How much do network support and managerial skills impact women's entrepreneurial success? The Overlooked role of country economic development

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Abstract:

The success of women-owned businesses with regard to the stages of economic development of countries is under-examined on a global basis. This study explores the relationship between country economic and political contexts and assesses the importance of entrepreneurs' networks and managerial skills on women's entrepreneurial success. The research uses data from 22 countries chosen from multi-dimensional country context constructs (i.e., select economic and political factors) and measures both family and external moral and financial support and managerial skills. The results show that stock (managerial skill) and flow (family and non-family support) differentially influence women's entrepreneurial success in countries at varying levels of competitive development. In particular, the results confirm the positive influence of managerial skills and family moral and financial support on women's entrepreneurial success (based on annual income) in countries at a higher level of competitive development and confirm their negative influence in countries at a lower level of competitive growth. Moreover, the results reveal influences of non-family financial support (positive for highly competitive countries) on income but not non-family moral support. Public policy implications are discussed.

Keywords: Female entrepreneurship | country competitiveness | resource-based view

Article:

Introduction

Understanding the importance of entrepreneurs' networks and managerial skills on women's entrepreneurial success in countries at different stages of development is vital for several reasons. First, the role of women in developing new business has gained increased attention in

recent years, due to the rate of growth of women-owned businesses in economies around the world (Brush and Cooper 2012; Mari, Poggesi, and De Vita 2016). Second, social networks and managerial skills are part of entrepreneurs' human and social capital, and scholars have called for a better understanding of the uniqueness of strategic resources in the area of female entrepreneurship (Mari, Poggesi, and De Vita 2016; Poggesi, Mari, and De Vita 2016). Third, research indicates that social and human capital influence entrepreneurial performance and success (Hernández-Carrión, Camarero-Izquierdo, and Gutiérrez-Cillán 2017). Thus, confirming whether the competitive development of countries plays a role in explaining the influence of these factors on women's entrepreneurial success is essential.

Entrepreneurship literature based on the resource-based view (RBV) has found that human capital has a positive direct and indirect effect on entrepreneurial success (Irwin et al. 2018; Semrau and Hopp 2015). Similarly, research on social capital provides empirical evidence that professional and institutional networks (external social capital) have a more significant influence on entrepreneurs' performance than other types of networks (Hernández-Carrión, Camarero-Izquierdo, and Gutiérrez-Cillán 2017). By contrast, studies based on industrial organization theory indicate that the level of competitiveness in an economy influences the creation of new business, innovation, and self-employment (e.g., Bjørnskov and Foss 2016; Young, Welter, and Conger 2018). Under this same framework, Amorós et al. (2019) find that the fragility of a country (considered a proxy of economy competitiveness) has a positive influence on necessity-based entrepreneurship but hinders opportunity-driven entrepreneurship. Thus, the RBV suggests that resource superiority is a critical driver of entrepreneurial success. Still, industrial organization theory indicates that essential factors for entrepreneurship (including human capital skills and business networks) can change depending on the country's competitiveness level (Porter 1990).

Recent literature on work–family interface theory contributes knowledge in this regard. Welsh, Kaciak, and Thongpapanl (2016) and Kaciak and Welsh (2020) show that the economic development of a country affects the flow of social capital (assessed as family moral and instrumental support) to women entrepreneurs. Welsh, Kaciak, and Thongpapanl (2016) find that economic development is related in different ways (S-shaped curve and inverted S-shaped curve) to family moral and instrumental support. Kaciak and Welsh (2020) find that female entrepreneurs have a lower probability of receiving family support as the level of competitive development of a country increases. Regarding human capital, studies based on the RBV confirm the positive influence of higher levels of human capital on effective business creation in economies at different stages of development (Davidsson and Honig 2003; Eresia-Eke and Okerue 2020). However, research based on industrial organization theory suggests that abilities critical to human capital in factor-driven economies differ from those in efficiency- and innovation-driven economies (Perez-Moreno, Rodriguez, and Luque 2016).

Overall, economic context, as well as social and human capital, influences entrepreneurial success. In the case of female entrepreneurship, economic context matters (e.g., Batsakis 2014; Noguera et al. 2015), as does social and human capital (Cetindamar et al. 2012; Neumeyer et al. 2019). However, there is debate in research based on the RBV and industrial organization theory about resource superiority (i.e., managerial skills and family/non-family support) and whether it can be a source of entrepreneurial success in countries at different stages of

development (Davidsson and Honig 2003; Perez-Moreno, Rodriguez, and Luque 2016; Porter 1990; Ruziev and Midmore 2014). Similarly, scant research has examined the intersection of economic context, social and human capital, and female entrepreneurship (exceptions are Kaciak and Welsh 2020; Welsh, Kaciak, and Thongpapanl 2016). Moreover, research has not explored the role of women entrepreneurs' network support (family and other external actors) and managerial skills in entrepreneurial success across economies at different stages of competitiveness. For this reason, this article aims to answer the question of how family support, non-family support, and entrepreneurs' managerial skills influence women's entrepreneurial success in economies at different stages of development.

To answer this question, we use survey data from 22 countries classified at three different stages of development according to the Global Competitive Index. The results show an asymmetric influence of managerial skills and family/non-family support on women's entrepreneurial success depending on the country. In countries at a higher level of competitive development, managerial skills positively influence women's entrepreneurship income level, but this relationship is negative for countries at a lower level of competitive development. A similar relationship exists for family/non-family financial support and for family moral support.

Theoretical foundations and hypotheses

Stock and flow of resources and competitive entrepreneurship advantage

The evolutionary economy states that organizational memory is implicit in a firm's routines (Nelson and Winter 1982). Therein lies the knowledge about the use of available assets, how people should interact, who the key actors are in each decision, and the search for mechanisms to solve each problem that arises (Parmigiani and Howard-Grenville 2011). Thus, the stock of given resources available within a firm should depend on how it flows from internal and external sources allowing accumulation (Dierickx and Cool 1989). Accordingly, resources such as social and human capital have conditions of flow and stock.

The stock condition of a resource reflects the amount of a given asset that accumulates; flow refers to the way (path of flows) entrepreneurs leverage this resource in business activities (Dierickx and Cool 1989). This means that social and human capital should influence entrepreneurial dynamic not only because of the resource availability (stock) but also by the way they interact (or flow) within the business dynamic and between it and external stakeholders (Wang, Aggarwal, and Wu 2020). Thus, when entrepreneurial activity is strongly linked to the owner-entrepreneur family, firm behaviours and performance will depend not only on the firm's routines but also on the family routines (Reay 2019). Recent research on women entrepreneurship confirms the role of providing support in the influence of family support on women's entrepreneurial success (Kaciak and Welsh 2020; Welsh and Kaciak 2019).

Prior research has noted the importance of distinguishing between stock and flow of resources in family-controlled entrepreneurship (Danes et al. 2009), as the existence of a given stock of resources does not necessarily guarantee its flow within entrepreneurial activity; as such, the processes generating this flow need to be assessed (Gudmunson and Danes 2013). One way family social capital can flow within the business is through family support, which can yield

benefits but also costs (Arregle et al. 2007; Stam, Arzlanian, and Elfring 2014). Similarly, external social capital can flow within the firm through support from financial institutions, friends, government agencies, non-profit organizations, suppliers, distributors, and angel venture capitalists (Adiguna and Sharif 2014; Gedajlovic et al. 2013). Thus, managerial skill is considered stock as it derives from previous routines and indicates how well an entrepreneur is doing in this dimension. By contrast, moral and financial support are mechanisms that allow the flow of resources (i.e., family and business networks) within the entrepreneurial activity.

Country competitiveness and entrepreneurship

Industrial organization theory and economic geography literature have primarily acknowledged the importance of the commercial and industrial context on firms' ability to create an appropriate financial wealth (Ellison and Glaeser 1997; Porter 1990). This framework suggests that economies/countries have different levels of complexity and competitive capacity that transfer to companies and entrepreneurs depending on their position in terms of the fundamental factors of production, demand conditions, firm strategy/structure, rivalry, and support from related industries (Jelinek 1992). The more competitive economies have a better position on the last two factors, while weaker economies are based mainly on the first two factors (Harzing and Giroud 2014). Thus, in more developed economies, knowledge and innovation are more critical to entrepreneurs' strategies. By contrast, in less developed economies, factor conditions (e.g., natural resources, low-cost wages) are more significant (Welsh, Kaciak, and Thongpapanl 2016).

This framework emphasizes the importance of agglomeration economies, in which there is a close connection between production activities (industrial clusters) to explain business performance (Delgado, Porter, and Stern 2014). Agglomeration economies are crucial for firms to reach higher levels of productivity and cost advantages (Delgado, Porter, and Stern 2016). What spurs this development in an economy is the existence of networks of businesses and institutions, specialization, and high levels of trust among organizations (Porter 1998). These factors decrease transaction costs between agents and increase market and business efficiency (Auerswald and Dani 2017). Thus, in countries with higher levels of competitive development, entrepreneurs will likely benefit from agglomeration advantages more than entrepreneurial businesses in less developed economies. Delgado, Porter, and Stern (2010) find that stable industrial clusters align with start-up survival and the establishment of new ventures by existing companies.

Agglomeration economies build secure networks, human capital, as well as business knowledge and skills (Delgado, Porter, and Stern 2016). Access to these resources, however, is not equally available or equally important in countries at different stages of development (Porter 1998; Slaper, Harmon, and Rubin 2018). Therefore, gaining a better understanding of the role of networks (social capital) and managerial skills (human capital) in entrepreneurial success in countries at different levels of competitive development is essential.

Managerial skills and entrepreneurial success

The RBV states that firm competitive advantage and success are based mainly on resource asymmetries among firms (Barney 1991). One primary source of advantage is the human capital

available in the firm, particularly the team managerial skills (mainly the CEO's) (Gope, Elia, and Passiante 2018; Roumpi, Magrizos, and Nicolopoulou 2019). This resource is particularly important in women's decision of whether to become an entrepreneur (Cetindamar et al. 2012). This tacit knowledge determines firms' strategic orientation and their ability to understand their customers, launch new products/services, and take risks (Chen and Hambrick 2012; Kraiczy, Hack, and Kellermanns 2015).

Human capital refers to the knowledge and skills people acquire through schooling, training, and experiences, including those on the job (Becker 1964). Overall, it usually relates to higher business performance and entrepreneurial success (Chandler and Hanks 1998; Rauch and Frese 2007). Evidence confirms that human capital has a positive direct and indirect impact on the creation and successful development of firms (Semrau and Hopp 2015). Research has shown that human capital involves several factors. Human capital aligns with entrepreneurs' ability to identify and exploit new business opportunities, gain access to relevant resources (e.g., physical and financial capital), and engage in new venture strategic planning (Brush, Greene, and Hart 2001; Frese et al. 2007). Similarly, training and skills are critical drivers of innovation (Belitski, Caiazza, and Rodionova 2019).

The reviewed research thus far is based primarily on the RBV and does not focus on women entrepreneurship. Research on women entrepreneurship has emphasized that environmental factors, networks, and entrepreneur career (as a proxy of skills) are of particular importance for female entrepreneurship (Noguera et al. 2015). Accordingly, the industrial organization framework provides insightful information to understand differences among countries. For the industrial view of global competitiveness, skills such as planning, innovation, and teamwork are critical factors in countries at higher levels of competitive development but are not in low competitiveness countries (Perez-Moreno, Rodriguez, and Luque 2016).

Most new businesses in fragile economies (countries) are necessity-based, while in highly competitive countries, they are opportunity-driven (Amorós et al. 2019). While opportunity-driven venturing relates to innovation, long-term orientation, income growth opportunity, and long-term personal aspirations, necessity-based entrepreneurship relates to unemployment, informality, and recessions (Amorós and Cristi 2008; Cullen, Johnson, and Parboteeah 2014). Therefore, entrepreneur motivations and long-term aspirations can differ depending on whether the venture is necessity-based or opportunity-driven.

Motivation and long-term aspirations are acknowledged mainly as critical to explaining how entrepreneurs leverage resources within organizational activities (Delery and Roumpi 2017; Maslow 1943). These aspirations relate to the level of commitment and how hard an entrepreneur works on his or her business (Beugelsdijk and Noorderhaven 2005) and are critical in determining the future income the entrepreneur can obtain from venturing. In support, Lee (2019) finds that entrepreneurs' hard work is a predictor of entrepreneurial success and that entrepreneurs' general education (more skilled) has a significant, negative influence on hard work. As such, the impact of managerial skills on entrepreneurial success is a function not only of the availability of this resource but also of whether the entrepreneur is motivated to use it to the full extent.

In highly competitive economies, opportunity-driven entrepreneurship allows entrepreneurs to tie their motivations and aspirations to their venturing activities (Cullen, Johnson, and Parboteeah 2014). This explains why research provides support for the direct influence of managerial skills on entrepreneurial success (e.g., Davidsson and Honig 2003). However, this would not be the case for low competitiveness countries where necessity-based venturing is most common (Amorós et al. 2019). People with higher levels of human capital tend to be less prone to become entrepreneurs, as in the long run, the labour market can provide them more profitable wage options (Cassar 2006; Mickiewicz et al. 2017). Thus, skilled entrepreneurs are often forced by context to become entrepreneurs, and venturing is not one of their long-term aspirations (Amorós and Cristi 2008). In this case, when skilled people engage in necessity-based entrepreneurship, we expect that they will have a lower level of commitment, which will negatively influence business income (Lee 2019). Thus:

> *H1. Management skills are positively related to women's entrepreneurial success (based on annual income) in countries at higher levels of competitive development. This relationship is negative for countries at lower levels of competitive development.*

Family financial and moral support and entrepreneurial success

Both the RBV and social capital theory acknowledge the critical role of the family in the development of entrepreneurial activities (Gedajlovic et al. 2013; Habbershon, Williams, and MacMillan 2003). Families are often a source of financial and non-financial resources, providing access to both social and human capital of family members who are committed and open to receiving lower salaries than non-family employees (Cruz, Justo, and De Castro 2012; Habbershon and Williams 1999). From a social capital perspective, family social networks are a resource that entrepreneurs can leverage to gain a competitive advantage (Arregle et al. 2007). Family social capital within entrepreneurial activity is family support (Arregle et al. 2007). However, evidence indicates that this flow of capital has the potential to yield benefits and costs (Stam, Arzlanian, and Elfring 2014).

Research assessing the influence of family support on women's entrepreneurial success has found a negative relationship between these two constructs (Welsh and Kaciak 2019). In line with agency theory (Chrisman, Chua, and Litz 2004), when family members financially support a relative's venture, they are more likely to try to exert control over business decisions, moving them away from performance criteria. However, the RBV suggests a positive relationship between access to resources from the family and entrepreneurial success (Le Breton-Miller and Miller 2015; Sarkar 2018). Therefore, family financial support is integral to women's entrepreneurship success, regardless of the country's level of competitive development (Constantinidis et al. 2019).

Overall, previous research suggests that family financial support positively or negatively influences women's entrepreneurial success (Constantinidis et al. 2019; Kaciak and Welsh 2020), depending on whether it enhances agency cost or whether the family's financial support is, in some way, a source of competitive advantage (Chrisman, Chua, and Sharma 2005). Mainly, family financial support can provide diversification in financial sources, flexibility in the use of such sources, lower financing cost, and more timely and quick access to it (Llanos-

Contreras and Jabri 2019; Llanos-Contreras, Jabri, and Sharma 2019). Thus, if the agency problem is under control, the resource increases the potential for higher income.

Research has found that access to family financial support decreases when country competitive development increases, which makes this resource even more valuable (Kaciak and Welsh 2020). The type of entrepreneurial activity (opportunity vs. necessity) and the institutional conditions (highly developed vs. poorly developed) both affect the agency problem. We expect the problem to be more controllable in developed countries (Amorós et al. 2019; Auerswald and Dani 2017), though this depends on whether family financial support positively or negatively influences women's entrepreneurship income level. Thus:

> *H2. Family financial support is positively related to women's entrepreneurial success (based on annual income) in countries at higher levels of competitive development. This relationship is negative for countries at lower levels of competitive development.*

In contrast with family financial support, family moral support is not associated with high costs, such as entrepreneurs' ability to make independent business decisions (Chrisman, Chua, and Litz 2004). The benefits of family support (through the participation of relatives as employees) decrease when the company is the entrepreneur's primary source of income (Cruz, Justo, and De Castro 2012). Thus, non-financial resources in the form of encouragement, attention, and family members' positive attitudes have proved especially valuable in the case of women's entrepreneurship (Powell and Eddleston 2013; Zhang and Zhou 2019). Moral support is also critical for women-owned businesses because frequently, the family takes on other responsibilities to assist in work–family balance (Constantinidis et al. 2019). However, all the benefits obtained from the family support disappear if the priority for supporting family needs leads the entrepreneur to pay back the support received (Llanos-Contreras and Jabri 2019).

Recent research empirically confirms the positive influence of family moral support on women's entrepreneurial success in a highly competitive country (Welsh and Kaciak 2019). However, the idea that family dependence on entrepreneurship income can cause problems has led to the argument that it can change in countries at a lower level of competitive development (Cruz, Justo, and De Castro 2012; Llanos-Contreras and Jabri 2019). The country level of competitive development determines the type of entrepreneurship (opportunity vs. necessity), which in turn relates to the family dependence on the business (Amorós et al. 2019; Puente, Espitia, and Cervilla 2019).

Another critical issue in how family moral support influences entrepreneurial success is the probability that this flow of resources from the family becomes a source of competitive advantage (Habbershon and Williams 1999). Family moral support is idiosyncratic and non-transferable (Constantinidis et al. 2019), but it is not equally available in countries at different levels of development; for example, in innovation-driven economies, women entrepreneurs are less likely to receive family emotional support (Kaciak and Welsh 2020). Therefore, in highly competitive countries, family moral support will be more scare (more valuable), and the family demand for business cash flow will be lower (as women likely engage more in opportunity-driven venturing). By contrast, in low competitiveness countries, family moral support will be

more available (less valuable), and the family demand for business cash flow will be higher (accordingly to necessity-based entrepreneurship). Thus:

> *H3. Family moral support is positively related to women's entrepreneurial success (based on annual income) in countries at higher levels of competitive development. This relationship is negative for countries at lower levels of competitive development.*

Non-family financial and moral support and entrepreneurial success

Literature connecting the RBV with cluster theory (the industrial organization view) discusses the importance of geographical networking (social capital) in developing agglomeration economies (Hervas-Olivery and Albors-Garrigos 2007). That research indicates that strategic resources come not only from within the business but also from the industrial networks when comparing global competitiveness. Gazel and Schwienbacher (2020) recent article on the FinTech industry in France shows the importance of large clusters of networks and increased competition in attracting new start-ups, reducing failure, and increasing the probability the new business will be acquired. Thus, the level of a firm's competitiveness and territorial and industrial proximity within it are central in explaining entrepreneurial success.

The competitive territory conditions are asymmetric among countries as a consequence of heterogeneity in resources, such as quality of labour, the strength of business networks, the quality of institutions, specialization, and trust (Porter 1998). Competitive conditions influence financial market efficiency, which in turn affects the level of access and the cost of funding (Sorenson et al. 2016). The importance of access to financial capital in entrepreneurial activity is well recognized (Kim, Hsieh, and Lin 2019; Kuzilwa 2005). On the one hand, Chandler and Hanks (1998) argue that a high level of access to financial capital counterbalances potential disadvantages in human capital for entrepreneurs. On the other hand, the lack of access to financial capital can be a significant threat to entrepreneurial activity (Hernández-Carrión, Camarero-Izquierdo, and Gutiérrez-Cillán 2017).

The relevance of access to financial support in entrepreneurial activity is equally crucial for both male and female entrepreneurs (Cetindamar et al. 2012). In their study comparing female entrepreneurs in China and Vietnam, Zhu, Kara, and Zhu (2019) find that a lack of access to financial capital is one of the most significant challenges to entrepreneurship. It is a problem not only in terms of the availability of loans but also in terms of the availability of venture capital, angel funding, and other institutional mechanisms to which entrepreneurs can have recourse (Gupta and York 2008). When the market does not work, external financial support can come from sources such as friends, government agencies, and non-profit organizations (Adiguna and Sharif 2014). Studies on informal funding in less developed countries have also discussed the emergence of money lenders as a response to the demand from 'fellow entrepreneurs' (Ruziev and Midmore 2014). They report that this funding is stringent, expensive, and short term, which can become a threat to future income.

Overall, financial support is critical for women entrepreneurship and central to venturing success (Kim, Hsieh, and Lin 2019; Zhu, Kara, and Zhu 2019). However, access to financial support between countries at a different level of development is asymmetric in terms of cost and

suppliers (Porter 1990). While highly developed countries report efficient access and low cost, research on low competitiveness countries reports problems of access, high price, and short-term payback demands (Gazel and Schwienbacher 2020; Ruziev and Midmore 2014). Thus, because of asymmetries in the type of lender, cost, and condition of funding, we expect the following:

> *H4. External financial support is positively related to women's entrepreneurial success (based on annual income) in countries at higher levels of competitive development. This relationship is negative for countries at lower levels of competitive development.*

Molino et al. (2018) examine the importance of social support as a determinant of entrepreneurial intention. The authors find a significant, positive relationship between support from family and friends and entrepreneurial intention, especially for women entrepreneurs. Non-family (external) moral support from friends and mentors has a positive impact on entrepreneurs' attitudes, self-confidence, perseverance, and self-efficacy. It increases the likelihood of success with little, if any, of the financial cost (Ahmad 2015). The integral role of governments and policymakers in supporting small businesses is also crucial (Ahmad 2015). Thus, non-family moral support exerts an influence not only on entrepreneurs and small businesses but also on the entrepreneurial ecosystem of countries, influencing the likelihood of success (Guerrero and Urbano 2017). However, as discussed previously, the level of development and the efficiency of institutions (implicit in how moral support from government and private agencies flows to new ventures) are asymmetric between countries (Porter 1990). In less developed countries, institutions are weaker, and entrepreneurs can attract attention from corrupt officials, threatening the success of the venture (Collier 2009; Kistruck et al. 2015). In the case of non-family moral support from friends and mentors, flow does not mean the same in developed and under-developed economies. In developing countries, social assistance from the network is important in solving basic needs (Gautam and Andersen 2017). In under-developed countries, where the economy is more fragile, the state attempts to provide basic social security and assistance but much more is need to catapult women entrepreneurs and their businesses (Banerjee and Duflo 2007). Entrepreneurs who receive support from friends, for example, will be committed to giving back the support. However, giving back support and the risk of being trapped by corrupt officials will hurt the level of entrepreneurial activity. Thus:

> *H5. Non-family (external) moral support is positively related to women's entrepreneurial success (based on annual income) in countries at higher levels of competitive development. This relationship is negative for countries at lower levels of competitive development.*

Method

Sample and data collection

This multi-country study used the same self-administered questionnaire with slight adaptations for country culture in each country. The survey was initially developed by Hisrich and Brush (1984), with subsequent modifications (Hisrich, Bowser, and Smarsh 2006; Lerner, Brush, and Hisrich 1997). The questionnaire included a mixture of dichotomous, multiple-choice, open-ended, and rank-order items to assess the nature of women's entrepreneurship in each country.

We had the survey translated into the original language of each country and then, following Earley's (1987) back-translation procedure, had it translated again into English to ensure that the meaning of the questions in different cultural settings.

The aggregate, cross-sectional sample consists of 2,164 women entrepreneurs from 22 countries classified into three groups: factor-efficiency, efficiency-innovation, and innovation. We organized the countries according to the Global Competitiveness Report developed by Schwab (2012, 2013, 2014, 2015, 2016, 2017) (see Table 1). We grouped the countries by variables such as gross domestic product, primary requirement indexes, efficiency enhancers, and innovation, and sophistication factors (see Welsh, Kaciak, and Thongpapanl 2016).

Table 1. Country grouping distribution

Factor-/efficiency-driven	Sample size	Efficiency-/innovation-driven	Sample size	Innovation-driven	Sample size
Saudi Arabia	48	China	115	Singapore	17
Morocco	116	Poland	184	United States	91
Egypt	117	Slovakia	187	Japan	138
India	44	South Africa	126	Germany	84
Nigeria	6	Turkey	147	Canada	155
		Brazil	137	France	47
		Jordan	116	Austria	92
		Serbia	19	Ireland	113
				Taiwan	65

Data collection took place between 2010 and 2018. Each country was surveyed only once for a short time (typically one to three months). The 2010–2018 period is characterized by economic changes following the financial crisis of 2008–2009. This crisis affected entrepreneurs about evenly in all countries around the world. Therefore, we decided not to control for year dummies to keep the model as parsimonious as possible and to minimize the loss in degrees of freedom. Table 2 presents the sample descriptive data. The study was approved by the Institutional Review Board or institutional equivalents to ensure ethical standards of conducting international research. Approximately 30% of the women entrepreneur's own businesses with their families.

Dependent variable: entrepreneurial success

We assess *entrepreneurial success* (*ENS*), the dependent variable, using respondents' current annual (self-reported) business income. Self-reported performance measures, though subjective, are reliable and highly correlated with objective data (Cruz, Justo, and De Castro 2012). Business income (or revenue) is among the most frequently used and validated indicators of firm financial success (Díaz-Garcia and Brush 2012; Dyer, Dyer, and Gardner 2012; Lerner, Brush, and Hisrich 1997; Sullivan and Meek 2012). The same five annual business income brackets are adjusted on the basis of country averages so that the middle (third) bracket contains the average yearly business income. We measured income at the ordinal level: 0 = the lowest income bracket; 1 = low income bracket; 2 = average income bracket; 3 = high income bracket; 4 = the highest income bracket. Income-related categorical measures of firm performance/success are prevalent in other studies (Cetindamar et al. 2012; Díaz-Garcia and Brush 2012; Mari, Poggesi, and De Vita 2016).

Table 2. Descriptive statistics and correlations

Variables	Mean	S.D.	Min.	Max.	1	2	3	4	5	6	7	8	9	10	11
1. FOB	0.29	0.45	0	1	1										
2. MRS	0.68	0.47	0	1	0.19**	1									
3. AGE	2.68	1.08	0	5	0.11**	0.27**	1								
4. EDU	3.02	1.73	0	6	0.00	0.01	0.03	1							
5. MSK	0.78	0.42	0	1	−0.02	−0.05	0.07	−0.01	1						
6. FFS	0.75	0.43	0	1	−0.03	0.03	0.03	0.07*	0.13**	1					
7. FMS	0.61	0.49	0	1	0.11**	0.16**	−0.04	0.04	0.01	0.04	1				
8. EFS	0.18	0.38	0	1	0.03	−0.05	0.05	−0.03	0.15**	−0.06	−0.02	1			
9. EMS	0.25	0.43	0	1	−0.12**	−0.05	−0.00	−0.09*	0.03	−0.05	0.04	0.03	1		
10. LCD	1.26	0.77	0	2	−0.05	0.00	0.16**	−0.18**	0.16**	−0.01	−0.13**	0.12**	0.09*	1	
11. ENS	1.17	1.08	0	4	0.06	−0.04	−0.06	−0.11**	0.07	−0.11**	0.02	0.19**	−0.02	0.45**	1
12. NET	0.23	0.42	0	1	−0.02	−0.04	0.04	−0.05	0.01	0.03	−0.06	0.07	0.02	0.21**	0.15**
r_{YXi}									0.07	−0.11**	0.02	0.19**	−0.02		
$r_{YXi.M}$									0.06	−0.12**	0.01	0.18**	−0.03		
$t_{\alpha/2,\ N-3}$									1.61	−3.32**	0.14	5.13**	−0.89		

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Listwise N = 755

Focal predictors

Family and external moral support

The survey contained the question, 'Who has been the biggest moral supporter in your business venture? Please rank in order of performance (1 being the most important, and four least important; leave empty what is not applicable)'. The response categories were spouse, child, parent, siblings, or relative. We classified these categories as family moral support (*FMS*) and the categories friend, mentor, government agency, or private agency as external moral support (*EMS*). Following Welsh and Kaciak (2019), we classified the categories according to intensity and number of support individuals. Thus, if respondents indicated at least two of the five supports as strong (ranging from 1 to 5), we coded them as 1 and coded weak moral support as 0.

Family and external financial support

Another survey question was, 'Please check the following items to describe how you obtained and maintained the funding and financing required to initiate and maintain the ownership of your business. Check as many boxes as apply'. We coded this family financial support (*FFS*) variable as 1 if the respondent selected 'own savings or family borrowing' (initially or during the first six months of operations) and 0 otherwise. For external financial support (*EFS*), the previous question had the following answer options: borrowing from friends, a government programme, commercial bank loan, investment bank loan, or gift. The coding procedure followed the same logic as above.

Management skills

Respondents were asked to self-report in four categories (from poor to excellent) with regard to the following eight skills: financial, dealing with people, marketing, sales, idea generation, organizational structure, general management, and IT management. Following Welsh and Kaciak (2019), we coded management skills (*MSK*) as 1 if respondents rated at least two of the seven skills as good or excellent and 0 otherwise.

Moderator variable

The country level of competitive development (LCD)

We grouped the 22 countries into three categories (i.e., factor-/efficiency-driven, efficiency-/innovation-driven, and innovation-driven) based on the Global Competitiveness Index (Schwab 2012, 2013, 2014, 2015, 2016, 2017) (for a similar classification, see Welsh, Kaciak, and Thongpapanl 2016). Table 1 shows the three groups of countries. Specifically, the moderator variable *LCD* is ordinal, coded as 0 for factor-/efficiency-driven countries, 1 for efficiency-/innovation-driven countries, and 2 for innovation-driven countries, thus ranging from lower to higher levels of competitiveness.

Control variables

We controlled for additional variables to eliminate their possible influence on the relationships between the focal predictors and the dependent variable. First, we controlled whether the firm was a family business or not (family business ownership, *FBO*). There is no agreement among researchers on the definition of a family firm (Howorth, Rose, and Hamilton 2010). In our project, we use Westhead's (1997) definition that an owner's 'perception' is one of the elements that most closely captures the family business concept. Thus, the respondents indicated whether their business was a family business or not. Research has extensivly examined the relationship between FBO and firm performance; however, empirical findings are inconclusive (Arosa, Iturralde, and Maseda 2010). Some studies find that FBO positively influences firm performance (e.g., Welsh et al. 2017, 2018), whereas other empirical results indicate either a negative impact of family organizational involvement on profitability (Arosa, Iturralde, and Maseda 2010) or no relationship at all (Welsh et al. 2014). We measured *FBO* at two levels coded as 1 if respondents defined the business as family-oriented and 0 if they indicated otherwise.

Second, following other studies (Cetindamar et al. 2012), we also used marital status (*MRS*) as a control variable. When measuring this variable, we decided to juxtapose women entrepreneurs who were married (=1) against those who were not married (i.e., single, widowed, separated, or divorced) (=0).

Third, entrepreneur's age (*AGE*) also has an important influence on entry into entrepreneurship and subsequent stages of the business venture (Pathak, Goltz, and Buche 2013). In this study, we measured *AGE* at the ordinal level: 0 = respondents under 20 years of age; 1 = 20–29 years; 2 = 30–39 years; 3 = 40–49 years; 4 = 50–59 years; and 5 = 60 years or older.

Finally, we controlled for entrepreneurs' education level (*EDU*). Education can increase a woman's access to knowledge that will help in running her business (Pathak, Goltz, and Buche 2013). We measured *EDU* at the ordinal level: 0 = elementary; 1 = high school; 2 = diploma/2-year degree; 3 = institution/technical/trade; 4 = bachelor's degree; 5 = master's degree; and 6 = doctoral degree. Other studies have also employed categorical coding of education level (Lofstrom, Bates, and Parker 2014; Manolova et al. 2006; Pathak, Goltz, and Buche 2013),

Data analysis and results

Table 2 shows the descriptive data and Pearson's correlation coefficients for the entire sample. We applied the listwise (total) procedure for deleting all missing observations. This approach produced a final sample of 755 cases across the entire analysis. We opted for listwise deletion because in pairwise (partial) deletion, different correlations have different subsets of evidence, so parameter estimates may be biased. The estimation of standard errors is also problematic in such cases. We also checked that missing values were randomly distributed so that their deletion would not harm the model results.

Collecting data from self-reported questionnaires at one point in time can lead to common method bias (Podsakoff et al. 2003; Simmering et al. 2015; Spector and Brannick 2009). To control for this unwelcome phenomenon (also referred to as common method variance [CMV]), we used the correlational marker technique (Lindell and Whitney 2001). Another approach is

Harman's one-factor test, one of the most widely used techniques by researchers. However, as researchers question its appropriateness (e.g., Podsakoff et al. 2003), we rely on the marker variable technique only.

A vital requirement of this method is that a questionnaire includes a so-called marker variable. A marker variable is supposed to be theoretically unrelated to at least one substantive (dependent or independent) variable in the model. We also followed Williams, Hartman, and Cavazotte (2010) recommendation that a marker variable should be selected on the basis of a theoretical rationale explaining how well it taps into one or more of the sources of bias (Podsakoff et al. 2003) that can occur in the measurement context for given substantive variables. Given these considerations, we included a variable in our questionnaire that measured respondents' interest in joining women entrepreneurs' networking groups (*NET*), where 1 equals no interest and 0 equals a positive response. We are unaware of any conceptual models or empirical research linking interest in joining women entrepreneurs' networking groups with firm performance or with other family-business interface types of substantive variables included in our study. Thus, we assume that our marker variable is theoretically unrelated to these variables. Furthermore, we argue that our marker variable taps into some of the biases Podsakoff et al. (2003) describe, such as social desirability. Finally, we note that our marker variable appeared in the questionnaire in close vicinity to the dependent variable to address both CMV and serial-position effects (Lindell and Whitney 2001).

The correlational marker technique calls for selecting the smallest observed correlation between the marker variable and one of the substantive variables (which is 0.01, the correlation coefficient between *NET* and *MSK*; see Table 2). Lindell and Whitney (2001) propose calculating the partial correlations between the dependent variable and each of the predictors controlling for CMV. The selected smallest coefficient serves as an estimate of the amount of method variance. The following equation removes shared variance between the marker and other variables:

$$r_{YXi.M} = (r_{YXi} - r_s)/(1 - r_s)$$

where $r_{YXi.M}$ is the partial correlation between Y (the dependent variable) and X_i (the independent variables) controlling for CMV, r_{YXi} is the observed correlation between Y and X_i possibly contaminated by CMV, and r_s is the smallest observed correlation between the marker variable and one of the substantive variables that are theoretically unrelated. Thus, this approach partials out the same amount of method variance at the construct level from all relationships in the dataset. The resulting 'corrected' correlations are supposed to be closer approximations to true relationships than the uncorrected correlations (Richardson, Simmering, and Sturman 2009). We assume that CMV had an effect if, after correction, a significant correlation becomes non-significant. The statistical significance of 'corrected' correlation tests with a t-test statistic is with three degrees of freedom (Lindell and Whitney 2001):

$$t_{\alpha/2,N-3} = r_{YXi.M}/\sqrt{(1 - r^2_{YXi.M})/(N-3)}$$

Table 3 shows the correlation coefficients r_{YXi}, the partial correlation coefficients $r_{YXi.M}$, and their corresponding t-test statistics in the last three rows of the five columns corresponding to the

five predictors. Most of the correlations between the dependent (*ENS*) and the five independent variables are not significant even before we adjust for CMV. Specifically, Table 2 shows that the correlations for *MSK* (0.07), *FMS* (0.02), and *EMS* (–0.02) are not significant. However, the correlations of *FFS* (–0.11, $p < 0.01$) and *EFS* (0.19, $p < 0.01$) with the dependent variable remain statistically significant even when we control for CMV; they are equal to – 0.12 ($p < 0.01$) and 0.18 ($p < 0.01$), respectively. Thus, we can conclude that CMV cannot reasonably account for these two correlations and that the variables *FFS* and *EFS* still retain their 'practical significance in terms of a meaningful amount of variance explained' (Lindell and Whitney 2001, 119).

Table 3. Ordinal regression results (ordered logit)

	Model 1 N = 755	Model 2 N = 755
Dependent variable: Entrepreneurial Success (*ENS*)		
Control variables:		
Family Business Ownership *(FBO)*	0.168 (0.157)	0.254 (0.172)
Marital Status *(MRS)*	−0.087 (0.148)	−0.016 (0.171)
Entrepreneur's Age (*AGE)*	−0.131** (0.065)	−0.343*** (0.076)
Educational Level (*EDU)*	−0.148*** (0.039)	−0.072* (0.043)
Independent variables:		
Management Skills (*MSK*)		−1.246*** (0.351)
Family Financial Support (*FFS*)		−2.042*** (0.378)
Family Moral Support (*FMS*)		−0.307 (0.356)
External Financial Support (*EFS*)		−0.368 (0.637)
External Moral Support (*EMS*)		−0.236 (0.403)
Moderator variable:		
Country Level of Competitive Development (*LCD*)		−0.638** (0.256)
Interaction terms:		
$MSK \times LCD$ (H$_1$)		1.161*** (0.239)
$FFS \times LCD$ (H$_2$)		1.163*** (0.216)
$FMS \times LCD$ (H$_3$)		0.400* (0.206)
$EFS \times LCD$ (H$_4$)		0.662* (0.364)
$EMS \times LCD$ (H$_5$)		−0.165 (0.232)
Pseudo R-Square (Cox and Snell)	0.03	0.350
Pseudo R-Square (Nagelkerke)	0.03	0.376
Final model $\chi^2(df)$	21.31(4)***	325.11(15)***
Test of parallel lines [$\chi^2(df)$; *p*-value]		51.44 (*45*); 0.24

Regression coefficients: ***p < 0.01; **p < 0.05; *p < 0.10; two-tailed tests
Heteroskedasticity-robust standard errors in the parentheses

To further minimize common method biases inherent in surveys, we also undertook several *ex ante* remedies, as suggested in the literature (Podsakoff et al. 2003). Specifically, we worded the items to ensure survey respondents fully understood their precise meanings. Linguistic experts checked the non-English versions of the questionnaire and recommended some re-wording to reflect the local cultural conditions of the corresponding countries.

Finally, to reduce the potential bias due to common scale formats, we used several question formats. The survey instrument included a mixture of multiple-choice, dichotomous, rank-order,

and open-ended items to examine the nature of women's entrepreneurship in each country. *Ex ante* solutions to the CMV threat reduced the effect of social desirability bias (Podsakoff et al. 2003). Incorporating this procedure gives us more confidence that our findings, though conducted as cross-sectional surveys in various countries, are based on reasonably equivalent samples.

To check for multicollinearity, we assessed the variance inflation factors and the correlation matrix itself. All factors have values below the cut-off parameter of 10, usually established in the literature for regression models. Furthermore, the correlations among the independent variables are low (below 0.30), also suggesting limited potential for distortions due to multicollinearity. Given this, we conclude that multicollinearity was not a threat to our study. Finally, to address the possibility that the error term does not have constant variance, we employed the heteroskedasticity-robust standard errors (White 1980).

Given the ordinal nature of the dependent variable, we performed ordinal logistic regression analysis (ordered logit) to test the hypothesized relationships between the predictors and the dependent variable. Table 3 presents the results. Model 1 tests only the control variables, while Model 2 adds the predictors and interaction terms per the standard moderation analysis. The two models indicate a significant improvement over the baseline intercept model; both chi-square statistics are significant (Model 1: $\chi^2 = 21.31$; Model 2: $\chi^2 = 325.11$; $p < 0.0001$). Furthermore, the full model (Model 2) shows an explained variance of 35%–38%, a notable increase compared with that of Model 1 with controls only.

The critical assumption in ordinal regression is that the effects of the explanatory variables are consistent (proportional) across the different thresholds of the ordinal dependent variable (the assumption of proportional odds or parallel lines). Specifically, this assumption means that the explanatory variables have the same effect on the odds of the outcome being lower or higher for every one-unit increase in the explanatory variable, regardless of the threshold. To test this assumption of proportional odds, we use in ordinal regression the test of parallel lines. Specifically, we investigate whether the ordinal model (which has one set of coefficients for all the thresholds in the dependent variable *ENS*) stands against a model with a separate set of coefficients for each threshold.

Model 2 employs the test, and it produced a *p*-value of 0.24, which does not lead to the rejection of the ordinal model (the null hypothesis), which is the desired outcome. This means that the assumption of proportional odds holds for the data. To correctly interpret the estimation results (Table 3), we base ordinal regression on assumptions other than linear regression. We explain each ordinal regression coefficient β in terms of the so-called odds ratio (OR) by taking the coefficient's exponent e^{β}.

Management skills and family financial support

First, in the full model (Model 2), the main effect of *MSK* was significant and negatively related to *ENS* in the aggregate sample of the 22 countries ($\beta = -1.246$; $p < 0.001$). The exponent of this coefficient is OR = 0.288. The higher the MSK of the woman entrepreneur, the lower are the

odds (or likelihood) that she is operating in a country with a higher level of competitive development.

Second, the main effect of the *FFS* variable was also significant and negatively related to *ENS* ($\beta = -2.042$; $p < 0.001$; OR = 0.130). The odds for a woman entrepreneur to operate in a country with a higher level of competitive development decrease by 0.130 when the financial support offered expands from non-existent to substantial family support (including own savings). The remaining three main effects are non-significant.

Hypotheses testing

Four of the five hypotheses are supported. Only H5 is not supported, which stipulates a positive relationship between *EMS* and *ENS*, moderated by *LCD* ($p > 0.10$). The interaction between *MSK* and *LCD* is positively related to *ENS*, in support of H1 (Model 2: $\beta_1 = 1.161$; $p < 0.0001$; OR = 3.19). The results suggest that women entrepreneurs who possess good or excellent MSK and operate in innovation-driven (highly competitive) countries are more likely to have greater ENS than women with similar skills operating in countries at a lower level of competitiveness. To further explore this moderating effect, we plot the interaction between *MSK* and *LCD* in Figure 1.
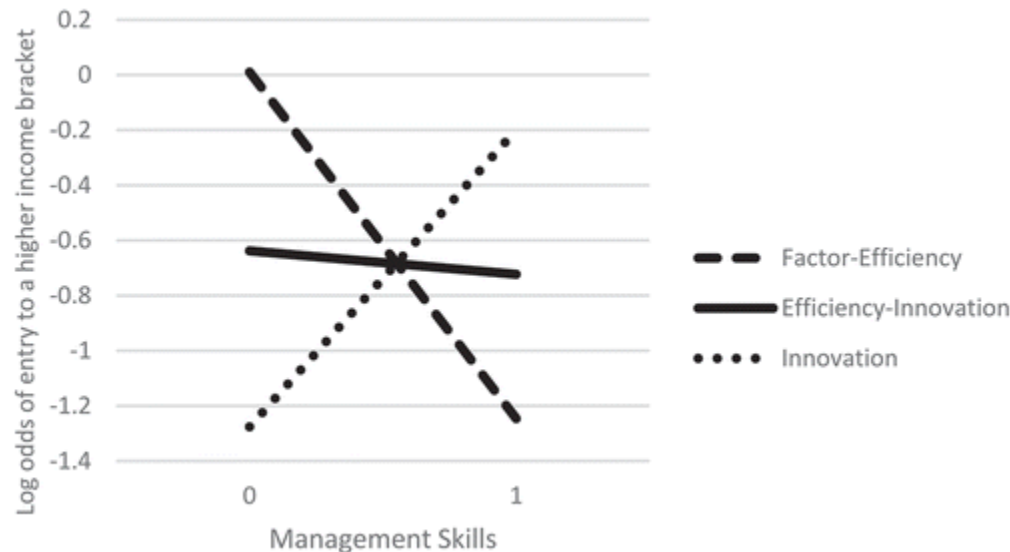

Figure 1. Moderating effect of the country level of competitive development (factor/efficiency, efficiency/innovation, innovation) on the management skills-entrepreneurial success relationship

The three lines in Figure 1 visibly differ in slope, meaning that the relationship between MSK and odds (log) of entry into a higher income bracket (ENS) indeed varies depending on LCD. With the improvement in MSK, these odds increase for innovation-driven countries but decrease for factor-/efficiency-driven economies (the efficiency-/innovation-driven countries are in the middle). This moderation plot provides further support for H1. Similarly, we interpret the remaining three significant results found in Table 3. To save space, we do not repeat the discussion related to *MSK*. However, we present the corresponding moderation plots in Figure 2–4 for the sake of completeness. The ordinal regression results, together with the moderation plots, fully support the remaining three hypotheses for *FFS, FMS,* and *EFS*.

Regarding the control variables, in Model 2, *AGE* and *EDU* were significantly and negatively related to *ENS*. This result means that the higher the age and education level of a woman entrepreneur, the lower are the odds (or likelihood) that she is operating in a country with a higher level of competitive development. The other two controls (*FBO* and *MRS*) are not significantly related to ENS.
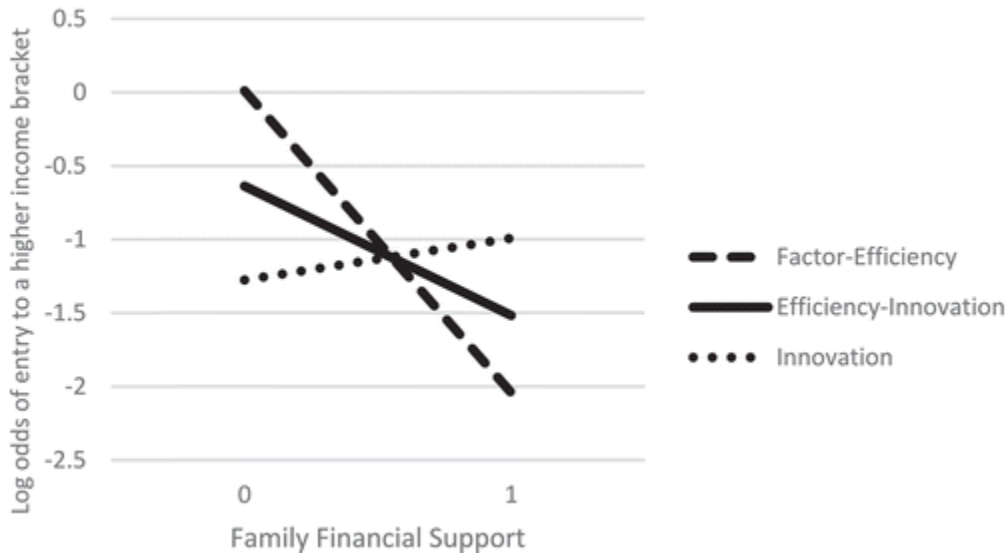

Figure 2. Moderating effect of the country level of competitive development (factor/efficiency, efficiency/innovation, innovation) on the family financial support-entrepreneurial success relationship
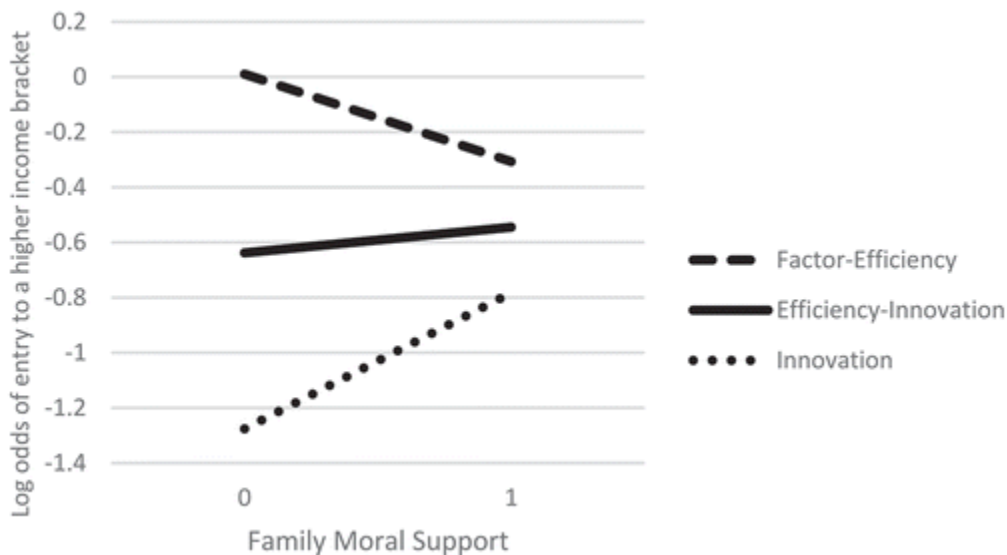

Figure 3. Moderating effect of the country level of competitive development (factor/efficiency, efficiency/innovation, innovation) on the family moral support-entrepreneurial success relationship
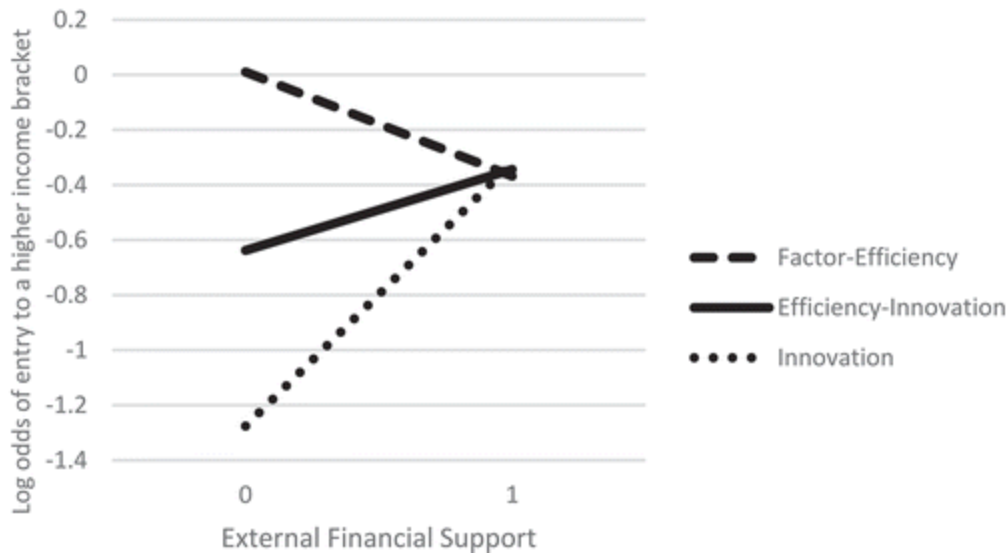
Figure 4. Moderating effect of the country level of competitive development (factor/efficiency, efficiency/innovation, innovation) on the external financial support-entrepreneurial success relationship

Discussion and conclusions

This study examines the role of the country's economic development level to more effectively understand how resources become a source of competitive advantage measured by the success of women (based on income level) entrepreneurs in 22 countries. More precisely, this study responds to the question of how family support, non-family support, and entrepreneurs' managerial skills influence women's entrepreneurial success in economies at different stages of development. We found support for the idea that management skills are positively related to women's entrepreneurial success in countries at higher levels of competitive development. These results are in line with the RBV literature (Barney 1991). The results confirm the findings of previous research that human capital is a source of competitive advantage and positively influences the successful development of new ventures (Gope, Elia, and Passiante 2018; Roumpi, Magrizos, and Nicolopoulou 2019; Semrau and Hopp 2015). However, our results offer further insight into countries at a lower level of development for which we found a negative relationship between management skills and women's entrepreneurial success. These results lend support to the country competitiveness theory rather than the RBV. They suggest that a better position in terms of managerial skill is not necessarily a source of entrepreneurial advantage when an entrepreneur's engagement is short-term (Beugelsdijk and Noorderhaven 2005) but is a source of advantage in low competitiveness countries where entrepreneurial activity is a necessity (Amorós et al. 2019; Cullen, Johnson, and Parboteeah 2014). Thus, what matters is not the capability of the manager but the degree of motivation to engage in a high level of commitment and effort to make the venture a success (Delery and Roumpi 2017; Lee 2019).

The results provide support for the hypotheses regarding the relationship between family financial/moral support and women's entrepreneurial success. Again, the RBV and country competitiveness theory interact to explain the results. The results confirm the idea that family support is a way for family resources to flow in venturing activities to influence long-term performance (Arregle et al. 2007). The asymmetric relationship between family financial/moral

support and entrepreneurial success is also in line with previous literature indicating that such support can positively and negatively affect entrepreneurial activity (Constantinidis et al. 2019; Kaciak and Welsh 2020). The results indicate a positive relationship between these variables in countries at a high level of competitive development and a negative relationship in the opposite case. This provides an explanation of the trade-off between the gains from resources advantages and the disadvantages of the potential agency cost (Chrisman, Chua, and Sharma 2005).

Country competitiveness theory explains the findings related to family support (financial and moral) and entrepreneurial success. Our framework describes the level of family support for each country type and also explicates the asymmetry of institutional quality, which explains the family's ability to take advantage of the entrepreneur's payback (Kaciak and Welsh 2020; Porter 1990). Particularly in the case of moral support, a critical issue for countries at lower levels of competitive development is the family dependence on the business's cash flow (Puente, Espitia, and Cervilla 2019). For example, families may feel pressure to use the new business's cash flow as payback for family moral support if required. These results are in line with previous research on family employment in small family firms and organization decline (Cruz, Justo, and De Castro 2012; Llanos-Contreras and Jabri 2019). The current research clarifies the negative effect of the indiscriminate use of business cash flow to meet family needs.

Regarding non-family (external) financial and moral support, the results confirm only the hypothesis proposed for non-family financial support. The evidence for highly competitive countries is in line with previous research on the critical importance of financial support for entrepreneurial success (Cetindamar et al. 2012; Kim, Hsieh, and Lin 2019; Kuzilwa 2005). The existence of efficient institutions and financial markets is critical for correct microeconomic functioning (Porter 2003). However, our results suggest that access to non-family financial support does not mean the same thing in high and low competitiveness economies. Theoretically, while financial support is likely related to formally regulated institutions in highly competitive countries, such support refers to money lenders in low competitiveness countries where conditions are often disadvantageous (Gazel and Schwienbacher 2020; Ruziev and Midmore 2014). This finding explains the negative relationship between non-family support and entrepreneurial successes in these types of countries in our sample.

In conclusion, both stock of resources (managerial skills) and flow of resources (family and non-family financial and moral support) can improve or worsen the chances of women's entrepreneurial success (assessed as income level), depending on the type of resources (managerial skills vs. social capital) available as well as the way (family vs. non-family; moral vs. financial) they flow within the firm (Barney 1991; Dierickx and Cool 1989). According to our analysis, the way these resources interact with motivations, family/entrepreneur priorities, and country institutional conditions can explain the differences in results in countries at different stages of competitive development (Gazel and Schwienbacher 2020; Lee 2019; Llanos-Contreras and Jabri 2019).

Theoretical contributions

Drawing on the previous analysis and by integrating the RBV and country competitiveness theory, this article makes three contributions. First, we contribute to the RBV literature by

distinguishing between the stock and flow of resources and their influence on women's entrepreneurial success (Barney 1991; Dierickx and Cool 1989). Data on women's entrepreneurship support show differences in the flow of social capital and managerial skills that affect success. Second, this research makes progress on how the theory of country competitiveness applies to entrepreneurship. Our study investigates how asymmetries in institutional development and internal market competitiveness through countries at different levels of competitiveness interact with entrepreneurs' resources to explain venturing success (Gazel and Schwienbacher 2020; Porter 1990). Third, this study responds to the call for more cross-cultural quantitative entrepreneurship research focusing on country and institutional context (Amorós et al. 2019; Carrasco 2014).

Public policy implications

This study also provides implications for policymakers. Government agencies dedicated to supporting entrepreneurial activity should pay attention to the importance of non-economic support to increase the probability of success of new women-owned ventures. Formal support mechanisms such as mentoring, support, and coaching activities for encouraging women entrepreneurship would require few economic resources and provide a high payback in terms of outcomes. The development and implementation of these mechanisms in a systematic way with continuous financial and human support are highly valuable. Such arrangements are especially crucial in countries at lower levels of competitiveness, as they could be a source of competitive business advantage but also moral support. Female entrepreneurs need to assess the advantages and disadvantages of family financial support and to decide how best to ensure work–family balance. Governance mechanisms and policies should avoid agency costs of the family's influence on business activities (Chrisman, Chua, and Litz 2004; Zellweger 2017). Funding support mechanisms, such as child and elder care, that traditionally fall on women to provide, needs to be a permanent part of any government programme that intends to improve women's entrepreneurial success.

In addition, policymakers need to examine the level of economic development to support mechanisms. Pairing women entrepreneurs with support networks that lead to opportunities both internally and externally would go a long way in raising the level of overall economic development. Government or agency mentoring/matching programmes and financial incentives for partners would be two possible solutions that would further the development of women entrepreneurs and their businesses.

Limitations and future research directions

This study has limitations to consider when interpreting the results. First, the number of countries is limited. Although the study included 22 countries, we had at most only five countries in the factor-efficiency group comprising the lower end of the economic and political spectrum. Second, for the most part, the sample was a convenience sample gathered from surveys distributed by women's support organizations and networks with access to the Internet. While the sample is diverse in terms of demographic characteristics, women entrepreneurs without access to the Internet were less represented in the sample, such as those in rural areas. The data are also cross-sectional and should not be generalized to other countries in general. Third,

differences may exist in the economic situation in the countries surveyed depending on the time of data collection (between 2010 and 2018). Finally, this study assessed success only by income level; however, success may be determined not only by income but also by other factors, such as years in business (Welsh and Kaciak 2019), which reflects the entrepreneur's opportunity cost in the labour market (Gimeno et al. 1997).

Future research should examine larger samples in all three economic areas (factor-efficiency, efficiency-innovation, and innovation), especially in population growth areas around the globe. Regionalism makes a difference (see Breitenecker et al. 2017). Africa, Central America, and South America, require further examination to effectively understand the relationship between country context and stages of economic development on the success of women-owned businesses. In addition, the impact of government and private programmes particularly in the areas of financial and moral support for women entrepreneurs needs further investigation in the light of the stages of country economic development. Family intervention programmes intended to assist women entrepreneurs may be designed differently depending on both cultural factors and stages of economic development of the country.

Disclosure statement

No potential conflict of interest was reported by the authors.

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