 63% belong to men. This entrepreneurial difference, to the detriment of women, also persists when one refers to the size criterion of the companies or sector of activity of the latter. An analysis by firm size confirms the predominance of male-owned companies over female-owned firms. However, this entrepreneurial gap between men and women tends to be reduced with an increase in the size of companies (there is an entrepreneurial difference of 30% when one looks at the SE. it is 29% for the ME and only 8% for LEs). Similarly, regardless of the sector of activity, women's businesses are also poorly represented in Cameroon. Only 30% of companies in the manufacturing sector are owned by women while 70% are owned by men. In the retail sector, 35% are owned by women, while 65% are owned by men. In the other services sector, 47% are owned by women and 53% by men.

The gender analysis of the main business leaders not only confirms this difference in participation between men and women in Cameroonian companies, but also highlights the gap in terms of professional experience between these two groups of company leaders. Indeed, when one looks at participation at the level of the management of companies, the gap becomes even wider as only 16% of women hold the position of director in Cameroonian companies, while 84% of men are directors of companies. The trend is almost the same when an analysis of participation is conducted based on the size of the firm or industry. About 94% of men are managers in LEs compared to only 6% women, and only 9% of the latter occupy a management position in the manufacturing sector. These figures indicate that the presence of women in the management of Cameroonian companies is significantly lower than found in the works of Belghiti-Mahut and Lafont (2010) or Dang and Nguyen (2014) in French companies. The first study finds that 39.8% of French companies have at least one woman in their management. The second study found that only 13% of women held a seat on the board of directors of French companies. However, the study revealed that about 80% of companies had a female manager. Similarly, Schrader et al. (1997) researched on a sample of 200 American firms and showed that almost 23.68% of women were already in managerial positions in 1992.

When we look at the professional experience of key business leaders by gender, we find that the proportion of women with work experience in the industry is significantly lower (13%) compared to men (87%). Therefore men in management positions in companies have much more professional experience than their female counterparts. This could probably be an explanation for their predominant presence at this level.

An explanation of the differences in men's and women's participation in management and entrepreneurship can be provided by the human capital theory, which is based on the assumption that the endowment of individuals in human capital is the main determinant of income. According to this approach, it is the different levels of training of individuals that would justify the differences observed in participation in

the labour market, access to managerial positions or even the earnings gap between men and women. Therefore, if men are more represented in activities or management positions that are a priori better paid and more secure than jobs occupied by women, this could be explained by a low human capital endowment, in other words, low productivity of women. The increasingly competitive business environment demands a higher level of education, meaning those less educated or trained find themselves in precarious or disadvantaged positions.

The INS's (2010) analysis of gender disparities in education and training in Cameroon finds that the enrolment rate is lower among girls (87%) than boys (90%). This discrimination against girls in terms of schooling is confirmed when we look at the gender parity index (GPI) in most regions of the country. Primary school completion rates for girls and boys are indicative of the different paths of these two groups. The national school completion rate (73.7%) also masks great regional disparities. One of the main reasons for gender inequality in education is early marriage, which prevents many young Cameroonian girls from completing their education at the primary level and continuing to the secondary level. In a context where access to training appears to be not only an essential element of professional security, but also an important condition of economic efficiency for companies, the INS (2010) shows that women represent only 37.8% of the actively employed who had professional training in the Cameroonian labour market, and mainly in the sectors of the clothing industry (84,6%), restaurant (74,5%), retail trade (57,7 %) and agronomy (51.5%), which generally require low initial investments.

However, according to gendered theories of organisational processes, the distribution of work and decision-making power in organisations is based on their gendered evolution. This was established and controlled by men at a time when women held only marginal positions in the labour market. As a result, the structure of today's organisations reflects the roles and identity that society attributes to men. By way of illustration, the requirements for managerial positions are mostly modelled on the male ideal of a linear and uninterrupted career. This is clearly a barrier for women facing family commitments or constraints related to motherhood.

This gap in participation between men and women, to the detriment of the latter, can also be observed when one looks at the distribution of the workforce in Cameroonian companies. Such an examination allows us to observe that, whatever the employment status, the size of the company or the sector of activity, women are clearly in the minority compared to men. They fill only 10% of permanent jobs in companies and the proportion of women decreases as the size of the enterprises increases (they occupy 23% of permanent jobs in SEs and 14% in MEs, but only 6% of these jobs in LEs). The distribution according to sector of activity suggests a very low representation of women in the manufacturing sector (less than 2% of women hold a permanent job in this sector against 90% of men). The temporary distribution of jobs is also detrimental to women. Only 34% of temporary jobs are held by women compared to 66% by men (the manufacturing sector remains the one sector that employs the fewest women, only 20% against 80% men).

A similar analysis in the manufacturing sector, distinguishing between production and non-production employees, also reveals a predominance of male-occupied jobs over female-occupied jobs. Only 13% of women hold permanent production jobs (with 11% representation in SEs and LEs) compared to 87% of men, while 15% of women hold permanent jobs outside production.

An analysis of the distribution of jobs according to gender of the owner or principal manager of a firm confirms this predominance of “male” jobs, whatever the employment status or type of employment in the manufacturing sector. Indeed, both female- and male-owned businesses tend to employ many more men than women. Permanent jobs in female-owned enterprises are occupied by only 13% of female workers and 34% occupy temporary jobs. In the case of female-led enterprises, the analysis reveals that although women recruit a few more permanent and temporary women (32% and 47%, respectively), jobs occupied by men are still largely in the majority.

In addition to Becker's theory of human capital, which is frequently used as a framework for explaining the low participation of women in economic activity based on the assumption of lower endowments in human capital or training in the latter compared to men, other theories can serve as a framework for analysing this difference in gender participation in Cameroonian companies, including feminist explanations of women's participation in the labour market. For proponents of feminist theory, the domination of men is considered a historical postulate. Thus, gender gaps in the labour market are only cases of discrimination that result from the subordinate position (historically and culturally constructed) of women in society. As a result, cultural norms as well as the different social roles attributed to each gender constitute undeniable obstacles to women's participation in the labour market. This subordination of women and division of labour by gender have two consequences for the position of women in the labour market. First, they do the domestic work alone and therefore have less time to participate in other activities, including economic activities. Second, even if they are present in the labour market, they only perform activities that very often represent an extension of domestic activities. This last factor explains not only the low representation of women in the governing bodies of organisations, but also the precarious nature of their jobs and their low salaries.

The contribution or performance gap could also be explained by differences in endowments between men and women as postulated by the human capital theory. An analysis of professional experience according to the gender of the principal director shows that only 13% of female managers had professional experience in their sector of activity, against 87% of male managers. Thus, the underperformance of female-led enterprises is a consequence of their lack of professional experience or their low human capital endowment.

Female-owned businesses' access to financial institutions is still limited compared to that of their male counterparts. While 40% of businesses with a female principal manager have access to formal credit, fewer than 7% of female-owned businesses have access to credit from formal financial institutions. At the same time, 94% of

businesses with a male principal manager have access to formal financing, as do 60% of companies owned by men. However, these figures are somewhat higher than those found in the Congolese market where Mwisha (2016) shows that only 3.6% of female-headed businesses benefit from a line of credit or loan from a formal financial institution.

Several results from research on financing differences between male and female entrepreneurs agree on the rate of refusal of loans requested by female entrepreneurs/managers, which is higher than for men. However, the difficulty for these studies to agree on the reasons for this high refusal rate contributed to the researchers splitting out into two groups. On the one hand are those who establish a relationship between this refusal and the personal characteristics of female entrepreneurs/leaders (Lee-Gosselin et al., 2010; Coleman, 2000) in particular: lack of experience, their youth, and lack of guarantees (personal property). Similarly, several characteristics relating to companies owned/run by women are highlighted in these studies to explain the high rate of refusal of loans from financial institutions. Thus, the fact that these companies operate in high-risk business sectors, their youth (lack of evidence in the sector of activity) or the low growth rate posted by these companies would contribute significantly to the rejection of credit applications by financial institutions.

On the other hand, some authors explain these loan refusals as a result of the process and conditions for access to credit. According to these authors, the rates of credit refusal of female entrepreneurs/managers remain high even after considering the different characteristics presented above. Indeed, credit conditions for women (much larger guarantees and high interest rates) remain an obstacle to financing. An analysis of the overall turnover of companies for the year 2015, which represents the total value of goods and services sold during that year, indicates that it stands at FCFA501,870,000,000. When we look at the distribution according to gender of owners and main business leaders, the contribution to this turnover of businesses owned and/or run by women remains significantly lower than those of businesses owned and/or run by men. Indeed, while businesses owned by women contribute 37% to the overall turnover of the companies surveyed, the contribution of those owned by men is 63% of the overall turnover. This difference is even more noticeable when we look at this contribution according to the gender of the chief executive of the company (companies with women as main managers contribute only 3% of overall turnover while those directed by men make a contribution of 97%). These statistics confirm the underperformance of businesses owned and/or run by women as widely documented in the literature. These results are also corroborated by research carried out by Kasim and Akampumuza (2018), which concludes that productivity in terms of turnover is significantly lower among Rwandan businesses owned by women, compared to those owned by their male counterparts. More specifically, the authors find that turnover is 22% lower among businesses owned by women compared to those owned by men.

However, when we look at the analysis of growth in turnover and jobs according to companies owned/run by women, we find that regardless of these performance measures, companies owned/run by women are somewhat better compared to

those owned/managed by men. Indeed, there are differences in the rate of growth of turnover of around 9% and 4% in favour of businesses owned and run by women, respectively. (Female-owned businesses have a sales growth rate of 24% vs. 15% for businesses owned by their male counterparts. Sales growth of 22% is also seen in female-led businesses against 18% in those led by men.) With regard to growth rate in jobs, differences of 0.8% and 1.2% are observed in favour of businesses owned and run by women, respectively. (Female-owned firms register an employment growth rate of 2.6% compared to 1.8% for firms owned by their male counterparts. Employment growth of 3.1% is also observed in companies headed by women versus 1.9% in those headed by men). These figures indicate that in Cameroon, businesses owned/run by women employ slightly more people compared to those owned/run by men. This result is far from trivial when we know that beyond the ethical or legislative arguments, one of the main arguments put forward to justify the integration of women at all levels of the company is of an economic nature. In particular the positive influence of their presence on the performance or profitability of companies. This performance of businesses owned and/or managed by women in Cameroon can also be explained by the capacity of anticipation on the market that characterises Cameroonian female entrepreneurs. These include their proactive skills, their ambition as well as the objectives they set for themselves.

With regard to the distribution of growth rates in turnover and jobs according to sector of activity of the companies in our sample, the analysis reveals lower growth rates in the companies operating in the retail sales sector. These companies have average turnover and employment growth rates of 16% and 0.7%, respectively, while companies in the other services sector register the highest growth rates in Cameroon (growth rates in turnover and jobs are 20% and 2.9%, respectively).

The distribution of these growth rates by size of the companies reveals that, whatever the growth rate, the large companies are more efficient, registering growth rates of 28% and 5,5% in terms of revenue growth and job growth, respectively. These are followed by PEs which record a growth rate of 17% in terms of turnover and 2.4% in respect of growth in number of employees. In other words, GEs are the businesses that make the most sales and employ the most workers in Cameroon. These results remain in line with those obtained from the last general census of Cameroonian companies (RGE, 2016), which highlights the importance of the role that LEs play in the creation of permanent jobs and the contribution to the total turnover of companies in Cameroon. Indeed, compared to PEs and MEs, this survey presents GEs as the largest provider of permanent jobs, with 27.7% permanent jobs and 65.6% of the turnover generated by these companies. This performance of Cameroonian GEs can be explained by the greater capacity of these companies to innovate (as they invest more in research and development) compared to other types of companies that face a lack of financial resources.

The correlation table in the appendix (Table A1) suggests an absence of multicollinearity between the variables. Therefore, our econometric regression can be done. This is presented in the next section.

7. Econometric analysis

Table 3 presents the results of the linear regression of Equation 2. It indicates that, regardless of the performance measure adopted, the variable proportion of women is not significant. In other words, the presence of women in the workforce has no influence on the performance of companies, which leads us to reject our first hypothesis. This result can be explained by the very low proportion of women present in the companies in our sample. Representing only 10% of permanent jobs and 34% temporary jobs, the number of women employed in Cameroonian companies is still very low. As a result, the impact of their work on business performance cannot be significant compared to that of their male colleagues, the majority of whom are represented in the company, and therefore the workforce is likely to have a more significant impact on performance.

However, this result contradicts those of several studies. For example, the study by Rosa et al. (1996) who analyse the impact of the presence of women on the performance of British companies concludes that the presence of women in British companies is a determining factor in their performance when measured by turnover. In other words, companies with a high proportion of women have a higher turnover compared to those with a low representation. The authors rely mainly on feminist theories of organisations to explain this result, and particularly on the argument of gender differences in the behaviour in companies. Although these behaviours are frequently mentioned to explain the fact that women rise to higher positions less quickly, or that there are fewer women in higher levels of companies compared to men, they are mostly perceived as vectors of collective success in businesses. Thus, we can see that altruism or the absence of very competitive behaviour between employees contributes to improving the teamwork climate in the company (Mirza et al., 2012), and therefore making the business more productive.

Table 3: Linear regressions of business performance: Influence of women's presence as employed and in management

Variables	Turnover growth		Growth in number of employees	
	Coef	Std.err	Coef	Std.err
Proportion of employed women	-1,1749	(1,1162)	0,6161	(0,4806)
Percentage of female directors	0,6102**	(0,3535)	-0,1266	(0,1660)
Growth rate of number of employees	-0,5625***	(0,2552)	-	-
Growth rate of number of employees squared	0,2358	(0,4525)	-	-
Growth rate of turnover	-	-	-0,3013***	(0,0761)
Growth rate of turnover squared	-	-	0,0841***	(0,0236)
Professional experience in the sector	0,002	(0,0035)	0,0014	(0,0015)
Age of the company	-0,0174***	(0,0068)	-0,0049	(0,0031)
Age of the company squared	0,0002	(0,0001)	0,0001	(0,0004)
Sales sector	0,2572	(0,2774)	-0,1697	(0,1199)
Other services	0,2012	(0,1949)	-0,1096	(0,0908)
Small enterprise	-0,1155	(0,1284)	-0,0729	(0,0449)
Medium enterprise	-0,0635	(0,1256)	-0,0997**	(0,0497)
Access to credit: Line of credit or loan	-0,1037	(0,0692)	0,0182	(0,0324)
Access to credit: Overdraft facility	-0,0015	(0,0080)	-0,023	0,028
Self-financing	0,0855	(0,0553)	0,0008	(0,0244)
Investment: Equipment	0,0041	(0,0662)	-0,0675**	(0,0338)
Investment: Land or buildings	0,0092	(0,0535)	0,0006	(0,0048)
Business management tips	0,1197*	(0,0720)	-0,0067	(0,0341)
Power cut	-0,1480	(0,1256)	-0,0026	(0,0468)
Electricity generator	0,0652	(0,0682)	0,0128	(0,0313)
Losses due to theft	-0,1177	(0,0934)	0,0051	(0,0435)
Official registration	-0,0195	(0,0751)	-0,0722**	(0,0365)
Recruitment of skilled workers	0,0690	(0,0694)	-0,0259	(0,0339)
Foreign ownership	0,0028**	(0,0027)	0,0016	(0,0004)
Constant	0,5701***	(0,2149)	0,2482***	(0,0867)
Number of obs	361		361	
Wald chi2 (23)	50,40		30,30	
Prob > chi2	0,0008		0,1409	
Root MSE	0,5176		0,2356	

Source: Author.

*** Significant at 1%; ** significant at 5%; * significant at 10%.

The analysis of the influence of the presence of women in the management of companies on performance shows us that the increase in the percentage of women in management significantly increases the performance of companies when measured by growth in turnover. Indeed, the coefficient associated with this variable in Table 3 (0,6102**) turns out to be positive and significant at the 5% threshold. In other words, despite the small number of women in business management, we empirically observe that the presence of the latter in the management of Cameroonian companies improves by 61%, on average, the level of performance of companies in terms of turnover growth. This conclusion allows us to confirm our second hypothesis. However, this hypothesis is immediately rejected when the performance of the company captured by the growth of employees is taken into account, because the table of results reveals that the percentage of women in business management has no significant influence on performance when measured by the growth in the number of employees.

The performance in terms of sales growth by companies managed by women in the Cameroonian context can find an explanation in their status and managerial behaviour. This first result is similar to that of the work carried out by Belghiti-Mahut and Lafont (2010) in French companies, or by Mwishu (2016) in the Congolese context. Although the first authors measure performance according to Tobin's Q, they also point to a positive and significant relationship between the presence of women in the management of French companies and the performance of these companies. Mwishu (2016) shows that Congolese businesses managed by women are more efficient in terms of annual sales growth compared to those managed by men. Similarly, the work of Rosa et al. (1996) on the determinants of the performance of British small businesses show that the gender of the main manager is a significant determinant of the performance measured by turnover. The authors find that British small businesses run by women are very successful in terms of turnover, but nevertheless underperform in terms of number of employees.

The second result of our analysis agrees with the conclusions of numerous empirical works, notably those of Dang and Nguyen (2014) carried out in 120 French companies, which conclude that there is a lack of influence of percentage of women present in the management body of companies on their performance. It is also consistent with the second conclusion of the work of Schrader et al. (1997), which shows that there is no significant relationship between the percentage of women in management positions and the financial performance of large companies in the American context, or the conclusion of the study by Carter et al. (2010) based on a sample of 2,563 companies observed over a five-year period, which shows that the number of women on the board of directors has no influence on the financial performance of companies.

In the Cameroonian context, this result can be explained by the very low percentage of women in management positions, or the very low percentage of companies run by women in our sample. Indeed, it is suggested that the business environment in Cameroon still has a large gap between the percentage of men and women in business management (results confirmed by our descriptive statistics). Women are

significantly less likely to run businesses compared to their male counterparts. The low representation of women at this level in companies can therefore explain the low impact of their work on the performance of companies, particularly when this is measured in terms of growth in the number of employees.

Such a result can also be explained from a theoretical point of view. The theory of human capital (Becker, 1975) maintains that people at the head of companies bring with them a set of knowledge, skills and experiences that constitute the core of the performance of these companies. It is the skills or professional experience of managers that would explain the performance of their business (Fairlie and Robb, 2009). However, the argument of an underinvestment of women in human capital is widely put forward in the literature to explain the difficulties of women having access to management positions in companies, especially the underperformance of the companies they lead (Kasim and Akampumuza, 2018). Thus, the lack of significance of the variable relating to the presence of women at the management level of companies could be due to their lack of experience in the sector of the companies they run. A more in-depth analysis of the factors explaining the growth in the number of employees in companies by gender of the main manager (Table A4) confirms the key role of the experience of main manager in the performance of female-led businesses. In other words, this table shows that the professional experience of the chief executive officer has a positive and significant impact on the growth of employees in companies headed by women.

However, the coefficient associated with the variable percentage of women in business management turns out to be negative and not significant, reflecting a lack of significant influence on job growth. This finding contradicts many studies that find that female-owned businesses tend to have fewer employees compared to those run by men. Several studies in the literature confirm this small size in terms of the number of employees in businesses run by women. By way of illustration, Coleman (2007) finds that American companies managed by men employ 50% more employees than those managed by women. Still in the American context, a similar conclusion comes from Anna et al. (2000). One explanation for this negative influence of the presence of female managers on employee growth is that, generally speaking, employees are less accepting of being led by women, which in most cases leads to lower confidence in the hierarchy and professional relationships.

Furthermore, there is no guarantee that these gender differences in behaviour, which are widely documented to explain the positive link between the number of women employed and the performance of companies, can be observed at the level of company management. This could very well explain the fact that there is no positive influence from the presence of women in the management of companies on the growth of employment.

In addition to the variables representing the presence of women in the company, other variables explain the performance of Cameroonian companies. This is the case with the growth rate in the number of employees, which is proving to be an important determinant of growth of the company's turnover. Thus, the analysis shows that an

increase of one unit in the growth rate of number of employees implies a decrease of 56.25% in the growth of turnover. Likewise, the growth in the number of employees is determined by the rate of growth in turnover. The increase in the growth rate of turnover of 1% implies a decrease in the growth rate of the number of employees of approximately 30.13%. Table 3 also shows that annual turnover/sales decrease with the age of the company. In other words, a one-year increase in the age of the company leads to a decrease in annual turnover/sales of about 1.74%. However, the age of the company has no influence on the performance measured by employee growth, although the coefficient associated with this variable turns out to be negative. McPherson's (1996) work on five southern African countries confirms the negative impact of business age on employment growth.

An analysis of the influence of firm size indicates that, compared to large firms, medium-sized firms are less efficient in terms of growth in number of employees. In fact, the coefficients associated with the average size variable turn out to be negative and significant at the 5% threshold when employment growth is adopted as a performance measure. However, this variable is not significant on performance measured by the growth in turnover. Investment also appears to be a strategic variable in the performance of companies. Indeed, the investment in terms of purchasing equipment has a negative and significant effect at the 5% threshold on the growth in number of employees. In other words, when annual spending on equipment increases by one unit, the rate of growth in the number of employees decreases by about 6.75%. However, it has no influence on the growth of companies' turnover. The official registration of the company is also a determining factor in its performance. The analysis shows that the coefficient associated with the corresponding variable is negative and significant at the 5% threshold when the performance of companies is measured in terms of growth in the number of employees. This reflects the fact that companies registered legally at the start of their activities show low job growth. This variable is not significant when we consider performance through growth in turnover.

Table 4 presents the results of the breakdown of performance (measured by growth in turnover on the one hand, and growth in employment on the other hand) of businesses owned by men and those owned by women. This decomposition method allows us not only to assess the performance gaps between companies owned by women and men, but also to identify the reasons.

Table 4: Decomposition of business performance by gender of owner

Variables	Turnover growth		Growth in number of employees	
	Coef	Std.err	Coef	Std.err
Differential				
Prediction_Men	0,1507***	(0,0282)	0,0178	(0,0126)
Prediction_Women	0,2373***	(0,0502)	0,0259	(0,0193)
Difference	-0,0866	(0,0575)	-0,0081	(0,0230)
Decomposition				
Explained part	0,0212	(0,0257)	0,0133	(0,0105)
Unexplained part	-0,1078**	(0,0524)	-0,0215	(0,0216)
Number of observations	361		361	
1: female owners = 0				
2: female owners = 1				

Source: Author.

*** Significant at 1%; ** significant at 5%; * significant at 10%.

Considering revenue growth as a measure of performance, this analysis shows that the expected value of the revenue growth rate of businesses owned by men is 15% (Prediction_Men), compared to 23% (Prediction_Women) for businesses owned by women. These figures reveal an 8% gap between the two categories of businesses. This means that businesses owned by women are more successful in terms of revenue growth compared to those owned by their male counterparts. This difference in performance is mainly due to the difference in endowment between female and male owners. As a result, the results suggest that adjusting the level of endowment of male owners to that of women would increase the turnover of businesses owned by men by 2%. However, the analysis reveals that a 10% gap between the two categories of business remains unexplained.

Regarding the analysis of the performance gap in terms of growth in number of employees, although the results reveal very low growth rate values (the expected value of the growth rate of the number of employees for businesses owned by men is 1.7% and 2.5% for businesses owned by women), there is still a very small performance gap (a difference of 0.8%) in favour of companies owned by women. In summary, this analysis of the differences in performance between companies owned by men and those owned by women reveals a performance gap, both in terms of turnover growth and employee growth (although the first difference is clearly more important than the second) in favour of those owned by women. These results lead us to reject our third hypothesis. However, they confirm those of numerous studies carried out in various contexts, notably the work of Kasim and Akampumuza (2018) in Rwanda, and that of Coleman and Robb (2012), which all point to the existence of

a difference in performance in favour of female-owned businesses. Mwishu's (2016) study of Congolese companies also finds a difference in performance in favour of female-owned companies. Specifically, the author finds an 18% gap in annual sales growth between the two categories of business. This difference is mainly due to the difference in endowments. However, with regard to the performance gap in terms of growth in number of employees, the study points to a performance gap of 5.41% in favour of businesses owned by men.

As in most studies analysing the performance gap between businesses owned by men and those by women, the existence in the Cameroonian context of the performance gap in favour of businesses owned by women can be explained by the theory of market segmentation (Zeytinoglu and Cooke, 2005; Reynaud, 1994). The companies managed by or belonging to women would limit themselves, specialise and ultimately excel more in the sales and/or service sectors because low capital is required to set up these businesses and/or because of the difficulties to access other sectors. In the Cameroonian context, female-owned businesses are concentrated in the retail and service sectors. However, these two sectors represent 67% of the companies in our entire sample. Thus, the specialisation of female businesses in these sectors can explain the differences in performance observed between the two categories of businesses. Another explanation for this performance gap in favour of companies owned by women is the differences in entrepreneurial characteristics between the two categories of companies. It would seem that access to credit is more advantageous for female entrepreneurs than for their male counterparts. In other words, female entrepreneurs have certain characteristics that allow them to take better advantage of credit. They receive small loans due to the value of the guarantees they present, but also given the size of their business. This allows them to obtain relatively flexible terms, which eases credit management. In the Cameroonian context, access to credit facilities from microfinance institutions and government entrepreneurship promotion schemes, which mainly target female entrepreneurs, may explain this performance of female-owned businesses.

Table 5 summarises the main results obtained in the analysis, taking into account not only the levels of analysis and the measures of presence of women adopted, but also the performance measures selected.

Table 5: Summary of results from econometric analyses

Level of analysis	Measuring the presence of women	Performance measurement	Main results
Employees	Proportion of employed women	Turnover growth	No statistically significant influence on business performance
		Employment growth	No statistically significant influence on business performance
Management of company	Percentage of female directors	Turnover growth	Positive and significant influence on performance, reflecting an improvement of an average 61% in level of performance
		Employment growth	No statistically significant influence on business performance
Business owners	Percentage of female owners	Turnover growth	Businesses owned by women are more efficient compared to those owned by men. A difference in performance of 8% mainly due to differences in endowments between male and female owners
		Employment growth	Very small performance gap (difference of 0.8%) between companies owned by women and those owned by men, in favour of women

8. Conclusion

In this study, we proposed to analyse the link between the presence of women in Cameroonian companies and the performance of those firms. We first proposed to analyse the effects on business performance of the presence of women in the workforce. Next was an analysis of the effects on the performance of companies due to the presence of women in management, and finally we analysed the performance differences between companies owned by women and those owned by men. The results reveal that, regardless of the measure of performance, the variable proportion of women is not significant. In other words, the presence of women in the workforce does not affect the performance of Cameroonian companies. With regard to the effect on performance of a female presence at the company management level, the analysis does not reveal that the variable percentage of women in management exerts a positive and significant influence on the performance of companies when the latter is measured by growth in turnover. In other words, in addition to the relatively low importance of women in management of companies, the analysis shows that the presence of women in management of Cameroonian companies improves by 61%, on average, the level of performance of companies in terms of growth in turnover. However, this relationship is not observed when measuring corporate performance by employee growth. The analysis reveals that the variable percentage of women in business management does not have a significant influence on performance when measured by job growth.

Finally, the analysis of the performance gap between companies owned by women and those owned by men reveals a performance gap both in terms of turnover and employee growth in favour of male-owned businesses. In fact, looking at the difference in performance in terms of turnover, we note that the expected value of the growth rate in turnover of companies owned by men is 15% against 23% for female-owned businesses. This reveals an 8% gap between the two categories of companies. This reflects the difference in performance in favour of female-owned businesses, mainly due to the difference in endowments between female and male owners. This result suggests that adjusting the level of endowments of male owners to that of women would increase the turnover of businesses owned by men by 2%. This analysis also reveals a performance gap in terms of growth in the number of employees in favour of companies owned by women, although this difference in performance is very small (0.8% difference between the two categories of businesses).

Following the results obtained from our various analyses, some recommendations should be made to not only public authorities but also to employers' associations. This is to encourage women to access Cameroonian businesses, and to own and manage them, by integrating decision-making bodies. To achieve this, it is the responsibility of the government to strengthen education and training for women. Indeed, traditional educational schemes in Cameroon still do not expose women or girls to modern knowledge. Their level of education is found to be low compared to that of men, which further limits their recruitment and rise in companies. A look at UNESCO statistics of 2016 provides sufficient information on the under-education of girls. Almost 70% of young girls still suffer from illiteracy in Cameroon. The main reasons for this under-schooling is a result of poverty, cultural norms or even the parents' literacy. Strengthening women's capacity through literacy, formal education and training can, therefore, enable them to be better equipped to contribute actively, as well as men, to activities and strategic debates within companies. As a result, businesses will better understand women's expectations and preferences. This will allow them to develop their leadership capabilities.

This first recommendation can, therefore, translate into the following actions: First, gender awareness. This mainly concerns parents, community leaders, teachers and learners (girls and boys) with the aim of raising awareness of the crucial importance of helping or encouraging girls' access to education. Second, the creation of incentives aimed not only at limiting the school dropout rate of girls, but also at reducing the direct costs of education, which still limit the training of girls. These can be measures encouraging positive discrimination in favour of girls, such as awarding prizes to the best female learners or to those who come to school regularly; granting allowances to enrolled girls; scholarship programmes or financial assistance for these girls (for example the Female Secondary School Stipend Programme initiated in Bangladesh, which enabled more than two-thirds of girls to get secondary education); or even setting up sponsorships for girl learners as a strategy for keeping them in school and to dissuade them from giving up. Strengthening education and training for women can finally be achieved by modernising teaching materials. This encapsulates making available non-sexist teaching materials to schools. In other words, programmes and textbooks that do not only present girls and women in traditional roles, but that encourage them to embark on various careers and to participate actively in the life of society.

It is also a question of the public authorities encouraging and supporting female entrepreneurship in Cameroon by encouraging women to develop their capacity. This means giving women the means to take on responsibilities in the same way as men. Better still, creating a framework of "positive discrimination" in favour of women, to enable the creation of companies. This measure can translate into setting up incentives such as tax advantages, access to social protection, and financial contributions in order to encourage women to create businesses. It may also involve organising meetings to inform and sensitise women on the different statutes of the company, the procedures for its creation and registration.

Concerning access to finance, this measure can be implemented not only by improving information for female entrepreneurs on existing sources of finance, setting up specific mechanisms or programmes for funding female entrepreneurs with payment and repayment terms adapted to their needs, but also by setting up funds to finance women's projects, such as a start-up fund granted in the form of an interest-free repayable loan. Finally, with regard to access to business development support services and programmes, this involves specifically encouraging the participation of female entrepreneurs (sole traders and very small businesses run by women) in the various programmes and business development support services, for example by covering their travel costs. It also entails focusing the activities of support services for business development on support that meets the specific needs of female entrepreneurs, in particular on technical training incorporating adapted teaching methods, and professional networking to make women aware of business opportunities and of rights and regulations.

Finally, it is the responsibility of employers' associations or unions to educate business leaders and their network on the empowerment of women. Because the weak representation of these in the breasts of the organs of management, direction and execution can lead to a loss of earnings for Cameroonian companies. Indeed, by number (nearly 51% of the total population according to the Central Bureau of Censuses and Population Studies, 2010) women represent a significant potential workforce which could be beneficial for business. It is therefore about revaluing the role of women and considering them to be a potential force to benefit companies.

This study has some limitations that are worth highlighting. The first concerns the constitution of the sample (361 companies), which reduces its scope and does not allow generalisation and transposition of the results. Mainly concerning the Cameroonian context, it would be wise to widen the sample and include in the analysis all companies that do not appear in the formal, private non-agricultural economy. This obviously poses the problem of accessibility to data, which is not guaranteed. The second limit relates to the fact that very small businesses (employing less than five people) are not taken into account in the data collection; companies which are mostly represented in Cameroon and are mainly owned/run by women. Indeed, the exclusion of this category of business not only reduces the study sample, but also limits the analysis on the impact of women on business performance.

Note

1. SDG 5: Achieve gender equality and empower all women and girls. SDG 10: Reduce inequalities within and across countries.

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Annex

Table A1: Correlation between study variables

	Croiss-i	P_femm-t	P_femm-o	femm-ptp	experi-r	Fabric-n	Vente	Autres-c	Petite	Moyenne	Grande	Acces_-t	Invst_-u	Coupr_-g	Age
Croissance_i	1.0000														
P_femmedirt	-0.0275	1.0000													
P_femmepr-o	0.0526	0.4994	1.0000												
femmeemp-ptp	0.2277	0.0330	0.2335	1.0000											
experience-r	0.1356	-0.1129	0.0268	0.1813	1.0000										
Fabrication	0.0923	-0.0840	-0.1214	-0.0739	-0.0208	1.0000									
Vente	-0.1794	0.0889	-0.0618	-0.1053	-0.0419	-0.3193	1.0000								
Autres_svc	0.1182	-0.0336	0.1407	0.1528	0.0553	-0.3347	-0.7861	1.0000							
Petite	-0.1770	0.1502	-0.0453	-0.2363	-0.1748	-0.0526	0.2156	-0.1801	1.0000						
Moyenne	0.0083	-0.0588	-0.0226	-0.0167	0.1146	0.0503	-0.0203	-0.0127	-0.7585	1.0000					
Grande	0.2538	-0.1453	0.0985	0.3763	0.1063	0.0106	-0.2953	0.2867	-0.4688	-0.2200	1.0000				
Acces_credit	0.1957	-0.0939	0.1000	0.1717	0.1519	0.0070	0.0617	-0.0659	-0.1036	0.0607	0.0728	1.0000			
Invst_secu	0.2426	-0.0210	0.1221	0.1796	0.1337	0.1133	-0.1520	0.0772	-0.1162	0.0447	0.1133	0.1099	1.0000		
Coupr_enrg	0.0371	-0.0060	0.0802	0.0395	0.1517	0.0440	-0.0482	0.0192	-0.0777	0.0825	0.0044	0.0361	0.0601	1.0000	
Age	0.0399	-0.0674	0.0733	0.1424	0.6097	-0.0594	-0.0490	0.0875	-0.2171	0.1781	0.0836	0.0881	0.1128	0.0768	1.0000
groupe_ele-c	0.1241	-0.0184	0.1074	0.1556	0.1514	-0.0538	-0.0912	0.1258	-0.1140	0.0578	0.0923	0.0929	0.2645	0.0063	0.1921
perte_crim	0.1775	-0.0117	0.1025	0.0645	0.0425	-0.1253	-0.0917	0.1728	-0.1077	0.1528	-0.0459	0.1122	0.1301	0.1236	0.0038
Trvqli	0.1711	-0.0853	0.1008	0.2488	0.1940	-0.0669	-0.1126	0.1556	-0.1072	0.0773	0.0557	0.2394	0.2254	-0.0573	0.1999
Conseil_acvt	0.2193	-0.0180	0.0642	0.1221	0.1532	0.0027	-0.0163	0.0145	-0.0868	0.0939	0.0027	0.2226	0.2353	0.0844	0.1706
Financemen-o	0.0462	-0.0226	-0.0162	-0.0962	-0.0447	-0.0394	-0.0292	0.0547	0.0892	-0.0872	-0.0155	0.0300	-0.1656	-0.0144	-0.2452
enregist_o-l	0.1483	-0.0537	0.0455	0.0378	0.1030	0.0839	-0.0401	-0.0149	-0.1176	0.0679	0.0839	0.1527	0.0627	0.0363	0.0932
pro_etrn	0.0911	-0.1110	-0.0197	0.0572	0.1905	0.0130	-0.1195	0.1103	-0.0953	-0.0337	0.1884	0.0969	0.0423	-0.0101	0.1444
groupe_c	perte_m	Trvqli	Conseil-t	Financ-o	enregi-l	pro_etrn									
groupe_ele-c	1.0000														
perte_crim	0.0571	1.0000													
Trvqli	0.1858	0.1836	1.0000												
Conseil_acvt	0.2344	0.0243	0.2263	1.0000											
Financemen-o	-0.0461	0.0842	0.0459	-0.0498	1.0000										
enregist_o-l	0.0160	0.0277	0.1517	-0.0509	0.0285	1.0000									
pro_etrn	0.1292	-0.0085	0.0934	0.0552	-0.0181	0.0366	1.0000								

Table A2: Linear regression: Presence of women in business management

Linear regression

Number of obs = 361
F(2, 358) = 65.78
Prob > F = 0.0000
R-squared = 0.3114
Root MSE = .30386

femme_d	Robust					[95% Conf. Interval]	
	Coef.	Std. Err.	t	P> t			
prop_fem	.4024808	.0650539	6.19	0.000	.274545	.5304167	
pr_fmp	109.8861	14.99847	7.33	0.000	80.38997	139.3823	
_cons	-.0571375	.0124364	-4.59	0.000	-.0815952	-.0326799	

Table A3: Linear regression: Proportion of women in business

Linear regression	Number of obs = 361
	F(2, 358) = 27.64
	Prob > F = 0.0000
	R-squared = 0.1722
	Root MSE = .25915

prop_fem	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]
19b	.0009185	.0003313	2.77	0.006	.0002669 .0015701
pr_fmd	113.6396	16.54202	6.87	0.000	81.10784 146.1713
_cons	.169599	.0183127	9.26	0.000	.1335849 .2056131

Table A4: Linear regression: Employee growth in female-headed enterprises

Source	SS	df	MS	Number of obs = 57
Model	2.65345631	23	.115367666	F(23, 33) = 3.50
Residual	1.0879561	33	.032968367	Prob > F = 0.0005
				R-squared = 0.7092
				Adj R-squared = 0.5065
Total	3.74141241	56	.066810936	Root MSE = .18157

CE	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
prop_fem	-.3862717	.112405	-3.44	0.002	-.6149614 -.1575821
femme_p	.0955013	.1049505	0.91	0.369	-.1180221 .3090247
CV	.0110632	.1481446	0.07	0.941	-.2903394 .3124657
CV_2	-.3373539	.1096658	-3.08	0.004	-.5604706 -.1142372
experience_directeur	.0133209	.0042387	3.14	0.004	.0046973 .0219446
Fabri	.1675693	.1131506	1.48	0.148	-.0626374 .397776
Autr	.1282354	.0717696	1.79	0.083	-.0177809 .2742516
Getse	-.2040088	.1571172	-1.30	0.203	-.523666 .1156485
Metse	.1861939	.0827898	2.25	0.031	.0177567 .354631
Acces_credit	-.1083527	.1268013	-0.85	0.399	-.3663318 .1496264
Invst_secu	-.0072159	.0888255	-0.08	0.936	-.1879327 .1735008
Coupr_enrg	-.204913	.0965075	-2.12	0.041	-.401259 -.0085669
Age_2	.0006469	.000273	2.37	0.024	.0000915 .0012023
Age	-.036718	.0114058	-3.22	0.003	-.0599233 -.0135127
groupe_electric	.0758489	.0904942	0.84	0.408	-.108263 .2599607
perte_crim	-.1670607	.080471	-2.08	0.046	-.3307803 -.0033412
Trv_qli	-.1343468	.0707732	-1.90	0.066	-.2783359 .0096423
Conseil_acvt	-.0378779	.0779482	-0.49	0.630	-.1964646 .1207089
Financemen_proprio	.1260102	.0767862	1.64	0.110	-.0302125 .2822329
enregist_officiel	.0821004	.0813672	1.01	0.320	-.0834424 .2476431
pro_etrn	-.000879	.0025044	-0.35	0.728	-.0059742 .0042162
fcl_dcvt	-.0062398	.0639772	-0.10	0.923	-.1364024 .1239228
imbilst	.0990285	.07698	1.29	0.207	-.0575884 .2556455
_cons	.3911032	.1489588	2.63	0.013	.0880443 .6941622



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Middle East Bank Towers,
3rd Floor, Jakaya Kikwete Road
Nairobi 00200, Kenya
Tel: +254 (0) 20 273 4150
communications@ercafrica.org