




IDENTIFYING FEMALE LEADERSHIP AND PERFORMANCE IN SMALL AND MEDIUM-SIZED ENTERPRISES IN A TRANSITION ECONOMY: THE CASE STUDY OF VIETNAM



 Tien Quang Tran

Vietnam Women's Academy, Dong Da, Hanoi, Vietnam.
Email: tranquangtien@vrwa.edu.vn Tel: +84948990868



ABSTRACT

Article History

Received: 14 October 2019

Revised: 21 November 2019

Accepted: 30 December 2019

Published: 10 February 2020

Keywords

Gender diversity
Female leadership
Company performance
Small and medium enterprises
Transition economy
Vietnam.

JEL Classification:

L25, M11, M12, M51.

A review of the literature shows that there is no consistently positive impact on enterprise performance of female participation in business leadership (gender diversity in leadership). This study conducts direct surveys of more than 500 Small and Medium-sized Enterprises (SMEs) in Hanoi, Vietnam, to assess the relationship between women in top management positions and enterprise performance. Unlike previous studies, which used financial indicators to measure enterprise performance, this study adopts the Balance Scorecard theory (BSC) developed by Kaplan and Norton (1996) that assesses enterprise performance based on four groups of criteria: Financial, customer, internal operating process, and training and development. In addition to the control variables used commonly in previous studies, this study adds two factors: (1) awareness of equal opportunities for men and women to become business leaders (2) appropriateness of men and women in leadership positions. The results of the study have shown no clear relationship between the percentage of female participation in leadership, and the financial results and customer development of the enterprise. However, internal operating process and training and development results are negatively affected by the participation of women on the board of directors. The inconsistency of these research results suggests the need to continue to study this topic in SMEs with larger sample size and geographic scope.

Contribution/ Originality: The current study employs the Balance Scorecard theory developed by Kaplan and Norton to assess the enterprise performance based on financial, customer, internal operating process, and training and development. The study findings are useful for female leadership in Small and Medium-sized Enterprises in transition economies.

1. INTRODUCTION

In recent years, the Vietnamese government has encouraged women to participate in leading and operating enterprises. In 2017, Decision No. 939/QĐ-TTg of the Prime Minister published in 30/6/2017 approved the national project labeled "Support for Women in Business Startup in the period of 2017-2025". The project aims to raise awareness of women as sound business owners and managers of business startups. The most important goal is for 20,000 women to start a business by 2025 and 100,000 women-owned enterprises to be established (Tran, 2017a). In promoting women's participation in corporate governance, on June 6th, 2017, the government issued

Decree No. 71/2017/ND-CP on corporate governance guidelines applicable to public companies, stipulating that "The composition of the board of directors must be balanced in terms of the number of members having knowledge and experience in law, finance and business operations of the company and gender balance" (Clause 1, Article 13). This new law will bring comprehensive change to gender participation within enterprises, and a consequence always follows change. Understanding the potential consequences of a prescribed change is of interest to a variety of stakeholders. This study aims to identify the relationship between broadly defined Small and Medium-sized Enterprises (SMEs) performance, and increased female participation on boards and in management positions.

The new law, Support for Small and Medium-sized Enterprises (SMEs) in Vietnam, sets two criteria for identifying SMEs, namely, the number of insured employees and capital. Specifically, SMEs comprise micro-, small-, and medium-sized enterprises, each with no more than 200 employees per year on average who are covered by social insurance (Tran, 2017b). SMEs owned by women in Vietnam account for at least 26% (International Finance Corporation (IFC), 2017). Women-owned enterprises account for only 21% of all firms in Vietnam. Of this 21%, micro-enterprises account for 57% of the total number of women-owned enterprises; SMEs account for 42%, and only 1% own large-scale enterprises. A study focusing on SMEs owned by women in Vietnam concludes that 98.8% of SMEs owned by women are micro and small enterprises, of which 61.4% operate in the service sector, 37.6% operate in the manufacturing sector, and 1% operates in the agricultural sector (Mekong Business Initiative (MBI), 2016).

According to the Labor Force census from 2009-2014 conducted by the General Statistics Office of Vietnam (GSO), the proportion of female leaders and managers in the business sector accounts about 23% of all leaders and managers. Besides, approximately 30% of all business entities (SMEs, household businesses, and large enterprises) are owned by women. Although the 2018 index of women entrepreneurs ranked Vietnam 18th out of 57 economies, Vietnam stands ahead of all Asian countries (Newsroom, 2018). The 2015 report of the International Labor Organization presented a survey of over 600 enterprises and found that women account about 14% of the board members and 7% of CEOs (International Labour Organization (ILO), 2015). Tran and Phung (2018) have used secondary data on the Vietnam stock market and found that enterprises led by women gain impressive results in comparison with firms led by men. Despite the capital constraints and small scale of their businesses, female-led enterprises achieve better results in revenue, after-tax profit, and return on equity (ROE). In addition, previous studies also have confirmed that women's enterprises are more responsible for paying taxes, social insurance, attracting female workers, and implementing other social responsibilities.

2. THEORETICAL BASIC AND RESEARCH MODELS

Gender diversity is a suggested requirement for any business to encourage recruiting and retaining talented groups of individuals. Gender diversity brings a variety of experiences and views that are beneficial to businesses and stakeholders. Women's participation on boards of directors encourages creativity and innovation, and also employing women members on the board provide the opportunity to consider a variety of ideas and possibilities. It improves women's productivity and promotes company images through role modeling (Carvalho and Diogo, 2018). The American Psychological Association (APA) (2015) defines gender diversity as "The extent to which a person's gender identity, role, or expression differs from the cultural norms prescribed for people of a particular sex. This term is becoming more popular as a way to describe people without reference to a particular cultural norm, in a manner that is more affirming and potentially less stigmatizing than gender nonconformity". The gender of an enterprise's board member is just one characteristic of diversity. According to Dutta and Bose (2006), the definition of gender diversity on boards refers to the presence of females as members of boards of directors. Additionally, Van der Walt and Ingley (2003) describe the diversity of corporate governance as a component of boards of directors and a combination of the various qualities, characteristics, and knowledge of each member related to the decision-

making and other board processes. Many studies have investigated the impact of women leaders and managers on corporate effectiveness. There is a close relationship between governance and corporate performance. In addition, some studies have analyzed and compared the differences between female- and male-owned enterprises.

A survey conducted by [Navigos Group \(2018\)](#) on nearly 1000 people in Vietnam in 2018 shows that gender diversity plays a vital role in developing enterprises. The results of this survey indicate that 50% of respondents believe that gender diversity contributes to resolving company problems; 41% believe that gender diversity serves a wider variety of customers, and 26% think that gender diversity attracts and maintains talent. Mekong Business Initiative (MBI) also concluded that female-owned businesses employ more female workers, pay higher insurance and pay less for creating new jobs when compared to male-owned enterprises. [Nadeem et al. \(2017\)](#) study of American firms for the period of 2010-2014 found that corporate sustainability practices increase in line with an increase in gender diversity.

The company performance variable has frequently been used in conjunction with gender diversity, and the various impacts of gender diversity on company performance are relatively diverse. [Catalyst \(2007\)](#) has used the financial performance variable as measured by return on equity (ROE), return on sales (ROS) and return on invested capital (ROIC). The research work of [McKinsey and Company \(2007\)](#) employs effective variables including return on equity (ROE), operating results (earnings before interest and taxes, EBIT) and stock price growth. [Lückerath-Rovers \(2013\)](#) have also used all of the above. Other researchers have used only one variable. For example, [Krishnan and Park \(2005\)](#) use return on total assets (ROA); [Christiansen et al. \(2016\)](#) use the dependent variable on the firm's assets; [Dezsö and Ross \(2012\)](#) and [Conyon and He \(2017\)](#) employ Tobin's q as a representative of performance. Tobin's q is defined as the ratio of the market value of a firm's assets to its replacement value.

Results of impacts: Presently, the relationship between gender diversity and company performance is unclear. The research conducted by [Rhode and Packel \(2014\)](#) comprehensively reviews several studies and concludes that there is no evidence of a consistent and robust relationship between the board structure by gender and a firm's financial results. However, studies have shown, through both theoretical and practical results, which the presence of gender diversity positively affects the decision-making process, contributing to the promotion of the firm's image through the transmission of equal and inclusive opportunities.

The trend of a positive impact of women's leadership or management on business performance has been found in many studies. Two case studies by [Catalyst \(2007\)](#) and [McKinsey and Company \(2007\)](#) also found that firms with many female managers have higher ROE, ROS and ROIC than those without female managers. The works of [Lückerath-Rovers \(2013\)](#); [Krishnan and Park \(2005\)](#); [Conyon and He \(2017\)](#) and [Roberson and Park \(2007\)](#) have also concluded the same results.

Other studies have found a positive relationship between female managers/leaders and company performance. [Christiansen et al.](#) have found a positive relationship between the rate of return on assets of enterprises (ROA) and the percentage of females in senior positions, and they developed two potential channels that support the effect of gender diversity on company performance. Positive interaction is clearly shown in sectors that employ mostly women, such as the service sector. Although many studies focus on small samples in select countries, [Christiansen et al.](#) have analyzed more than 2 million listed and non-listed companies that include at least two females in their senior group and/or on their board of directors across 34 European countries ([Christiansen et al., 2016](#)).

The study of [Lenard et al. \(2014\)](#) has calculated the effect of gender diversity on company performance through [Cheng \(2008\)](#) model and the use of the risk variable standard deviation of monthly stock returns. The results show that gender diversity on boards of directors affects company risk due to the reduction of profit volatility on the stock market. More significant percentages of female directors on boards of directors correlate with lower risk crises of company performance ([Lenard et al., 2014](#)).

Martín-Ugedo and Minguéz-Vera (2014) have analyzed small and medium Spanish enterprises, and their study conclude that the participation of women on boards of directors increases company performance and decreases the risk level of ownership. This research also found that female participation on boards of directors positively affects company performance. Dezsö and Ross (2012) used 15 years of panel data on senior managers from 15,000 companies and found that, when women's representation in senior corporate positions is high, company performance increases when company strategies emphasize innovation. Moreover, social benefits, information on gender diversity and behaviors related to women in leadership are essential for corporate management.

Post and Byron found that the percentage of females on boards of directors positively affects the accounting profit, and this effect becomes stronger in countries with better shareholder protection. Shareholder protection may encourage boards to use the knowledge, experience, and other values of every shareholder. Although the relationship between female performance rates on boards of directors and market performance seems to be zero, this relationship is positive in countries with high gender equality, and negative in the countries with low gender equality. This research also found positive interactions between two main tasks of boards of directors: supervision and firm strategy (Post and Byron, 2014).

According to Qian (2016), the nomination of female directors, and boards of directors with gender diversity both positively affect company performance. However, there are significant differences among countries due to measurement methods. Company performance turns high when there are two females on the board. Qian's research also found that company performance in the past cannot forecast the addition of the female directors in the future. Besides, cross-country differences in female corporate leadership in response to economic demand and supply as measured by gender equality in college education, labor participation, wages, and infant survival; females on boards of directors are identified by economic factors that are considered a potential variable of company performance in the future. The study of Liu *et al.* (2014) has used panel data on Chinese enterprises and concluded that gender diversity positively impacts company performance. However, the impact of female managers on company performance is significant only for private firms, not for state-owned enterprises.

A few studies found that there are negative impacts or no effects of gender diversity on company performance. For examples, Adams and Ferreira (2009) analyzed data from the American market and found evidence that women's leadership do not give support to the business. Because female executive members supervise and manage business more strictly, the growing numbers of females on boards can result in strict or unnecessary control levels in good management enterprises, and it results in a negative and unexpected influence on company performance. However, it has been found that increased numbers of females on boards correlate with better attitudes and performances by male directors. If all characteristics of the directors remain, there will be more opportunities for female directors to participate in monitoring committees when compared to male directors. Specifically, females have more opportunities to be in positions on the control, management and administrative boards. However, they have fewer opportunities to be part of compensation committees. Females also seem to have a significant influence on board management. Adams and Ferreira confirm the results of some previous studies, which conclude that lower company performance correlates with greater gender diversity on boards of directors.

Rhode and Packel (2014) provide a comprehensive review of research on diversity and corporate boards. Empirical research on the effect of board diversity on company performance is inconclusive, and they argue that the results are highly dependent on the methodology. In spite of this, they have still concluded that board diversity enhances decision making. In addition, Francoeur *et al.* (2008) studied the 500 largest Canadian firms and found a positive correlation between female leaders and financial performance, but no relationship between the ratio of women directors and company performance.

The study of Ryan and Haslam (2005) has examined the performance of FTSE 100 companies before and after the appointment of a board member and concluded that "In a time of a general financial downturn in the stock

market, companies that appointed a woman had experienced consistently poor performance in the months preceding the appointment. In contrast, when the stock market was more stable, companies that appointed a woman had experienced positive (but fluctuating) performance” (p. 86).

Lee and James (2003) used the data from the US stock market from 1990 to 2000 to examine shareholder responses (through cumulative abnormal returns) to the appointment of CEOs. The results indicate that the market has a negative response to the appointment of female CEOs. At senior management levels, there are stronger negative responses, and the internal appointment of female CEOs elicits stronger negative responses than external CEO hires.

The research of Joecks *et al.* (2013) specifically divides female leadership on the board of directors into three levels and concludes that gender diversity only contributes to company performance if the percentage of females on a board is more than 10%. Additionally, company performance has reached the highest level, and exceeds performance with only male managers when the percentage of female managers reaches 30%. However, if the rate of female managers is increasing but less than 10 percent company performance will decrease.

In conclusion, the results of examining the relationship of female owner/manager participation in SMEs are inconsistent and inconclusive. Therefore, this topic must be further studied. Based on the literature review, this study proposes the following research model Figure 1:

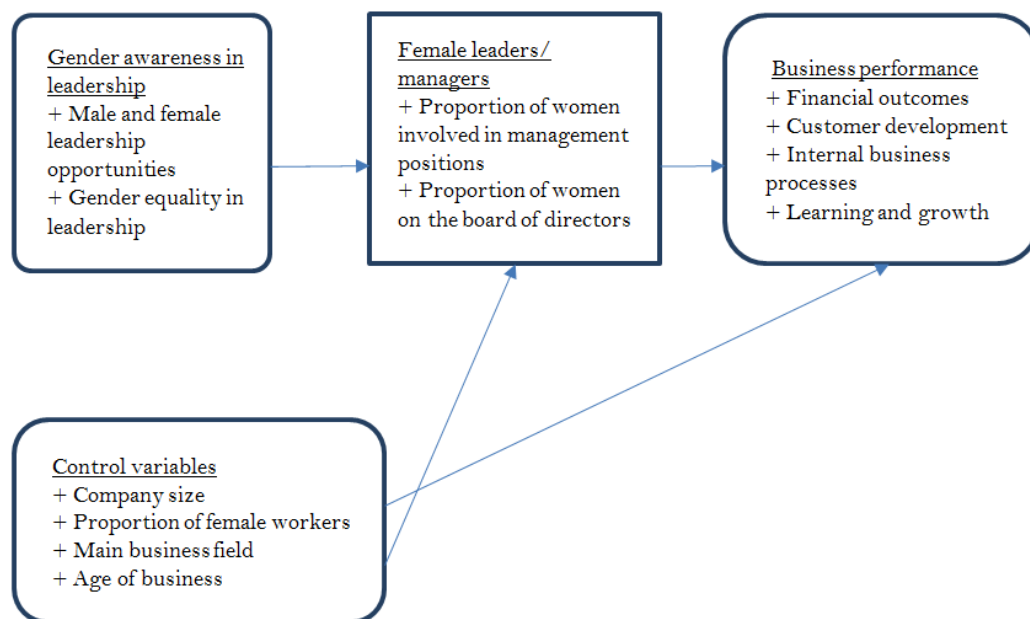


Figure-1. Theoretical model.

Source: Joecks *et al.* (2013).

3. MATERIALS AND METHODS

3.1. Measures

Company performance. For a long, Managers have employed financial evaluation to assess organizational performance. However, in the business environment, the judgment of business performance solely on financial performance has received criticism because it is considered a short-term measurement, it only displays past results, and it fails to illustrate the results of management activities and decisions. The Balanced Scorecard (BSC) method developed by Kaplan and Norton (1996) offers a novel approach to measuring strategic management activities. Following the reviewed studies, BSC is a collection of financial and non-financial measures that comprehensively evaluate organizational performance and strategic management through four perspectives: Financial outcomes, customer development, internal business processes, and learning and growth. Hudson *et al.* (2001) assert that the

balanced scorecard method adequately captures all dimensions of organizational performance. The study results of Peng and Zhou (2011) concluded that the balanced scorecard method provides an integrative view of overall organizational performance and strategic objectives.

In this study, the researchers utilize the scales developed by Le (2016) and Nguyen (2009), which follow Kaplan and Norton (1996). Business activity results are measured using the BSC method, with the simultaneous assessment of four dimensions: Financial outcomes, customer development, internal business processes, and learning and growth. Finance is measured using two criteria (F1, F2) for interviewee perceptions of total revenue and profit margins when compared to the industry average. Customer development is measured using three criteria: Market share, number of new customers and number of customers satisfied with goods and services. These criteria are denoted by C1, C2 and C3, respectively. Internal business processes are measured using five criteria (IBP1, IBP2, IBP3, IBP4, and IBP5); learning and growth are measured using three criteria (LG1, LG2, and LG3, see Appendix). All criteria are appraised with a five-point scale, as prescribed: (1) Greatly below average, (2) Slightly below average, (3) Average, (4) Slightly above average, (5) Greatly above average.

Female representation in leadership: This study focuses on SMEs in the private sector. Two striking characteristics of SMEs' leadership in Vietnam are that the owners lead and manage their enterprises, and that most SMEs do not feature boards of directors. Therefore, two scales are used: (1) the proportion of females on the board of directors (FE_LE_RATIO) (2) the proportion of females who are managers (FE_MA_RATIO; this variable applies for all levels of firm management). These variables are calculated by dividing the number of female leaders and managers by the total number of leaders and managers.

Perceptions of gender in business leadership and management: Gender studies mainly evaluate differences in opportunities between men and women and then analyze gender stereotypes or gender prejudices that exist in society. This study includes nine criteria that assess perceptions—of both male and female leaders and managers—of women in business leadership and management, and these criteria have been tested in previous studies (Zhu *et al.*, 2015; Tran, 2017b). These criteria are measured using a five-point Likert scale: (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, and (5) strongly agree (see Appendix).

Control variables: The business scale (SCALE) variable is commonly used in the literature. This study measures SCALE based on three levels: very small (micro), small, and medium, according to Vietnamese classification. Also, the number of employees (LABOR) is also used as a proxy for SCALE. Following previous literature (Lee and James, 2003; Adams and Ferreira, 2009; Dezsö and Ross, 2012; Rhode and Packel, 2014), firm age (AGE), field of business (FIELD) and female worker ratio (FE_RATIO) are also used as control variables. Since more than half of surveyed enterprises operate in the service industry, FIELD is developed as a dummy variable, equaling 1 if the enterprise is in the service industry, and 0 if not.

3.2. Sample and Survey Method

The present study conducted a survey in Hanoi, the capital city of Vietnam from April to August 2018, using four separate methods. First, questionnaires were distributed at workshops organized by the Hanoi Women Association of Small and Medium Enterprises (HAWASME) and the Hanoi Women Entrepreneurs Association (HNEW). Second, the researchers collaborated with the Department for Enterprise Management (the Ministry of Planning and Investment) to conduct face-to-face interviews with firm leaders and managers. Third, electronic questionnaires were sent to the member lists of HNEW and HAWASME, by appointing the staff of these organizations in charge for collecting the completed surveys. Fourth, all members of the entrepreneur network of the Vietnam Women's Academy were asked to complete the questionnaires.

After removing all incomplete responses, 521 surveys on SMEs were suitable for data analysis. The average number of employees was 41 per enterprise; the enterprises in this sample were established between 1956 and 2018;

their sizes were: 19% very small, 57% small, and 24% medium. The majority of enterprises in the sample operated in trade and services (about 64.4%), and the rest mainly operated in the manufacturing and construction industries.

The gender distribution of respondents in this survey was relatively equal (approximately 55% of total interviewees were women). Most of the respondents held top executive or managerial positions at the departmental level (88%). The remaining individuals were human resource officers and answered the survey based on a delegation from company leaders. Interestingly, around 70% of the respondents held senior positions at their respective companies (e.g., chairperson of the board of directors, general director, and deputy general director).

4. RESULTS AND DISCUSSION

4.1. Reliability and Exploratory Factor Analyses

The results of the exploratory factor analysis (EFA) revealed two different dimensions of gender perception in business leadership. The first was perceived as gender equality in leadership opportunities, and the second was perceived as gender business leadership suitability. Following the EFA, eight scale items were grouped in the perceived gender leadership suitability dimension, while only one item fell under perceived gender equity in leadership opportunity dimension (GE1). The results of the second EFA featured the Varimax rotation matrix, which completely fulfills the EFA application conditions. Further, reliability analysis was conducted for items in each dimension. As Hoang and Chu (2008) conclude, if Cronbach's alpha coefficient is between 0.8 and 1, the measure is highly reliable; it is reliable if it is between 0.7 and 0.8; and satisfactory if it is between 0.6 and 0.7. The results show that the scales are reliable enough to effectively measure each dimension, as all Cronbach's alpha coefficients are more significant than 0.7. Variables were then calculated for each factor by taking the average sum of the items for that factor, and these variables were included in the regression model under the names GE_OP (leadership opportunity equality) and GE_ST (leadership suitability).

Reliability was also calculated for all aspects of business performance (that is, the dependent variables), as explained in the Appendix. Here, four aspects were covered: finance outcomes, customer development, internal business processes, and learning and growth. The test results showed that most measures are reliable (that is, the coefficients are more significant than 0.7). The measure of learning and growth has a Cronbach's alpha coefficient of 0.683 that is close to 0.7. This reliability coefficient is generally acceptable for new measures in quantitative research (Hoang and Chu, 2008).

4.2. Regression Results

Regression models were performed for two dependent variables: the proportion of females on boards of directors, and the proportion of females who were department-level managers. For each dependent variable, two models were used: Model 1, which included only control variables, and Model 2, which included both control variables and two independent variables that assessed gender leadership opportunity and suitability as described in section 4.1 (GE_OP and GE_ST). There is no evidence of multicollinearity (VIF: < 2), and violations of assumptions of OLS regression, as shown in Table 1.

The regression results show that the larger business scale correlates with smaller proportions of female board members and managers. In contrast, larger proportions of female workers correlate with larger proportions of female directors and managers. This finding seems to indicate two conflicting trends: larger business scales may lead to fewer women being selected for leadership and, the more female employees are present in the enterprise, the higher the number of women in leadership positions.

More importantly, the research results suggest that bias toward women in leadership may influence the proportion of women involved in leadership. Specifically, the assumption that men are more suitable and likely to be more effective than women in business management correlates with lower proportions of female board members

and managers. These effects are statistically significant at the 95% level. However, the concept of equal opportunities for women and men in business leadership does not seem to affect the proportion of women in leadership positions in this sample.

Table-1. Regression results: Factors influencing the engagement of women in business.

Dependent variable / Independent variable	FE_LE_Ratio		FE_MA_Ratio	
	Model 1	Model 2	Model 1	Model 2
Age	.052	.044	.070	.066
Field	-.009	-.005	-.045	-.045
Scale	-.112**	-.115**	-.108*	-.116**
FE_Ratio	.475***	.467***	.539***	.530***
GE_OP		.010		.057
GE_ST		-.092*		-.088*
R ²	25.3%	26.1%	31.8%	32.6%
Change in R ²		0.8%		0.8%
F test	478***	476**	402***	400**
N	483	483	407	407

Notes: a, *, **, *** mean statistical significance at levels 90 percent, 95 percent, 99 percent, and 99.9 percent, respectively.

Table-2. Regression results: Effect of female leadership and management on business performance.

Dependent variable / Independent variable	Finance			Customer		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
GE-OP	.130	.129	.135**	.064	.067	.075
GE-ST	-.056	-.065	-.066	.040	.028	.026
Age	-.013	-.019	-.023	-.017	-.011	-.018
Field	-.029	-.020	-.021	-.022	-.018	-.018
Scale (mean centered)		.142**	.147**		.067	.073
FE_LE_Ratio (mean centered)		-.054	-.056		-.044	-.050
FE_MA_Ratio (mean centered)		-.103 ^a	-.085		-.093	-.067
SCALE * FE_LE_Ratio (mean centered)			-.017			-.055
Scale * FE_MA_Ratio (mean centered)			.086			.125*
R ²	1.7%	6.0%	6.5%	0.8%	2.8%	3.9%
Change in R ²		4.3%	0.6%		2.1%	1.1%
N	402	402	402	402	402	402

Notes: a, *, **, *** mean statistical significance at levels 90 percent, 95 percent, 99 percent, and 99.9 percent, respectively.

Table-3. Regression results: Effect of female leadership and management on business performance.

Dependent variable / Independent variable	Internal Business Process			Learning and Growth		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
GE-OP	.150**	.142**	.149**	.147**	.145**	.150**
GE-ST	.022	.016	.015	.004	-.006	-.007
Age	-.021	-.031	-.036	-.027	-.021	-.025
Field	-.005	.008	.007	.022	.027	.028
Scale (mean centered)		.153**	.158**		.047	.051
FE_LE_Ratio (mean centered)		-.131*	-.133*		-.096 ^a	-.100 ^a
FE_MA_Ratio (mean centered)		-.006	.017		-.005	.011
Scale * FE_LE_Ratio (mean centered)			-.024			-.044
Scale * FE_MA_Ratio (mean centered)			.103 ^a			.078
R ²	2.5%	6.9%	7.7%	2.3%	3.5%	4.0%
Change in R ²		4.4%	0.8%		1.3%	0.4%
N	402	402	402	402	402	402

Notes: a, *, **, *** mean statistical significance at levels 90 percent, 95 percent, 99 percent, and 99.9 percent, respectively.

Table 2 and Table 3 show regression models for four separate dependent variables that are measures of business performance: Financial outcomes, customer development, internal business processes, and learning and

growth. For each dependent variable, three regression models have been used. Model 1 has included only control variables. Model 2 has included control variables plus the proportion of females in the board of directors (FE_LE_RATIO) and the proportion of females who are managers (FE_MA_RATIO). Model 3 has added the interaction between business scale and the proportion of females on the board of directors, and the interaction between the business scale and the proportion of females who are managers. In order to minimize the non-intrinsic correlation between the independent variables and regulatory variables (for example, business scale) and their constituent variables, mean centering has been used for independent variables and regulatory variables (Cohen *et al.*, 2003). The regression results, therefore, no longer feature nonessential multicollinearity, nor do they violate other OLS regression assumptions.

The regression results show that there are virtually no differences in business performance between firms with high proportions of female leaders and those with low proportions. In fact, estimated coefficients of the effects of these proportions on business outcome variables, though bearing a negative sign, are statistically insignificant. Concerning internal business processes and learning and growth, high proportions of women on boards of directors correlate negatively with these results (significant at the 95% and 90% levels, respectively, for each measure of performance). This result may reflect the limited capacity of female managers to operate and train their workers when compared to their male counterparts. However, this limitation does not seem to affect the financial results or customers, at least in this research sample. It is also noteworthy that in larger firms, the negative correlation of female managers on customers and operational outcomes appears to diminish (the constituent variables of the proportion of female managers and scales have positive and statistically significant effects at the 95% and 90% levels, respectively). This result reflects the importance of female participation in management for increasing performance related to customers and internal business processes. In addition, regression analysis results also show that larger firms are more likely to have better financial and internal business process results in the absence of other factors. It should be noted that the results of this study act as an excellent reference but should be interpreted with caution. The sample is limited primarily to small and medium-sized enterprises in Hanoi. In addition, other internal enterprise factors may not have been considered, making the R^2 of the models low (though statistically significant).

5. CONCLUSION

This study on the relationship between female leadership and business performance is based on primary survey data from more than 500 SMEs in Hanoi, the capital city of Vietnam, and is one of only a few quantitative studies on such topics in this transition economy, especially for SMEs. In addition to replicating previous research, this study has further developed the gender concept in business leadership and is one of few studies on gender diversity that uses BSC theory to assess business performance in four aspects: finance, customer development, internal business processes, and learning and development (Szymanska and Rubin, 2018; Vu *et al.*, 2018). According to the findings of this study, the participation of women in leadership does not have a definite impact on the effective performance of SMEs in all four dimensions of the BSC analysis framework. Despite the fact that the proportion of female leaders (directors, deputy directors) correlates negatively with the dimension of performance for internal processes and the dimension of learning and development, it does not affect SMEs financial results and customer development. Additionally, the proportion of female managers (from the department level upward) does not correlate with the four aspects of effective SME performance (in fact, it significantly negatively correlates with financial outcomes). However, by multiplying the proportion of female managers by the scale variable, the result is positive for customer development and internal business processes. Because the research scope is only in the capital city, these results may not be generalizable to other cities or other countries and contexts on the relationship between gender diversity in leadership and SMEs effectiveness. More research should be needed on this group of enterprises, along with further development of related theories and scales.

Funding: This research is funded by the Vietnam National Foundation for Science and Technology Development (NAFOSTED) under grant number 502.01-2015.04.

Competing Interests: The author declares that there are no conflicts of interests regarding the publication of this paper.

REFERENCES

- Adams, R.B. and D. Ferreira, 2009. Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, 94(2): 291-309. Available at: <https://doi.org/10.1016/j.jfineco.2008.10.007>.
- American Psychological Association (APA), 2015. Key terms and concepts in understanding gender diversity and sexual orientation among students. Available from <https://www.apa.org/pi/lgbt/programs/safe-supportive/lgbt/key-terms.pdf>.
- Carvalho, T. and S. Diogo, 2018. Women rectors and leadership narratives: The same male norm? *Education Sciences*, 8(2): 1-14. Available at: <https://doi.org/10.3390/educsci8020075>.
- Catalyst, 2007. The bottom line: Corporate performance and women's representation on boards. Available from <https://www.catalyst.org/knowledge/bottom-line-corporate-performance-and-womens-representation-boards>.
- Cheng, S., 2008. Board size and the variability of corporate performance. *Journal Financial Economics*, 87(1): 157-176. Available at: <https://doi.org/10.1016/j.jfineco.2006.10.006>.
- Christiansen, L., L. Huidan, P. Joana, T. Petia and T. Rima, 2016. Gender diversity in senior positions and firm performance: Evidence from Europe. Available from <https://www.imf.org/external/pubs/ft/wp/2016/wp1650.pdf>.
- Cohen, J., P. Cohen, S.G. West and L.S. Aiken, 2003. Applied multiple regression/correlation analysis for the behavioral sciences. 3rd Edn., Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Conyon, M.J. and L. He, 2017. Firm performance and boardroom gender diversity: A quantile regression approach. *Journal of Business Research*, 79: 198-211. Available at: <https://doi.org/10.1016/j.jbusres.2017.02.006>.
- Dezső, C.L. and D.G. Ross, 2012. Does female representation in top management improve firm performance? A panel data investigation. *Strategic Management Journal*, 33(9): 1072-1089. Available at: <https://doi.org/10.1002/smj.1955>.
- Dutta, P. and S. Bose, 2006. Gender diversity in the boardroom and financial performance of commercial banks: Evidence from Bangladesh. *The Cost & Management*, 34(6): 70-74.
- Francoeur, C., R. Labelle and B. Sinclair-Desgagné, 2008. Gender diversity in corporate governance and top management. *Journal of Business Ethics*, 81(1): 83-95. Available at: <https://doi.org/10.1111/j.1467-8683.2005.00423.x>.
- Hoang, T. and N.M.N. Chu, 2008. Data analysis in SPSS. Hanoi: Hong Duc Publishing House.
- Hudson, M., A. Smart and M. Bourne, 2001. Theory and practice in SME performance measurement systems. *International Journal of Operations & Production Management*, 21(8): 1096-1115. Available at: <https://doi.org/10.1108/EUM0000000005587>.
- International Finance Corporation (IFC), 2017. Women-owned enterprises in Vietnam: Perceptions and potential. Available from https://www.ifc.org/wps/wcm/connect/86bc0493-78fa-4c7d-86ec-5858aa41fa1a/Market-study-on-Women-owned-enterprises-in-Vietnam_Eng_v1.pdf?MOD=AJPERES&CVID=1-Yi6gF.
- International Labour Organization (ILO), 2015. Women in business and management: Gaining momentum. Geneva: ILO.
- Joecks, J., K. Pull and K. Vetter, 2013. Gender diversity in the boardroom and firm performance: What exactly constitutes a "critical mass?". *Journal of Business Ethics*, 118(1): 61-72. Available at: <https://doi.org/10.1007/s10551-012-1553-6>.
- Kaplan, R.S. and D.P. Norton, 1996. Strategic learning and the balanced scorecard. *Strategy & Leadership*, 24(5): 18-24. Available at: <https://doi.org/10.1108/eb054566>.
- Krishnan, H.A. and D. Park, 2005. A few good women—on top management teams. *Journal of Business Research*, 58(12): 1712-1720. Available at: <https://doi.org/10.1016/j.jbusres.2004.09.003>.
- Le, T.P.T., 2016. Research on the leadership capacity of small and medium enterprises managers in the North Central. Unpublished Doctoral Dissertation, Hue University, Vietnam.
- Lee, P.M. and E.H. James, 2003. She'-E-Os: Gender effects and stock price reactions to the announcements of top executive appointments. *Academy of Management Proceedings*, 1: 1-6.
- Lenard, M.J., B. Yu and E.A. York, 2014. Impact of board gender diversity on firm risk. *Managerial Finance*, 40(8): 787-803. Available at: <https://doi.org/10.1108/mf-06-2013-0164>.
- Liu, Y., Z. Wei and F. Xie, 2014. Do women directors improve firm performance in China? *Journal of Corporate Finance*, 28(C): 169-184. Available at: <https://doi.org/10.1016/j.jcorpfin.2013.11.016>.
- Lückerath-Rovers, M., 2013. Women on boards and firm performance. *Journal of Management & Governance*, 17(2): 491-509. Available at: <https://doi.org/10.1007/s10997-011-9186-1>.
- Martín-Ugedo, J.F. and A. Minguez-Vera, 2014. Firm performance and women on the board: Evidence from Spanish small and medium-sized enterprises. *Feminist Economics*, 20(3): 136-162. Available at: <https://doi.org/10.1080/13545701.2014.895404>.
- McKinsey & Company, 2007. Women matter. Gender diversity, a corporate performance driver. Paris: McKinsey & Company.

- Mekong Business Initiative (MBI), 2016. Small and medium enterprises owned by women in Vietnam: Current status and policy recommendations. Available from http://www.mekongbiz.org/wp-content/uploads/2017/07/WOB-Position-Paper_English-1.pdf.
- Nadeem, M., R. Zaman and I. Saleem, 2017. Boardroom gender diversity and corporate sustainability practices: Evidence from Australian securities exchange listed firms. *Journal of Cleaner Production*, 149: 874-885. Available at: <https://doi.org/10.1016/j.jclepro.2017.02.141>.
- Navigos Group, 2018. Women who make the difference. Available from <http://www.navigosgroup.com>.
- Newsroom, 2018. Mastercard index of women entrepreneurs (MIWE). Available from https://newsroom.mastercard.com/wp-content/uploads/2018/03/MIWE_2018_Final_Report.pdf.
- Nguyen, M.T., 2009. The relationship between the three-dimensional leadership and the enterprise performance: Case study in Vietnam. Unpublished Doctoral Dissertation, Ho Chi Minh University, Vietnam.
- Peng, Y. and L. Zhou, 2011. A performance measurement system based on BSC. In M Zhu (Eds.), *Information and Management Engineering*. Berlin: Springer. pp: 309-315.
- Post, C. and K. Byron, 2014. Women on boards and firm financial performance: A meta analysis. *Academy of Management Journal*, 58(2): 1-58. Available at: <https://doi.org/10.5465/amj.2013.0319>.
- Qian, M., 2016. Women's leadership and corporate performance. Manila: Asian Development Bank.
- Rhode, D. and A. Packel, 2014. Diversity on corporate boards: How much difference does difference make? *Delaware Journal of Corporate Law*, 39(2): 377-426.
- Roberson, Q.M. and H.J. Park, 2007. Examining the link between diversity and firm performance: The effects of diversity reputation and leader racial diversity. *Group & Organization Management*, 32(5): 548-568. Available at: <https://doi.org/10.1177/1059601106291124>.
- Ryan, M.K. and S.A. Haslam, 2005. The glass cliff: Evidence that women are over-represented in precarious leadership positions. *British Journal of management*, 16(2): 81-90. Available at: <https://doi.org/10.1111/j.1467-8551.2005.00433.x>.
- Szymanska, I.I. and B.A. Rubin, 2018. Gender and relationship differences in the perceptions of male and female leadership. *Gender in Management*, 33(4): 254-281. Available at: <https://doi.org/10.1108/gm-06-2016-0127>.
- Tran, Q.T., 2017a. Women startup: From policy to reality. *Journal of Economic Research*, 8(471): 65-73.
- Tran, Q.T., 2017b. The impact of gender stereotypes and the perception of the entrepreneurial environment on the business start-up of women – case study in Vietnam. Hanoi: National Science Conference.
- Tran, Q.T. and T.Q.T. Phung, 2018. Gender diversity in enterprise's leadership and Vietnamese firm performance. *International Scientific Conference Proceeding*. pp: 232-244.
- Van der Walt, N. and C. Ingle, 2003. Board dynamics and the influence of professional background, gender and ethnic diversity of directors. *Corporate Governance: An International Review*, 11(3): 218-234. Available at: <https://doi.org/10.1111/1467-8683.00320>.
- Vu, H.T., T.-T. Lee, H.T. Duong and B. Barnett, 2018. Gendering leadership in Vietnamese media: A role congruity study on news content and journalists' perception of female and male leaders. *Journalism & Mass Communication Quarterly*, 95(3): 565-587. Available at: <https://doi.org/10.1177/1077699017714224>.
- Zhu, L., O. Kara, H.M. Chu and A. Chu, 2015. Female entrepreneurship: Evidence from Vietnam. *Journal of Business & Entrepreneurship*, 26(3): 103-128.

Appendix 1. Cronbach's Alpha coefficients on firm's performance

Dimension	Criteria	Alpha
Financial Outcomes	F1: Revenues of enterprise	.797
	F2: Profit, profit ratio	
Customer development	C1: Market share of the enterprise	.741
	C2: Number of new customers	
	C3: Number of customers satisfied with enterprise	
Internal Business process	IBP1: Information technology systems & applications	.831
	IBP2: Capacity utilization of machinery	
	IBP3: Customer service activities	
	IBP4: Number of new products, new services	
	IBP5: Social activities of the enterprise	
Learning and Growth	LG1: Number and percentage of trained workers	.683
	LG2: Satisfaction of employees on enterprise	
	LG3: Number and percentage of cases that involving violations of professional ethics of workers	

Appendix 2. Survey of Business Leaders on Gender Diversity in Enterprise Leadership

To collect information about current situation, factors that affecting the participation of business leaders by gender as a basis for policy recommendations; Vietnam Women Academy would like to ask you to take sometime to provide information in an honest and complete manner according to the following questions. The Academy commits to keeping all information confidential

Question-1.

Company's name:

Contact phone number:

Question-2.

Year of establishment (Age):

Question-3. Mainly registered fields of industries (at least 3)

- 1.
- 2.
- 3.

Question-4. Enterprise size (circle/ tick ONE answer):

- 1. Micro
- 2. Small
- 3. Medium

There in:

- The total number of employees:.....people ; Number of women workers:.....people
- Number of staff in the board of directors:.....people ; Number of women leaders:.....people
- Number of managers, leaders (from department level):..... people; Number of women managers:.....people

Question-5. Positions of the respondents (circle/ tick ONE answer, if you hold many positions, choose the highest)

1. <input type="checkbox"/> Chairman of directors	2. <input type="checkbox"/> CEO/ Director manager	3. <input type="checkbox"/> Deputy general manager, Vice director
4. <input type="checkbox"/> Member of Board of Directors	5. <input type="checkbox"/> Department manager	6. <input type="checkbox"/> Other

Question-6. Year of birth:

- Question-7. Sex:** 1. Male 2. Female

Question-8. Your education level (circle/ tick ONE answer)

- 1. Not graduated from primary school (grade I)
- 2. Graduated from primary school (grade I)
- 3. Graduated from Secondary school (grade II)
- 4. Graduated from High school (grade III)

Question-9. Your qualifications (degree) (circle/ tick ONE answer, choose the highest level)

1. <input type="checkbox"/> No training	5. <input type="checkbox"/> Trade School (vocational, professional)
2. <input type="checkbox"/> Vocational Training no certificate	6. <input type="checkbox"/> College (vocational, professional)
3. <input type="checkbox"/> Vocational training short-term certificates	7. <input type="checkbox"/> Undergraduate
4. <input type="checkbox"/> Elementary occupations	8. <input type="checkbox"/> Graduate

Question-10. If you have been trained, what major did you study? (circle/ tick ONE answer, choose the highest major you have been trained)

1. <input type="checkbox"/> Economics, Business Administration	5. <input type="checkbox"/> Travel, hotel, restaurant
2. <input type="checkbox"/> Accounting, Finance, Auditing	6. <input type="checkbox"/> Food processing
3. <input type="checkbox"/> Agriculture, forestry, fishery	7. <input type="checkbox"/> Electronic refrigeration
4. <input type="checkbox"/> Trade, foreign trade	8. <input type="checkbox"/> Other (specify):

Question-11. Current marital status (circle/ tick ONE answer)

1. Single
 2. Married and living together
 3. Widowed/divorced/separated/single parent
 4. Living together but haven't married yet
 5. Other (specify)

Question-12. Your agreement with these following statements (For each line, circle/tick one answer)

Code number	Criteria	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
GE1	Leadership opportunities are not required to balance between men and women	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
GE2	Male leaders often get better results	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
GE3	If there are 2 people have the same ability, I would choose men for appointment	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
GE4	Masculine characteristics (independence, decisive, self-control, confidence, risk taking...) are more suitable for business leaders.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
GE5	Leadership (knowledge, skills, qualities) of men is higher than women	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
GE6	Social model support man to become leaders	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
GE7	Work-life balance : Women need to give priority to their family	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
GE8	Women are suitable for leadership at lower, middle or small enterprises	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
GE9	Women are not suitable to become leaders in some occupations (construction, mechanics...)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Question-13. Please make a general assessment of the enterprise performance over the past three years compared to the industry average (For each line, circle/tick one answer)

Code number	Criteria	Greatly below average	Slightly below average	Average	Slightly above average	Greatly above average
F1	Revenues of enterprise	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
F2	Profit, profit ratio	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
C1	Market share of the enterprise	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
C2	Number of new customers	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
C3	Number of customers satisfied with enterprise products	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
IBP1	Information technology systems & applications	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
IBP2	Capacity utilization of machinery	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
IBP3	Customer service activities	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
IBP4	Number of new products, new services	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
IBP5	Social activities of the enterprise	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
LG1	Number and percentage of trained workers	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
LG2	Satisfaction of employees on enterprise	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
LG3	Number and percentage of cases that involving violations of professional ethics of workers	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Views and opinions expressed in this article are the views and opinions of the author(s), Asian Economic and Financial Review shall not be responsible or answerable for any loss, damage or liability etc. caused in relation to/arising out of the use of the content.