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Chapter

Internationalization and Turkish Manufacturing Firm Performance – Does Managerial Personality Matter?

Phan Anh Tu, Le Khuong Ninh and Do Thuy Huong

Abstract

This study investigates the impact of the managers' experience and gender on the relationship between internationalization and business performance of manufacturing firms in Turkey. Based on a dataset collected by the World Bank, including 263 manufacturing enterprises in Turkey, we find that more well-experienced managers can positively improve the relationship between internationalization and firm performance. In contrast, this relationship will be reduced when the business has a female executive manager. This result adds to the empirical evidence and reinforces the theory of internationalization, especially in transition economies. The research implications are to help policymakers promulgate appropriate policies to support and accelerate the internationalization of businesses.

Keywords: Internationalization, experience, gender, performance, Turkey

1. Introduction

Internationalization and efficiency of business operations have been a matter of great concern in international business by scholars around the world for more than five decades. When expanding operations to global markets, companies have growth opportunities, accumulate knowledge from foreign markets, and help businesses reduce production costs and incur costs due to international environmental uncertainty [1]. However, internationalization also harms firm performance. For example, businesses will face risks and may face failure when expanding internationally [2].

Although there have been many previous empirical studies on internationalization and business performance, the empirical results are often inconsistent due to differences in analytical methods and research. And sometimes contradictions lead to mixed conclusions. Most of these studies are conducted in countries with developed economies, and the research subjects are multinational companies. While many other empirical studies have found a linear relationship between internationalization and business performance of multinationals in the world and Taiwan [3, 4]

and including the positive (negative) impact of internationalization on the business performance of emerging market firms [5] and the U.S. market [6], Riahi-Belkaoui [7] is one of the rare scholars who finds a non-linear relationship between the degree of internationalization and the business performance of multinational companies in the large-scale economy (USA).

The role of moderating variables in the relationship between internationalization and business performance has attracted interest, although quite rare since 2006, such as the study by Hsu et al. (two thousand and thirteen). Furthermore, research on the manager's role is scarce.

According to the Uppsala model, Vahlne and Johanson [8] pointed out that managerial competence is an essential key in achieving growth and that managers play a vital role in making decisions on doing business in foreign markets. Upper-echelons theory in organizations has shown that to manage complexity from international markets and ambiguity, the manager's role in decision-making when processing information is vital. Adequate confidence is necessary [9]. Therefore, the study's question is whether or not the positive effect of internationalization on business performance will be enhanced or decreased when moderating the managers' characteristics.

This research will contribute to the literature review of internationalization by threefold: (1) provide additional empirical evidence for the theory of internationalization; (2) highlight with a vital role of personal traits of the managers of the firms; (3) provide a particular research context, i.e., manufacturing enterprises in transition economies.

2. Literature review

Internationalization is the process by which businesses expand their business to foreign markets. Internationalization is an effective growth strategy for businesses when the domestic market is limited; internationalization helps companies grow their economic scope and scale, and at the same time, helps companies reduce input costs [10]. According to researchers, internationalization is also understood as the process of firms increasing their participation in foreign markets and making strategic decisions to improve international sales [11]. When businesses participate in overseas markets, there will be many benefits, such as increasing knowledge about foreign markets, enhancing competitiveness through gaining practical experience, and exploiting local strategic assets [12].

Expanding business operations to a new market also creates many challenges and increases businesses' costs, particularly regarding the legal liability of "foreigners" when doing business in another market [13]. Besides, to be successful in the international market, companies must understand the market's cultural characteristics to make product innovations suitable for the market. Therefore, for a business to be successful and limit the risks of uncertainty, the complexity and constant volatility of foreign markets depend significantly on the leading executive role.

The business performance shows the firm's ability to use its resources to achieve its goals. Experimental results in the world have also demonstrated that the relationship between internationalization and business performance of enterprises in the period from 1998 to the first three months of 2020 is non-linear (shape The U, the inverted U, the S, and the W), are sometimes linear (forward, inverse) and mixed relationship.

Internationalization is also explained in the direction of considering the methods of entering the business's international market, more clarification in the Uppsala model. The Uppsala model, also known as the "internationalization process" theory, was developed from Uppsala University by Johanson and Vahlne

[14]. This model explains that the internationalization of a business can be divided into four stages of development: (1) no regular exports, (2) exports through independent representatives, (3) sales branches in foreign markets, and (4) production in international markets. Over the past four decades (from 1977 to 2017), Johanson and Vahlne have repeatedly developed the Uppsala model. The 2017 Uppsala model is their newest model, and the management ability is considered a significant bottleneck in achieving growth [8].

We argue that internationalization is a complicated business strategy and is tied to the business managers' decision to do business. A business manager is a unit of analysis. Upper-Echelon theory refers to groups of people with high social status [15] or top managers of the business, such as CEOs, senior managers, or top management team (board). Hambrick and Mason [16] argued that firm performance is influenced by factors related to the manager's characteristics; personal opinions change the manager's perceptions, and these affect the choice of a firm's business strategy [15]. Many studies use the Upper-Echelon theory to explain a firm's internationalization strategy related to the traits of managers such as experience [17], education level, age [9], gender [18].

Managerial experience. Management experience is measured by the number of years that the manager is working in the current position. As the number of years working increases also means that the number of managers' experience increases, knowledge accumulation during the working time will create experience and motivation for international business expansion [14]. A manager with knowledge accumulated increasingly after years of working in a leadership position creates valuable experiences in dealing with international markets' complexities and uncertainties while overcoming the psychic distance associated with doing business in global markets [19]. These experiences values motivate them to develop strategies and expand their business to new international markets [20]. At the same time, managers' experience also directly affects firms' business results in global markets [21]. Along with the expertise, knowledge of foreign cultures, and the selection of managers' business methods will help businesses eliminate barriers of cultural differences through innovation and innovation product policies and brand promotion to suit each country's culture.

Hypothesis H_1: Managerial experience will positively moderate the relationship between the degree of internationalization and firm performance.

Managers' gender. Turkey is a country with a prosperous transition economy. The Turkish government is always supportive of corporate business; it is trying to reinforce Islamic values, which could hinder women's advancement in society [22]. Some studies show that Men and Women in Turkey consider women as house workers, suitable for the role of motherhood [23]. Men are represented in most of the leadership roles in Turkey [24], and women are not represented in the senior leadership ranks or the committee director of a business [25].

The empirical studies have shown that male managers bring more benefits to businesses than women [26]. Firms headed by women do not have the majority of the financial resources led by men [27]. Since internationalization is a cost-effective strategy to maintain international relations and strengthen its position in the market, a business with a South manager is more suitable to engage in the process. Next, male managers face less discriminatory barriers and barriers to entry into international markets than Female managers [28]. Simultaneously, ideological stereotypes against women also create doubts from new clients about women's performance and their ability to deliver quality products to international markets on time [29]. All of these make such a significant obstacle to the internationalization process if the manager is a female.

Hypothesis H_2: The female manager will negatively moderate the relationship between internationalization and firm performance (**Figure 1**).
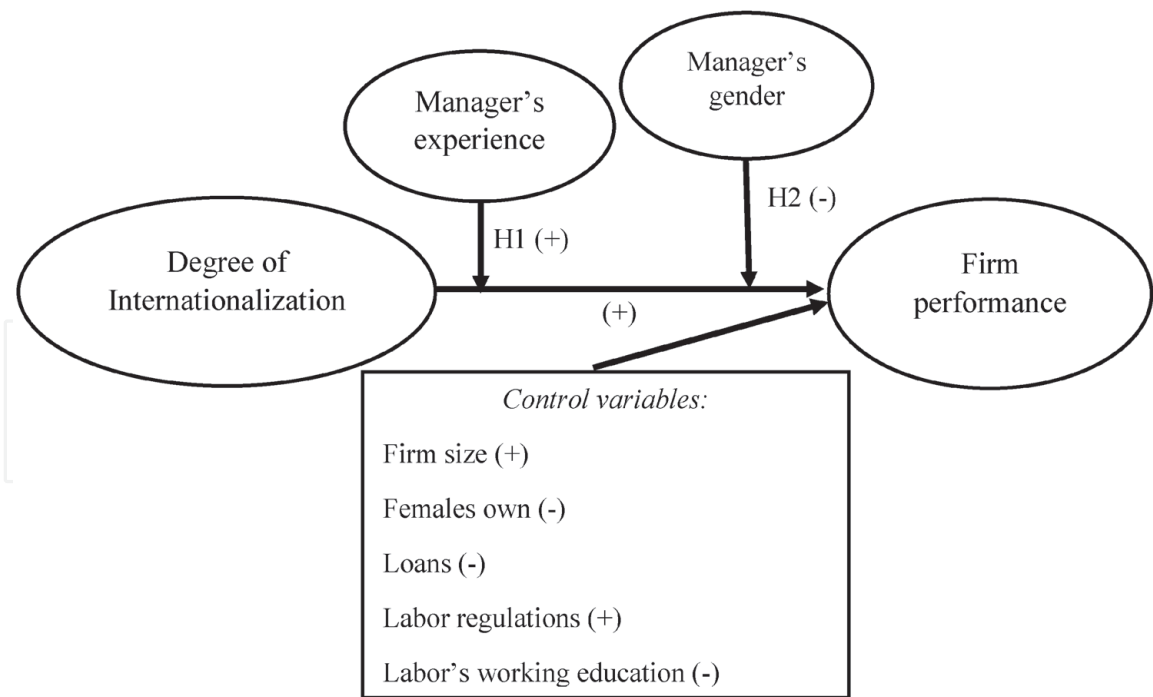
Figure 1.
Conceptual model.

3. Internationalization and Firm Performance in Turkey

Turkey is located in a favourable geographical position for economic development. This is the intersection between two continents (Asia and Europe, most of the territory are in Asia), connecting the Black Sea and the Aegean Sea, so it is easy to cooperate and develop trade with other countries. Thanks to the implementation of drastic measures to reform the economy towards industrialization, the Turkish economy has a huge difference before and after 1980. In 1980, the Turkish economy was moving to the market economy stage. The economic development policy at this time is to industrialize its production towards export. According to the statistics of the Turkish Statistical Institute (wwwdata.tuik.gov.tr), the Gross Domestic Product of Turkey also has a significant increase; GDP in 1980 reached 69 billion USD, 151 billion USD in 1990, 273 billion USD in 2000 and most recently 766.51 billion USD in 2019. It is the strong development since the economic reforms, Turkey now the 6th largest economy in Europe after Germany, the UK, France, Italy, Spain and the 16th largest in the world (according to International Monetary Fund, www.imf.org) and also a member of the G20 (Group major economies).

The current Turkish economy is mainly based on industry and services, develop towards a free market. According to an assessment of the Organization for Economic Cooperation and Development (www.oecd.org), in 2017, Turkey was the country with the third growth rate after China and India; in 2011–2017, the average GDP growth rate reached 6.7%. Industry, service and agriculture accounted for 26%, 64% and 10% respectively in 2013 in the economic structure. Production output has been considered the main driver of Turkish economic growth since the 1960s, including processing and manufacturing industries such as iron and steel production, oil refining. Therefore, one of the most critical sectors of the Turkish economy is the manufacturing and processing industry. In 2010, the Turkish manufacturing and processing industry accounted for 53.4% of the total export value. According to the Turkish Ministry of Industry and Technology (www.sanayi.gov.tr), over the past

20 years, the Turkish manufacturing and processing industry has also contributed a part major in GDP from 15–20%. In 2018, this sector's share of GDP was 19.1%.

According to the Turkish Institute of Statistics, the number of enterprises operating in the manufacturing and processing sectors was 3,221,000. Small and medium enterprises (SMEs) account for 99.8% of all enterprises, with 72.4% of jobs created in 2019. The majority of SMEs are in the commercial sector, with 36.3% of firms operating in the sales sector. Wholesale and retail; 14.4% of businesses in transportation and storage; 12.4% are manufacturing and processing industries. Also, 91.4% of the export turnover of SMEs is the product of manufacturing.

According to the World Bank's survey data, the current internationalization situation through direct-and-indirect exports of manufacturing enterprises in Turkey has significantly decreased. Specifically, in 2008 there were only 320 enterprises over 854 enterprises (accounting for 37.47%) having export activities. In 2013 and 2019, there were 282 exporting firms out of 1055 firms (accounting for 26.73%) and 207 exporting firms over 1036 enterprises (accounting for 20.18%). Many businesses have not engaged in export activities, accounting for more than 87.2% (2175 exporters/2495 processing and manufacturing enterprises). This shows that the difference between enterprises that have export activities and do not have export activities is still quite significant. The decreasing trend in Turkish processing and manufacturing enterprises' export activities may stem from the domestic and international barriers that businesses will face when entering the market.

Barriers for internationalization entry. According to a survey by the World Bank on Turkish enterprises' environment and business performance, many obstacles hinder businesses' internationalization in this country. First, the level of corruption varies considerably between regions in Turkey. The Bribery Depth Index shows that the percentage of 6 legal transactions and interest transactions related to asking for bribes for an average of 1 business in Turkey was 6% in 2008 and 3% in 2013. However, this Bribery Depth index varies significantly from region to region: namely, in East and Southeast Anatolia and the Aegean, it is three times higher than that of other Turkey areas. Consequently, the degree of corruption could exert tremendous financial and cost pressures on small Turkish firms and have limited financial capacity; this itself can interfere with enterprises' export process.

Second, the reliability of power supplies in Turkey is weak. Many Turkish businesses report power outages that account for 5% of their annual sales. Furthermore, there are notable geographical differences. In the Marmara region, power outage losses are only 2% compared with 12% in East and Southeast Anatolia. An increase in the proportion of businesses that own or share generators is also a sign of the country's inadequate electricity supply. Next, companies in Turkey view the tax rate as the biggest obstacle to their current operations, after factors of competition and political instability. According to the World Bank, 455/854 enterprises (accounting for 46.72%) consider the tax rate a factor hindering enterprises' current business activities in 2013 and 2019. Namely, there were 342/1055 enterprises (accounting for 67.58%), and 301/1036 enterprises (accounting for 70.95%) mentioned this factor as a barrier.

Fourth, international trade participation allows businesses to expand, raise business performance standards, import raw materials at lower costs, and access up-to-date technology. However, the transaction also requires firms to deal with customs regulations, and often firms are required to have an export and import license. Delays in export and import customs procedures add costs to the business, disrupt production, and hinder goods' supplies. Finally, most Turkish enterprises are small and medium-sized, so they often face difficulties in accessing finance. This can cause obstacles in the process of expanding operations and reduce the efficiency of business operations. Most SMEs have low equity capital and often have

trouble getting bank loans. In Turkey, only 40% of firms had a bank loan or credit line in 2013 compared with 57% in 2008, the use of banking services had a downward trend among firms. The proportion of financial investment financed from banks has decreased from 38% in 2008 to 17% in 2013, and even in 2019.

The Purchasing Managers Index (PMI) measures the economic "health" or efficiency of the manufacturing industry, with data taken from a survey of 400 processing enterprises. Create. The PMI index also shows the level of "excitement" of purchases in the manufacturing sector in 1 month. The monthly changes will reflect the growth or weakening of the manufacturing industry. Index of Industrial Production (IIP) is an index that determines industrial production's growth rate based on production volume. Turkey Manufacturing PMI-Purchasing Managers Index (Turkey Manufacturing PMI-Purchasing Managers Index) is also known as purchasing power management index; According to Markit Economics, this index in Turkey averaged 50.05 points from 2011 to 2020, reaching a peak of 55.70 points (January 2018). This PMI score of>50 indicates that the Turkish economy tends to develop positively, and manufacturing expands production activities. According to the Turkish Institute of Statistics, industrial production of Turkish processing and manufacturing enterprises in the 2008–2018 generally tended to increase gradually, reaching from 124 USD 5 billion (2008) to USD 146.1 billion (2018). This shows that the Turkish manufacturing and processing industry is growing with increasing production over the years and accounting for a relatively high GDP proportion, at the highest level of 19.1% (2018). The lowest is 15.1% (2010).

The two indicators mentioned above have shown that the Turkish economy is developing positively, and the business activities of enterprises in the manufacturing and manufacturing sectors in the domestic market are increasingly expanding and more developed. This also shows that these enterprises' business potential in overseas markets through export is a vast business turnover. Revenue is one of the factors that reflect the business results of an enterprise. According to the Turkish Institute of Statistics, in the period from 2007 to 2018, enterprises' revenue in the Turkish manufacturing and processing sector has many fluctuations, mainly tends to increase gradually and increase from 138.10 thousand billion euros (2007) to 241.20 trillion euros (2018), an increase of about 103.1 trillion euros. According to the Turkish Institute of Statistics, the percentage change in average annual turnover of Turkish manufacturing and manufacturing enterprises also fluctuates with the lowest percentage change of 6.9% (in 2016). The highest is 30.27% (in 2018). In general, the percentage change in annual revenue of businesses is positive.

4. Trait Characteristics of the managers of the firms in Turkey

According to the World Bank, the proportion of women's participation in the private sector as owners and employees has decreased significantly since 2008, leading to Turkey suffering from other countries with income levels. In 2013, only 5% of businesses were managed by 1 senior female leader compared with 12% in 2008. The same trend is observed for women-owned businesses, from 41% per year. 2008 decreased to 25% in 2013. The proportion of women among all enterprise workers has also significantly reduced from 25% in 2008 to 22% in 2013. The difference between the proportion of Women and Men in Turkish manufacturing is enormous. This can be traced back to the country's socio-cultural context. More than 98% of the population are Muslims, and women's business role is less important than staying at home and taking care of the house, family, and children.

As a result, most senior leaders in manufacturing and manufacturing in Turkey are men because they have more advantages than women; men have a higher education level than women. Men face fewer business barriers than women at work. A leader's experience is often measured through years of experience in leadership positions in the manufacturing industry. Leadership experience is essential in the business expansion to international markets. According to the World Bank, senior leaders in the manufacturing and manufacturing sector have a relatively high number of years of experience, focusing mainly on 20–30 years of experience. Some businesses are also run by leaders with up to 70 years of experience. Also, many companies are managed by leaders with low years of experience from 2 to 5 years. Differences in the years of leadership experience in companies will also affect domestic and international business strategies, bringing different business operations results and between businesses. Therefore, along with the leader's gender, the leader's experience is also an important factor affecting the company's business process.

5. Data and Research method

5.1 Data

This study uses secondary data sources on Turkey surveyed by the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), and the World Bank (W.B.) on the business environment and business performance of 4,159 enterprises. In this study, the panel data set are firms are operating in the manufacturing and manufacturing sector of Turkey in 3 survey periods in 2018, January 2013–December 2014 and September 9. 2018 - May 2019. The final sample used for analysis has 789 observations, including 263 processing and manufacturing enterprises.

5.2 Estimation model

The regression method with Feasible Generalized Least Squares (FGLS) is used to estimate the moderating effects on the relationship between the independent and dependent variables. The multicollinearity phenomenon is not a concern in this study [30] because the correlation coefficients in the Pearson correlation matrix of the variables are all less than 0.8, and the VIF index is below the "threshold" value 10.0. To choose between REM and FEM models, we conducted a Hausman test. Accordingly, with Prob> chi2 = 0.0714 and greater than P-value = 0.05 (accept H0 hypothesis), the REM model is more suitable than the FEM model. Then, the Lagrange test is used to check the heteroskedasticity of the REM model. As a result, it obtains Prob> chibar2 = 0.0000 smaller than P-value = 0.05, so rejecting hypothesis H0 (homogeneous variance), the model exists the heteroscedasticity phenomena with significance level 0.05. To cope with this issue, we use the Feasible Generalized Least Squares (FGLS) method as a method to correct this issue and thus increase the effectiveness of the estimation model.

The estimation model is constructed as follows:

$$
\begin{aligned}
ROS_{it} = {} & \beta_0 + \beta_1 doi_{it} + \beta_2 firmsize_{it} + \beta_3 femalesown_{it} + \beta_4 applyloans_{it} \\
& + \beta_5 laborregu_{it} + \beta_6 eduworkit + \beta_7 expertm_{it} + \beta_8 gendertmit \\
& + \beta_9 (doiex)_{it} + \beta_{10} (doige)_{it} + \varepsilon_{it}
\end{aligned}
\tag{1}
$$

Dependent variable: ROSit is the Return on sales of Turkish processing and manufacturing firms' business performance at time t.

Independent variable: doiit: a degree of internationalization of the firms.

Control variable: firmsizeit, femalesownit:, applyloansit:,laborreguit: labor regulation, eduworkit: labor's education.

Moderator variables: extmit: managerial experience, gendertmit: lmanager gender.

Interaction terms:

doiexi: the interaction between the degree of internationalization and management experience (measured by multiplying the doi variable and the extm variable),

doigeit: the interaction between the degree of internationalization and the gender of the leader (measured by multiplying the doi variable and the variable gendertm together).

Define	Symbol	Measure	Expected
Dependent variable			
Return on Sales	ROS	The rate of profit on total sales [31]	
Independent variables			
Degree of internationalization	doi	Percentage of export revenue over total revenue: $$\frac{\%directexportsales + indirectexportrevenue}{totalrevenue} \quad (2)$$ ([31]; [32])	(−)
Moderator variables			
Managerial experience	expertm	Years of experience = years of managers in the manufacturing and processing industry [33]	(+)
Manager gender	gendertm	Manager's gender, 1 = Female, 0 = Male [34]	(+)
Control variables			
Firm size	firm size	Number of employees in the firms 0 is small and medium-sized enterprise (> = 5 to <= 99 employees), 1 is a large-scale enterprise (> = 100 people) [35]	(+)
Females business owners	femalesown	Whether women own the business or not Dummy variable (1 = yes, 0 = no) [26]	(−)
Loans	applyloans	Business with or without a loan Dummy variable (1 = Yes, 0 = no) ([36]; [37])	(−)
Labor regulations	laborregu	Likert-5 levels: "To what extent, labor regulations are an obstacle to business operations." 0: no obstacles 4: extremely obstacles [38, 39]	(+)
Education level of labor	eduwork	Likert-5 levels: "At what level, the education level of labor is an obstacle to the operation of the business." 0: no obstacles till 4: extremely obstacle [38]	(−)

Table 1.
Descriptions of variables.

#	Variable name	Symbol	Number of observations	Mean	Standard deviation	Min	Max
1	Return on Sales (ROS) (%)	ros	789	43,412	34,278	−199,94	100
2	Degree of Internationalization (DOI)	doi	789	0,293	0,368	0	100
3	Managerial experience	expertm	789	23,099	12,047	2	70
4	Manager's gender	gendertm	789	0,074	0,261	0	1
5	Firm size	firmsize	789	0,274	0,446	0	1
6	Females own businesses	femalesown	789	0,313	0,464	0	1
7	Loans	applyloans	789	0,398	0,490	0	1
8	Labor regulation	laborregu	789	1,137	1,280	0	4
9	Education level of labor	eduwork	789	1,572	1,418	0	4

Source: World Bank Enterprises Survey (2019).

Table 2.
Descriptive statistics.

β0: intercept (constant)

βi: are the coefficients representing the marginal impact of factor i in the model, i = 1,...N, where N is the number of firms in the sample; t = 1,... T, where T is the research period.

and εit is the random error of the model (**Table 1**).

6. Results and discussion

Table 2 shows the results of the descriptive statistics of the variables in the research model. The average value of the return on sales of the business (ROS) is 43,412%, the maximum value is 100%, and the smallest amount is −1994.94%. The degree of internationalization, on average, reaches 0.293%, with the highest value being 100% and the lowest 0%. Moreover, the average of the managers' experience is about 23 years. Meanwhile, most of the managers are male rather than female (see **Table 2**).

Next, **Table 3** presents the correlation matrix between pairs of variables in the model, **Table 4** presents the regression results of 3 models Pooled OLS, REM, and FEM. Regression results with FGLS estimates are shown in **Table 5**.

Model 5 in **Table 5** includes all the main variables in the research model, the value Prob> chi2 = 0.000 shows the suitability of the model with actual data at 99% confidence level. All variables in model 5 are statistically significant, except for the variable of managerial experience (β7 = −0.096). There are 4 variables positively correlated with the return on sale (ROS) including: firm size (β1 = 3,443), labor regulations (β4 = 3,401), manager's gender (β8 = 9,963), the interaction between the degree of internationalization and managerial experience (β7 = 0.476). They are statistically significant at 5%, 0.1%, 5%, and 1%. Nevertheless, the remaining variables have a negatively correlated with the return on sales (ROS): business owner is Female (β2 = −6,888), loan (β3 = −9,560), labor level (β5 = −2,245), the degree of internationalization (β6 = −9,588), the interaction between the degree of internationalization and the manager's gender (β10 = −21.21) and all have statistical significance at 0.1%, 5%, and 1% level.

According to model 5, there is a negative relationship between internationalization and firm performance, but it is insignificant. This connection is contrary to expectation. Internationalization is a risky process, and firms have to burden additional costs in which these costs exceed the benefits that the business achieves, leading to a decline in the firm performance. In the early internationalization stage, the costs incurred will also increase because firms often focus on market exploration, enhancing knowledge learning, and experience in international markets [14]. At the same time, companies have to deal with obstacles and cost barriers such as the cost of the liability of "foreigners" [13]; the costs of adapting to cultures and institutions in different countries [1]; corporate governance and administration costs [40]; shipping costs and tariffs [1].

Model 5 in **Table 5** shows the interaction of internationalization level and leader experience (variable doiex) positively correlated. This result implies that the relationship between the degree of internationalization and the firm's business performance is strengthened as the managers' years of working experience increase. Therefore, hypothesis H₁ has been accepted. Experience in management positions helps leaders gain knowledge and confidence in managing and managing businesses. Those things create the motivation for leaders to develop products and expand business activities to international markets; the manager's experience also assists them in coping with the complexities and uncertainties of global markets; and directly affects the business performance of firms in international markets.

Variables	Mean	S.D	VIF	1	2	3	4	5	6	7	8	9
1. Return on Sales	43,412	34,278		1								
2. Degree of internationalization	0,293	0,368	5,03	−0,021 ns	1							
3. Managerial experience	23,099	12,047	1,68	0,011 ns	0,012 ns	1						
4. Manager's gender	0,074	0,261	2,05	−0,031 ns	0,078*	−0,069*	1					
5. Firm size	0,274	0,446	1,11	0,010 ns	0,257***	0,069*	0,012 ns	1				
6. Female business owner	0,313	0,464	1,16	−0,114**	0,119***	0,058 ns	0,312***	0,143***	1			
7. Loans	0,398	0,490	1,07	−0,165***	0,153***	0,033 ns	−0,011 ns	0,134***	0,104**	1		
8. Labor regulations	1,137	1,280	1,73	0,082*	−0,087*	−0,089*	0,027 ns	−0,032 ns	−0,087*	−0,121***	1	
9. Education level of labor	1,572	1,418	1,70	−0,012 ns	−0,048 ns	−0,024 ns	0,065*	0,037 ns	−0,047 ns	0,012 ns	0,628***	1

***p < 0.001.
**p < 0.01.
*p < 0.05 (ns) p > 0.10 (non-significant).
The value in parentheses is the standard error.

Table 3.
Description of the statistics and correlation table (n = 789).

Variables	Return on sales: ROS		
	Pooled OLS	**REM**	**FEM**
Constant	50,51*** (4,011)	49,04*** (3,837)	43,60*** (4,547)
Control variables			
Firm size	2,913 ns (2,834)	3,057 ns (2,880)	4,514 ns (3,857)
Female business owner	−8,170** (3,138)	−7,529** (2,723)	−4,954 ns (3,201)
Loans	−10,19*** (2,665)	−9,378*** (2,513)	−6,213* (3.104)
Labor regulations	2,859* (1,188)	2,190 ns (1,225)	−0,0262 ns (1,533)
Education level of labor	−1,937* (0,984)	−1,251 ns (1,095)	0,864 ns (1,353)
Main effect			
Degree of internationalization	−12,78 ns (8,368)	−10,23 ns (7,167)	−1,285 ns (8,513)
Managerial experience	−0,117 ns (0,127)	−0,092 ns (0,126)	−0,016 ns (0,146)
Manager's gender	10,21 ns (5,860)	11,15 ns (6,400)	14,11 ns (7,428)
Moderator effect			
Degree of internationalization x Managerial experience	0,727* (0,316)	0,621* (0,279)	0,296 ns (0,323)
Degree of internationalization x manager's gender	−25,78 ns (13.998)	−28,43** (10,965)	−35,61** (12,880)
Number of observations	789	789	789
	F(10,778) = 5,04	Wald chi2 (10) = 41,86	F(10, 516) = 1,70
	Prob>F = 0,0000	Prob>chi2 = 0,0000	Prob > F = 0,0776
	R2 = 0.06221	R2 within = 0.0242	R2 within = 0,0319

***$p < 0.001$.
**$p < 0.01$.
*$p < 0.05$, (n.s) $p > 0.1$ (non. significant).
The values in parentheses are standard errors.

Table 4.
Pooled OLS, REM, FEM models.

Also, managers can use their experience to interact with partners in foreign markets better, contribute to building trust and enhancing the reputation and image of the business in mind and thereby providing to the elimination of barriers of distance (cultural, social and geographical) in the process of expanding cross-border business activities.

Model 5 shows that the interaction between the degree of internationalization and the manager's gender is negatively correlated with firm performance. The hypothesis H_2 is hence supported. Hence, the relationship between the degree of internationalization and the firm's business performance will decline when the firm has a female manager, in contrast, a male manager will contribute to enhancing the positive effects of internationalization on the business performance. It can be explained that male managers are more successful than female leaders because, unlike women, men are not typically more focused on aspects such as risk reduction and risk aversion, and resilience, and higher risk tolerance [41].

Variables	Return on sales: ROS				
	Model 1	**Model 2**	**Model3**	**Model 4**	**Model 5**
Constant	48,93**	47,73***	52,61***	47,72***	51,51***
	(1,391)	(2,104)	(2,325)	(2,077)	(2,397)
Control variables					
Firm size	5,959***	5,647***	4,106*	4,487**	3,443*
	(1,445)	(1,501)	(1,632)	(1,556)	(1,691)
Female business owners	−6,749***	−6,616***	−6,614***	−6,106***	−6,888***
	(1,349)	(1,461)	(1,533)	(1,537)	(1,666)
Loans	−10,22***	−9,354***	−8,897***	−9,901***	−9,560***
	(1,256)	(1,502)	(1,523)	(1,544)	(1,613)
Labor regulation	3,460***	3,770***	3,835***	3,422***	3,401***
	(0,643)	(0,686)	(0,686)	(0.683)	(0,728)
Education level of labor	−2,347***	−2,605***	−2,436***	−2,376***	−2,245***
	(0,530)	(0,555)	(0,598)	(0,554)	(0,629)
Main effects					
Degree of internationalization		−1,534 ns	−16,54***	1,792 ns	−9,588*
		(1,900)	(4,202)	(2,087)	(4,632)
Managerial experience		0,064 ns	−0,138 ns	0,057 ns	−0,096 ns
		(0,579)	(0,077)	(0,058)	(0,079)
Manager's gender		−0,933 ns	−0,885 ns	10,75*	9,963*
		(3,144)	(2,855)	(4,981)	(4,899)
Moderator effects					
Degree of internationalization × Managerial experience			0,647***		0,476**
			(0,167)		(0,177)
Degree of internationalization × Manager's gender				−24,65***	−21,21**
				(6,616)	(6,837)
Number of observations	789	789	789	789	789
Wald chi2	191,24***	177,08***	178,64***	176,59***	149,12***

***p < 0.001.
**p < 0.01.
*p < 0.05, (ns) p > 0.10 (non. significant).
The value in parentheses is standard error.

Table 5.
Feasible Generalized Least Squares (FGLS).

7. Conclusion

Internationalization plays a vital role as an increasingly necessary and valuable business strategy [42]. This strategy is even more relevant and essential for firms in a transition economy like Turkey. This study used Moderated Multiple Regression analysis (MMR) with the feasible general least-squares estimadion (FGLS) method to find empirical evidence to support the hypotheses. Namely, the degree of internationalization has a more substantial positive influence on firm performance if the managers are males and have more managerial experience. The relationship between the degree of internationalization and firm performance may vary depending on the firms' managerial characteristics. Therefore, firms may carefully consider the managers' traits before deciding to expand the market in the global context.

The results show several important governance implications for corporate boards and managers who aspire to become senior managers in an international environment. First, to have a better performance, firms or executive boards of the firms may be better able to choose males and have much experience than females and have less experience operating the internationalization process. Second, female managers may better improve their international management experience to cope with additional transaction costs in foreign countries such as the "newness" and the "liability of foreignness."

This study goes without limitations. First, this result is limited to manufacturing firms, so that it is difficult to generalize to various business sectors. Second, the number of female managers may depend on a particular culture, region, and the whole country, but the data shows inadequate. Future research should extend the scope of research space and time (phases of internationalization); consider the managers' characteristics such as functional experience, education, age, and marital status, concurrent rights in the business, foreign language ability, and cultural contexts. Third, research in the future may pay attention to the influence of top managers' characteristics without considering how other corporate board members affect the relationship between the degree of internationalization and business performance. Finally, scholars may use diversified indices to measure firm performance.

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