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European Journal of Development Research

Mozumdar, Lavlu; Hagelaar, Geoffrey; Materia, Valentina C.; Omta, S.W.F.; van der Velde, Gerben et al

<https://doi.org/10.1057/s41287-022-00523-3>

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Fuelling Entrepreneurial Orientation in Enhancing Business Performance: Women Entrepreneurs' Contribution to Family Livelihood in a Constrained Context, Bangladesh

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Accepted: 14 February 2022

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Abstract

Women entrepreneurs' performance in connection to their contribution to family livelihood in developing countries is yet an under-researched potential for addressing poverty and its roots. Their performance can be characterised as multi-dimensional. Next to business performance (e.g. profitability and growth), women entrepreneurs aim at a personal- and a societal performance as well. Although such a multi-dimensional performance reflects the interplay between the individual and the communal nature of entrepreneurship, especially in developing countries, the conditions for women to achieve this performance in such challenging contexts seem still unfavourable. This study analyses how entrepreneurial orientation (EO), distinguished in its three dimensions, of women entrepreneurs operating in a constrained context can leverage their business performance so that they can enhance their societal performance, in this case, their family livelihood. In particular, antecedents of EO, determinants of business performance and its influence on family livelihood are researched. The results of a structural equation model on data collected from Bangladeshi women entrepreneurs suggest that the financial capital and education level are antecedents positively influencing innovative- and pro-active EO, whereas risk-taking EO is positively influenced by financial capital only. EO, financial capital, business training and experience have a direct positive influence on women's business performance, whereas barriers in the social environment exert a direct negative influence. Apparently, women entrepreneurs appear to fuel and shape their EO in such a manner that through their business performance, a strong contribution to their family livelihood is given.

Keywords Entrepreneurial orientation · Human and financial capital · Business performance · Family livelihood · Women entrepreneurs · Constrained context

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Résumé

La performance des femmes entrepreneures dans les pays en développement en matière de contribution aux moyens de subsistance de leur famille présente un potentiel intéressant pour la lutte contre la pauvreté et contre ses déterminants – un potentiel qui reste au demeurant bien peu étudié. On peut parler de performance pluridimensionnelle. Outre la performance de leur entreprise (par exemple, la rentabilité et la croissance), les femmes entrepreneures visent également une performance personnelle et sociétale. Bien que cette performance pluridimensionnelle reflète l'interaction entre les dimensions individuelle et communautaire de l'entrepreneuriat, en particulier dans les pays en développement, les conditions qui permettent aux femmes d'atteindre cette performance dans des contextes aussi difficiles semblent encore et toujours défavorables. Cette étude analyse comment l'orientation entrepreneuriale (OE), avec ses trois dimensions, des femmes entrepreneures opérant dans un contexte difficile peut tirer parti de leur performance commerciale pour qu'elles puissent améliorer leur performance sociétale, en l'occurrence, les moyens de subsistance de leur famille. Nous recherchons en particulier les antécédents de l'OE, les déterminants de la performance de l'entreprise et son influence sur les moyens de subsistance de la famille. Les résultats d'un modèle d'équation structurelle sur les données recueillies auprès de femmes entrepreneures bangladaises suggèrent que le capital financier et le niveau d'éducation influencent de façon positive l'OE innovante et proactive, tandis que l'OE de prise de risque est influencée de façon positive par le capital financier uniquement. L'OE, le capital financier, la formation et l'expérience commerciales ont une influence positive directe sur la performance commerciale des femmes, tandis que les obstacles issus de l'environnement social exercent une influence négative directe. Il semblerait que les femmes entrepreneures alimentent et façonnent leur OE de façon à ce qu'elles puissent contribuer fortement aux moyens de subsistance de leur famille, grâce à leur performance commerciale.

JEL classification M130 · M210

Introduction

Evidence that individuals often engage in entrepreneurship for motives other than wealth is needed. Recent research on women entrepreneurship has indicated that women do not just target business performance when performing their role as entrepreneurs; they instead target at what we call in this paper a multi-dimensional performance, which encompasses at the same time also an individual (Alkhaled and Berglund 2018; Rindova et al. 2009) and a communal (Anderson and Obeng 2017) perspective. According to Huq et al. (2020), for women entrepreneurs, the growth of their business can be about personal development or appreciation rather than solely about increasing profitability or the number of employees. McClelland et al. (2005) state that women are motivated to enter the business, not for financial gain but to make a difference in the sense of being more client-oriented than men, aiming to make social contributions in addition to economic ones, and perceiving



their business as a relationship network rather than an economic entity. The multi-dimensionality can therefore encompass business, personal and social, communal issues. When such a wider view on the performance of an entrepreneur is adopted, an important broader understanding of the potential gains and challenges that entrepreneurship presents for women, especially in challenging contexts in the light of enhancing food security, is offered (Materia and Dentoni 2020). In fact, as Ali (2018) states, “entrepreneurship understood as an individualised, growth-oriented activity marginalises other ways in which entrepreneurship is enacted” (p. 22).

Such a multi-dimensional perspective on performance certainly reflects the situation of women entrepreneurs¹ operating in developing countries,² typically depicted as constrained or challenged contexts. Entrepreneurship for these women represents a feasible occupational basis to contribute to the income and livelihood³ of themselves and their families (Al-Dajani and Marlow 2010; Moller 2012; Mozumdar 2018; Ramswamy and Kumar 2013). Literature suggests in fact that the contribution of women entrepreneurs to their family’s livelihood⁴ in these countries is a necessity (Block et al. 2015; Gibson et al. 2004; Shah and Saurabh 2015); however, the ability to contribute is dependent on the extent to which women entrepreneurs succeed in reaching a viable business performance (e.g. business growth and income) (Gibson et al. 2004; Shah and Saurabh 2015). Considering family livelihood as a performance of women’s entrepreneurship, multi-dimensional is to be understood here as *sequential*, meaning that business performance enables a contribution to family livelihood, *intentional*, meaning that the necessity to perform as such is present, and *challenging*, meaning that the intention to contribute to family livelihood puts demands on reaching a certain business performance. For instance, the social environment that characterises these challenging contexts often constrains women operating their businesses (Shah and Saurabh 2015). Social norms, in fact, influence women’s business activities as they relegate women to their responsibility for only family subsistence activities, such as taking care of the children and the house chores (Materia and Dentoni 2020; Mozumdar et al. 2022). Consequently, financial dependence on men and restricted activities outside the home constrain their business activities (De Vita et al. 2014; Roomi 2013). In addition, also the business environment that characterises developing countries challenges women to develop their business due to poor infrastructure, environmental threats and organisational limitations (Al-Dajani and Marlow 2010; Amine and Staub 2009; Roomi 2013). In this sense, we pose that a constrained context implies that women’s entrepreneurial activities are home-based, executed in a resource-scarce, socially confining and business-wise threat-to-disrupt environment.

¹ Here defined as the women who are the initiators, owners and managers of businesses run at least for one year (Moore and Buttner 1997).

² Generally identified as the low- and middle income economies (World-Bank, 2022).

³ Defined as the capabilities, assets (physical, economic and social resources) and activities required for a means of living (Ellis 2000).

⁴ Defined as the ability of a family to uphold and improve its income, assets, and social well-being (e.g. food, housing and health security) over the years (Lindenberg 2002).



Thus, women entrepreneurs in developing countries are constrained in their business performance and may face the risk of not succeeding in their intended and necessary contribution to their family's necessities. Particularly for a constrained context, however, Wiklund and Shepherd (2005) suggest that entrepreneurs can benefit from entrepreneurial orientation (EO) to gain a competitive advantage. EO, defined in the literature as the strategic capabilities of entrepreneurs to exploit opportunities, is viewed as an essential determinant for business performance⁵ since it might offer competitive advantages to entrepreneurs (Fuentes-Fuentes et al. 2015; Rauch et al. 2009). EO shapes the way in which entrepreneurs exploit opportunities by infusing innovativeness, pro-activeness and risk-taking—three EO dimensions—into their business operations (Fuentes-Fuentes et al. 2015; Miller 1983; Wales et al. 2013).

Appreciating the relevant potential contribution to livelihood that women entrepreneurs can have in developing countries when properly supported (Mozumdar 2018) and the significant role they can play in triggering economic development (Ali 2018; Sarfaraz et al. 2014), we deem necessary to enrich the vast current research on women entrepreneurship with insights on the multi-dimensionality of performance of women entrepreneurs operating in constrained contexts. Specific academic attention to the relation between EO and women entrepreneurs' performance is, according to us, necessary, considering that (1) the explanation of women entrepreneurship's performance from the perspective of the relationship between EO and multi-dimensional performance is still under-researched (Wales et al. 2013) although full of potential, and (2) identifying the antecedents of EO which can leverage the women's multi-dimensional performance in such constrained conditions has the potential for, on the one hand, addressing specific (policy) support to their activities, on the other hand, to extend research on what explains EO and the outcomes of EO (Ireland et al. 2009).

Research on the link between EO and performance has focused mostly on financial rather than non-financial outcomes (Wales et al. 2013). Lumpkin et al. (2013) make a case for further broadening the outcomes of EO to include social value creation. This broadening of outcomes would also acknowledge that EO is not just an instrumental variable related to superior performance but can be associated with multiple aspects of a firm's functioning (Wales et al. 2013). Where in past research, growth and profitability were used as indicators of financial performance, other non-financial indicators can also be added to confirm that a firm can have multiple goals which cannot always be presented by the bottom-line financial performance indicators (Wales 2016; Wales et al. 2013). In the relation between EO and multi-dimensional performance, we expect that women's EO will be shaped according to the intended performance of their business (Mozumdar et al. 2020). As suggested by several researchers (Ireland et al. 2009; Wales et al. 2013, 2011), antecedents of EO—namely, factors influencing EO—represent an important area in which further research is needed. Although scarce, such literature states that factors such as entrepreneurs' internal resources—e.g. financial (Wiklund and Shepherd 2005)

⁵ Here defined as the business success assessed by using financial- and/or non-financial performance indicators (Venkatraman & Ramanujam, 1986).



and human capital (Davidsson and Honig 2003; Wales et al. 2013)—and external environments—e.g. the social and the business environment—might influence EO (Leiponen and Byma 2009). Furthermore, the literature indicates that factors like financial and human capital (Coleman 2007) and external environments may directly influence business performance (Mozumdar et al. 2016). Thus, these factors may indirectly affect business performance, directly impacting EO.

We pose in this paper that such a typical view of women entrepreneurs being constrained in their contribution to society and the economy by means of their entrepreneurial activities asks for a ‘positive’ explanation though (Huq et al. 2020) on how their EO is fuelled and shaped to perform with their business in a multi-dimensional manner. This study aims to understand better women entrepreneurs’ EO with their multi-dimensional performance against the background of constrained conditions. This multi-dimensionality of performance urges a better understanding of EO as EO can be seen as the entrepreneurial intention towards how to run their business, including how to perform. Concerning a better understanding of EO, we focus on the shape of EO and how that EO is formed. With the shape, it is meant the combination of dimensions of EO. Concerning how EO is formed, we relate to antecedents of EO.

Our study has several contributions to the literature. First, EO literature is enriched by providing insights into how EO is fuelled in a context that does not favour entrepreneurship and thus adds to the understanding of the foundation and development of EO (Ruiz-Ortega et al. 2013). Second, we increase insights into the constellation of EO dimensions influencing business performance in a constrained situation. Thirdly, we introduce the multi-dimensionality of performance in this research and present this as sequential performance following the relations between EO-business performance and business performance-family livelihood (performance). Fourthly, as business performance is not only dependent on EO, we map other influences (direct and indirect (via EO)) to understand how such a seemingly constrained situation can still lead to business performance (economic) and thereby family livelihood (social) performance. The policy-oriented contribution is aligned with the above. Knowing the foundation of the EO of women entrepreneurs is crucial if one wants to support women in engaging in entrepreneurship and thereby sustain their family livelihood in constrained contexts.

Theory and Hypotheses

The comprehensiveness of the conceptual model is based on (1) the view that women entrepreneurs in developing countries necessarily need to contribute to the family livelihood and that (2) insights into antecedents of EO are beneficial for understanding how EO can be leveraged to realise such a contribution. Moreover, an inclusive approach—which includes at the same time internal and external factors—is adopted (Ruiz-Ortega et al. 2013) to get insights into the antecedents of EO. Combining internal and external factors is in line with the view that entrepreneurs are cognizant of the internal resources they possess and those necessary to pursue an opportunity whilst being aware of the external environment where they operate



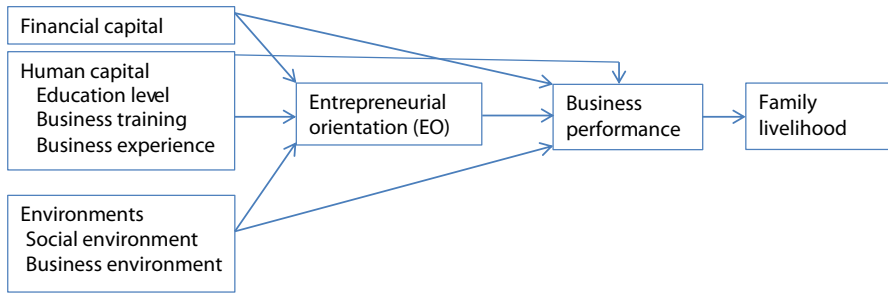


Fig. 1 Theoretical research model

(Haynie et al. 2009). Internal resources of entrepreneurs might fuel their EO to pursue opportunities (Gnyawali and Fogel 1994), while external environments might present opportunities or barriers for EO (Leiponen and Byma 2009). Also, the antecedents of EO can directly influence business performance. Business performance is seen as a necessary variable mediating EO and family livelihood to investigate to what extent these women contribute to their families' livelihood (see Fig. 1).

Entrepreneurial Orientation

The concept of entrepreneurial orientation (EO) is central to the model. EO is one of the most rigorously researched themes in entrepreneurship literature (Rauch et al. 2009; Wales 2016; Wales et al. 2013). It reflects the strategic capabilities and attitudes of entrepreneurs leading them to entrepreneurial actions and decisions (Lumpkin and Dess 1996; Rodríguez Gutiérrez et al. 2014). Based on Miller (1983), innovativeness, risk-taking, and pro-activeness are the three main dimensions of EO. Innovativeness is reflected by an entrepreneur's ability to participate in new ideas and techniques for introducing new products and services in markets (Hurley and Hult 1998; Miller 2011). Risk-taking reflects the ability of entrepreneurs to take strategic and financial risks to develop new products and services and reach new markets (Miller 2011; Willebrands et al. 2012). Pro-activeness is reflected by the forward-looking ability of entrepreneurs to forecast customers' needs and necessary changes in markets (Lumpkin and Dess 2001; Miller 2011). Although the EO dimensions, as defined by Miller (1983), are central to understanding the entrepreneurial process, Lumpkin and Dess (1996) and later Wales et al. (2013) suggest that they may occur in different combinations. This paper, therefore, investigates the combination of EO dimensions of women entrepreneurs in developing countries who are driven by necessity and experience restrictions to engage in entrepreneurial activities.

Antecedents of EO

Financial capital is the most common resource—such as money and credit—that can easily be changed into other resources (e.g. materials and machinery)



needed for the business (Cooper et al. 1994; Dollinger 2005). Available financial resources of entrepreneurs may positively influence their EO and precisely the EO dimensions (Filser et al. 2014; Wiklund and Shepherd 2005) since EO is a resource-consuming strategic capability (Covin and Slevin 1991). Seeing EO, especially for women in constrained conditions, as a resource-consuming strategic capability, we propose the following hypothesis.

Hypothesis H₁ Financial capital will show a positive relationship with the EO of women entrepreneurs.

Human capital refers to the knowledge and skills of individuals that increase their intellectual capabilities and lead to efficient and productive activities (Becker 2009). This is the outcome of formal and informal education (e.g. experience). Education, training and experience are viewed as the best investment in building and improving human capital (Becker 2009). Human capital might influence the EO of entrepreneurs (Davidsson and Honig 2003; Wales et al. 2013). This capital plays a vital role in nurturing an entrepreneurial mindset as entrepreneurs with business experience, training and education are expected to have the knowledge and intellectual abilities that may assist them to identify and exploit opportunities (Davidsson and Honig 2003; Hosseini and Eskandari 2013). Indeed, for women entrepreneurs in constrained conditions, the level of their human capital, a personal characteristic, can fuel their EO.

Hypothesis H₂ Education level (H_{2a}), business training (H_{2b}) and business experience (H_{2c}) will show a positive relationship with the EO of women entrepreneurs.

The environment can influence people's activities (Amine and Staub 2009; De Vita et al. 2014). The social environment in terms of shared norms, values, customs, traditions, ideologies, beliefs and practices might influence the activities of individuals by creating a sense of social control (Glonti et al. 2016). This creates barriers for women's entrepreneurial activities in many developing countries because it controls most of their actions (Amine and Staub 2009; De Vita et al. 2014; Jamali 2009). Similarly, the business environment in which business transactions occur in developing countries is challenging for women since this is usually characterised by poor, uncertain and changing conditions (Amine and Staub 2009; De Vita et al. 2014; Jamali 2009). This condition is created due to physical and institutional barriers (Acs et al. 2011). Physical barriers in the form of environmental threats (floods), infrastructural instability (poor roads and electricity), and institutional barriers in the form of governance limitations (non-supportive gender policies of the government) and political instability (strikes and political unrests) produce challenges for entrepreneurial activities of women (and men) in this context (Acs et al. 2011; Jamali 2009). As there is no evidence of the influence of barriers in social and business environments on women's EO, the above more general reasoning leads us to the following hypothesis.



Hypothesis H₃ Barriers in the social environment (H_{3a}) and barriers in the business environment (H_{3b}) will show a negative relationship with the EO of women entrepreneurs.

Determinants of Business Performance

Numerous studies suggest that EO is an influential variable for business performance (Fuentes-Fuentes et al. 2015; Rauch et al. 2009). Entrepreneurs having a high level of innovative, pro-active and risk-taking EO tend to scan and monitor their environments regularly for new opportunities (Bradley et al. 2011), which strengthen their competitive positions and improve their performance (Burgelman and Grove 2007; Fuentes-Fuentes et al. 2015). Moreover, EO is a multi-dimensional construct, and its dimensions might vary individually (Lechner and Gudmundsson 2014; Lumpkin and Dess 1996; Wales et al. 2013). The benefit of EO does not essentially depend on a high level of all its dimensions (Lumpkin and Dess 1996; Wales et al. 2013). Mozumdar et al. (2016), in line with Wiklund and Shepherd (2005)'s finding on EO benefits, particularly in constrained contexts, suggest a significant positive impact of women's EO on their business performance.

Hypothesis H₄ EO will show a positive relationship with the business performance of women entrepreneurs.

Financial capital—besides influencing EO—directly affects business performance (Acs et al. 2011; Cooper et al. 1994; Lee et al. 2001; Wiklund and Shepherd 2005). Entrepreneurs with a high level of financial capital invested in business might enjoy market opportunities through their high investment in improved quality products, services and advertisements (Lee et al. 2001). In contrast, entrepreneurs with a low financial capital might not enjoy market opportunities entirely as they might fail to compete with financially strong counterparts (ibid). We presume that women entrepreneurs with higher financial capital can have a better business performance than those with lower financial capital.

Hypothesis H₅ Financial capital will show a positive relationship with the business performance of women entrepreneurs.

Human capital—besides influencing EO—has also a direct influence on business performance (Crook et al. 2011; Ramos-Rodríguez et al. 2010). Education is the crucial element of human capital that leads to explicit knowledge and skills (Becker 2009), which is helpful to improve the business performance of entrepreneurs (Davidsson and Honig 2003). Empirical studies find that the education level has a significant positive effect on business performance—measured by growth and profitability—of women entrepreneurs in different developed and developing country contexts (Aterido and Hallward-Driemeier 2011; Coleman 2007; Inmyxai and Takahashi 2010; Roomi 2013). Furthermore, an entrepreneur's business knowledge achieved via business-training and experiences may significantly influence



business performance (Colombo and Grilli 2005). This knowledge may assist entrepreneurs in building a business and achieving sustainable competitive advantage in business (Hatch and Dyer 2004; Peng 2001). Various research results suggest that business training positively influences women entrepreneurs' business performance in developing countries like India and Laos (Inmyxai and Takahashi 2010; Kantor 2005). Also, the business experience can positively influence business performance through its support to exploring and exploiting opportunities (Arregle et al. 2015; Lee et al. 2001; Stam and Elfring 2008). Several authors find evidence that business experience has a significant positive impact on women entrepreneurs' business performance in developing countries (Inmyxai and Takahashi 2010; Kantor 2005; Manolova et al. 2007; Roomi 2013).

Hypothesis H₆ Education level (H_{6a}), business training (H_{6b}) and business experience (H_{6c}) will show a positive relationship with the business performance of women entrepreneurs.

The environment—besides influencing EO—may directly affect entrepreneurs' performance (Poggesi et al. 2015) as well. Literature suggests that barriers in the social environment (e.g. gender discrimination, societal legitimation, social obligations, local norms and religion) appear to be the main obstacles to women for their business performance in developing countries (Al-Dajani and Marlow 2010; Belwal et al. 2012; De Vita et al. 2014; Mozumdar et al. 2016; Roomi 2013). In the same way, barriers in the business environment might have adverse effects on their business performance (Mboko and Smith-Hunter 2009; Yordanova 2011). Based on this, we build the following hypothesis.

Hypothesis H₇ Barriers in the social- (H_{7a}) and the business environment (H_{7b}) will show a negative relationship with the business performance of women entrepreneurs.

Business Performance and Family Livelihood

Women's business activities in developing countries are crucial to improving their individual and family livelihood (Ramswamy and Kumar 2013). Their business profit might provide them with personal income and dignity (Awusabo-Asare and Tanle 2008) and create a resilient livelihood for them (Moller 2012). This might also induce a steady family livelihood (Ramswamy and Kumar 2013). Empirical evidence suggests that income from women's home-based business in developing countries—for instance, India and Jordan—contributes to their stable family income and livelihood though they operate their business activities in the context of embedded traditional patriarchal traditions (Al-Dajani and Marlow 2010; Ramswamy and Kumar 2013). In addition, women entrepreneurs in developing countries can be seen as dedicated to family livelihood based on the necessity to contribute. As an insight into the effect of business performance of such women entrepreneurs on family livelihood is lacking, we propose from the necessity-entrepreneurship angle



the following proposition on business performance enhancing family livelihood by improving economic⁶-, food⁷- and health security⁸ of the family.

Hypothesis H₈ Business performance will show a positive relationship with the family livelihood of women entrepreneurs.

The Context of Analyses

In order to make sense of the multi-dimensionality of the performance of women entrepreneurs operating in constrained contexts and of how EO can shape their contribution to embrace not only economic but also social potential, we base our analyses on Bangladesh. Bangladeshi women entrepreneurs are studied as they perform under seemingly societally induced constraints for their entrepreneurship activities and at the same time contribute to the national economy and their social environment. Bangladesh—a developing country—is characterised as a traditional societal setting, where women are disadvantaged and have a lower social position; this creates substantial constraints to developing their own business (Mozumdar et al. 2020a). This country's dominant shared values and norms constrain women's social mobility to their involvement in entrepreneurship and businesses (De Vita et al. 2014; Mozumdar et al. 2017). Their business operations predominantly depend on patriarchy and religion (Mozumdar 2018). The patriarchy in society relegates them to all kinds of family activities (e.g. cooking and children care) and keeps them financially dependent on men (Mozumdar et al. 2020): their financial resources are capped at stages substantially lower than those needed to develop a business (Chowdhury et al. 2018; Mozumdar et al. 2019). Ninety per cent of people are Muslims, and the Islamic view inculcates that women must maintain *purdah*⁹ (veil) that hampers their business- activities and performance (Islam et al. 2009; Mozumdar et al. 2020). Women wearing *purdah* often find it hard to visit banks (e.g. for credits) (Chowdhury et al. 2018), government offices (e.g. for training), purchase their raw materials and sell their finished products in markets where they need to deal with men (Mozumdar 2018). Moreover, the business environment in Bangladesh for business activities of women (and men) is unfavourable due to physical (e.g. floods, poor- technology and infrastructure) and institutional barriers (e.g. bribery, corruption and political instability) (Mozumdar et al. 2020; Rahim et al. 2019). Bangladeshi women entrepreneurs (10% of total entrepreneurs) (Mozumdar et al. 2022) therefore operate micro- (less than ten employees) and small businesses (10 to 49 employees) in a context of socio-cultural and business-environment-related barriers

⁶ Economic security of a family indicates that it has the ability to maintain and improve its income and assets over the years (Lindenberg 2002).

⁷ A family is called food secure if it has the ability to acquire the sufficient nutritious food needed by its members over the years (Coleman-Jensen, Gregory, & Singh, 2014).

⁸ Health security of a family comprises the ability to access to fresh water, good sanitation and primary health care facilities (Lindenberg 2002).

⁹ The practice in Muslim societies of screening women from men or strangers, especially by means of a veil.



that represent a constraint to the possibility to leverage their EO to establish their business and by this to support their family (Maas et al. 2014; Mozumdar et al. 2016, 2021).

Data and Methods

Research Setting, Sample and Data Collection

This study is located at the Jamalpur and Mymensingh districts in Bangladesh, in which the handicrafts sector is well-known. Most women entrepreneurs in these regions develop their businesses in the handicrafts sector since this represents a profit-oriented business in this country. This sector offers us a sufficient research population to engage in quantitative research. By collaborating with organisations¹⁰ supporting women, particularly their business activities in the selected districts, we drew up a list of 789 women entrepreneurs' names. Skipping overlapping names through crosschecking left us with 440 names. Among them, 300 women entrepreneurs (180 from Jamalpur and 120 from Mymensingh) fulfil the definition of women entrepreneurs of the present study (see footnote 1), and all were selected (complete enumeration) as respondents.

Data of this study are collected through a survey using a structured questionnaire discussed and elaborated with the support of local executives and experts of the organisations contacted. The questionnaire is divided into five segments: (a) socio-economic, (b) financial- and human capital, (c) EO, (d) business performance (e) family livelihood. A pilot survey containing 20 respondents (ten from each district) resulted in a rearrangement of questions. The two local interviewers who supported the main researcher in executing the survey on location received two days of training on this study's theoretical and methodological background. The data were collected in 2015 (from February through June) through face to face, approximately one-and-a-half-hour interviews.

Variables of the Model

Family Livelihood

Family livelihood, i.e. food security, economic security and health security of the family (Lindenberg 2002), is measured by perceptions of women entrepreneurs. In total, 11 perceptual items (3 on food (in)security (Coleman-Jensen et al. 2014); 4 on

¹⁰ The organizations contacted were: the government organizations BSCIC (Bangladesh Small and Cottage Industries Corporation), DWA (Directorate of Women Affairs), JMS (Jatiya Mahila Sangstha); non-government organizations WV (World Vision) and BRAC (Bangladesh Rural Advancement Committee); commercial and specialised banks NB (National Bank) and GB (Grameen Bank); and other organizations BWCCI (Bangladesh Women Chamber of Commerce and Industry), Trinamool Nari Unnayan Samity, Srijan Mohila Sangstha, Jamalpur Zilla Hasta Silpa Babsahi Samity, Jamalpur District Handicrafts Associations.



Table 1 An overview and operationalisation of variables used in the model

Variables	Operationalisation	Scale	Cronbach α
Family livelihood	The summated score of food security, economic security and health security Food insecurity: The reversed score of food insecurity Food security: Sum of <i>We worried whether our food would end before we got money to buy more; The food that we bought just did not last & we did not have money to get more; We could not afford to eat healthy and nutritious food</i> Economic security: Sum of <i>We were able to sustain and improve our annual family income; We were able to improve our accommodation facilities; We were able to increase our family assets (television, furniture, refrigerator); We were able to increase our family savings</i> Health security: Sum of <i>We had access to freshwater facilities (both for drinking and other use); We had access to sanitation facilities; We had access to primary health care facilities; Female members had access to health care facilities</i>	Summated scale: 11–77 (Likert 1–7)	.91 ^a
Business performance	Sum of: <i>The total volume of my firm's production has increased; I was satisfied with the price that I got from my customers; Customers were satisfied with my products and services; My shop had better products on offer compared to other handicrafts shops; My shop had a higher profit compared to other handicrafts shops</i>	Summated scale: 5–35 (Likert 1–7)	.73 ^a
Barriers in the social environment	<i>Hindrances due to family, norms, customs, traditions and religion</i>	Likert 1–7	-
Barriers in the business environment	Sum of: <i>Hindrances due to infrastructural instability (electricity and information technology); Hindrance due to political instability (strike, illegal tolls and briberies); Hindrance due to environmental threats (flood & heavy rains); Hindrance due to government rules and regulations (license, tax and vat)</i>	Summated scale: 4–28 (Likert 1–7)	.75 ^a
Innovative- and pro-active EO	Reported later (Table 2)	Likert 1–7	.94
Risk-taking EO	Reported later (Table 2)	Likert 1–7	.91
Education level	Highest level of education: (0 = no formal education; 1 = primary school; 2 = secondary school; 3 = higher secondary school; 4 = vocational and university education)		
Business training	Total number of hours of business-related training/year		
Financial capital	Current inventory + (the value of facilities/year) (Value of facilities = shop + sewing machine + embroidery machine + furniture + computer + other fixed assets)		



Table 1 (continued)

Variables	Operationalisation	Scale	Cronbach α
Business experience	The number of years since women entrepreneurs have started their business		
Bonding ties	The total number of bonding ties		
Bridging ties	The total number of bridging ties		
Linking ties	The total number of linking ties		
Other sources of income	The average of 2012, 2013 and 2014 of other sources of women's family income (e.g. husbands' income from agriculture or remittance)		

Cronbach α cannot be measured for a single item variable and is indicated as (-)

^aCronbach α of the items combined providing the summated scale



economic security; 4 on health security (Lindenberg 2002)) were measured using a seven-point scale (1 = completely disagree; 7 = completely agree). The family livelihood of women entrepreneurs is finally measured on the summated score of the 11 items (see items in Table 1).

Next to family livelihood, items of the following variables, namely business performance, EO, barriers in the social environment, and barriers in the business environment, were measured on a 7-point Likert scale (1 = completely disagree, 7 = completely agree).

Business Performance

Business performance in this study is measured on five perceptual items (production growth, profit growth, product quality, price satisfaction and customers' satisfaction) (Stam and Elfring 2008). The sum of the score of the five items (Hughes and Morgan 2007) represents the business performance of Bangladeshi women entrepreneurs (see Table 1).

We choose to measure business performance by perception. Perceived measures use a rating scale to compare performance with competitors, whereas objective measures use actual financial performance data (e.g. yearly sales or profit) (Dawes 1999; Dess and Robinson 1984; Zulkiffi 2014). Perceived measurement of business performance is valid in different contexts (Dess and Robinson 1984; Sarkar et al. 2001; Wall et al. 2004). This is particularly useful in our context, where most women cannot mention the objective data correctly.

Entrepreneurial Orientation (EO)

To measure EO, including identifying the EO dimensions in the context of women entrepreneurs in Bangladesh, we use an adapted version of the EO scale suggested by Verhees et al. (2012). This scale contains twenty-two items of innovativeness, risk-taking and pro-activeness. The EO dimensions in this context are identified by exploratory factor analysis presented later in the text ("Data Analysis").

Financial Capital

This is measured on the current investment in inventory and facilities used by women entrepreneurs (see Table 1 for detailed operationalisation).

Human Capital

Three variables, education level, business training and business experience, represent human capital for this study. Education level is measured as the highest level of education of women entrepreneurs. Business training is stated here as the average number of hours per year of business training received by women entrepreneurs. Business experience is measured as the number of years since women entrepreneurs have started their existing businesses.



Barriers in the Social Environment

The social environment—Barriers in the social environment—is measured with an item specifying hindrances due to family, norms, customs, traditions and religion.

Barriers in Business Environments

The business environment construct—Barriers in the business environment—is adapted from Rodríguez-Gutiérrez et al. (2015) and is measured on four items reflecting environmental threats, infrastructural, and political instability, finally government rules and regulations. The sum of the scores (Hughes and Morgan 2007; Mozumdar 2018) on four scale items represents this construct.

Control Variables

Several studies suggest that the social relationships or ties might influence the business performance of entrepreneurs (Granovetter 1985; Hoang and Antoncic 2003; Hoang and Yi 2015; Maas et al. 2014; Mayoux 2001; Mozumdar et al. 2019; Slotte-Kock and Coviello 2010). Consequently, we control three types of social ties, namely bonding- (Bonding ties: ties with family, friends and relatives), bridging- (Bridging ties: ties with other women entrepreneurs) and linking ties (Linking ties: ties with persons of organisations) for the business performance of women entrepreneurs (Maas et al. 2014; Mozumdar et al. 2019). The data on social ties are collected through the name generator technique (Ame et al. 2021; Scholten et al. 2015), because this can efficiently measure the number and the type of ties of entrepreneurs (Anderson et al. 2005; Batjargal 2007; Renzulli et al. 2000; Stam et al. 2014). Women entrepreneurs are asked to name a maximum of seven people¹¹ who concretely support their business (Mozumdar 2018; Scholten et al. 2015). Here, the relationships between women entrepreneurs and the persons they can mention are known as ties. To separate different types of ties, women are also asked to indicate how they know the persons they named (e.g. a friend or family member or from another business or organisation). In addition, we control other sources of income of women entrepreneurs (Other sources of income) for family livelihood because—besides their business income—their other income (e.g. husbands' income) may influence their family livelihood (Mozumdar 2018; Mozumdar et al. 2021). The operationalisation of all control variables in this study is shown in Table 1.

Data Analysis

We analyse the data in two steps. The first step is the primary task, including (a) marker variable analysis to test the common method bias, (b) exploratory factor analyses to identify the EO dimensions of Bangladeshi women entrepreneurs, (c)

¹¹ Those with whom they discuss matters of finance, market, raw materials and technology etc.



reliability analysis to check the consistency of items of the latent variables, and (d) correlations and descriptive analyses for the descriptions of all variables used in the model (Table 3). The second step is structural equation modelling.

First Step

Marker variable Analysis We partial out the common method variance (CMV) or bias from the uncorrected correlations (denoted r_u) to arrive at the CMV corrected correlation coefficients (denoted r_a). Testing for the significance of the CMV corrected correlations (r_a) estimates the magnitude and significance of common method variance in the data. Correlations that remain significant after CMV control are unlikely to be severely affected by method variance (Lindell and Whitney 2001). This marker variable analysis¹² indicates that CMV is not a problem in our data.

Exploratory Factor Analysis With this analysis, we check the multi-dimensionality of the EO concept (Kraus et al. 2012) and examine the EO dimensions of women entrepreneurs in the Bangladeshi context (Lumpkin and Dess 1996; Wales et al. 2013). We run the principal component analysis following Varimax rotation and Kaiser's criterion (eigenvalues > 1). The analysis includes 22 innovativeness, risk-taking, and pro-activeness items presented in the questionnaire survey. This leads to eliminating one item of risk-taking¹³ and three items of pro-activeness¹⁴ as they cross-loaded in two components with a single loading higher than 0.50 (p. 138), and the difference between loadings is lower than 0.10 (Osborne and Costello 2009). Eliminating four items, we rerun the analysis with 18 items: we again eliminate one pro-activeness¹⁵ item following the first elimination. We rerun the analysis with 17 items by omitting one item and finally getting a two-component solution for EO. We label the first component as Innovative- and pro-active EO because of the dominance of subsequent items. The second component is Risk-taking EO, as risk-taking items lead this component. As a result, Innovative- and pro-active EO and Risk-taking EO represent the two EO dimensions of Bangladeshi

¹² The CMV corrected r_a correlations are computed as follows:

$$r_a = (r_u - r_m) / (1 - r_m)^2$$

where r_a is the CMV corrected correlation and r_u is the original uncorrected correlation. For r_u we select a correlation that may reasonably be expected (here: the correlation between business performance and I start production and marketing of new products faster than competitors; $r_u = .42$). For r_m , we select the smallest correlation between any pairs of variables that is not expected to be related. We use the bivariate correlation of both marker variables as an indicator of CMV (here: the correlation between business performance and I take financial risks for higher profit; $r_m = .28$). We arrive at $r_a = (.42 - .28) / (1 - .28)^2 = .27$.

The t-statistic to assess the statistical significance of r_a is computed as follows:

$$t_{((\alpha/2), n-3)} = r_a / \sqrt{(1 - r_a^2) / (n - 3)} = 4.82.$$

The test statistic (4.82) is higher than 1.96, indicating that common method variance is not a serious problem in our research.

¹³ Item: *I am good at managing financial risks.*

¹⁴ Items: *I plan ahead what I want to do, I always produce desirable products for clients, and I can easily predict the action of competitors and set my strategies accordingly.*

¹⁵ Item: *I look for new connections to get access to raw materials, finance & new markets.*



Table 2 Exploratory factor analysis for items of EO dimensions

Items	EO dimensions	
	Innovative- and pro-active EO (λ)	Risk-taking EO (λ)
I produce a variety of unique products	.81	
I use new techniques in production and marketing	.77	
I always look for new markets	.74	
I start production and marketing of new products faster than competitors	.73	
I always try out new products	.73	
I introduce new and uncommon products into the market	.73	
I always look for new ideas and techniques	.71	
I am able to predict future demands and the necessary changes of products	.68	
I usually initiate activities before other handicraft firms do	.65	
I always start new activities if I see an opportunity	.63	
I take financial risks for higher profit		.79
I invest extra time in products and services that yield a higher profit		.78
I always take risks if I see an opportunity		.75
I take financial risks by producing new products and going to new markets		.74
I invest extra money in products and services that yield a higher profit		.69
I am always eager to find potential strategies for higher profit		.64
I use my own techniques to create new products		.61

Data fit statistics: Bartlett's test: chi-square (df=136)=3825.58, level of significance (p)= < .01, Kaiser–Maeyer–Olkin (KMO) test: .95, total variance explained: 65.28%, factor loading (λ) smaller than .50 is suppressed

women entrepreneurs; each dimension is constructed on items loading higher than 0.60 (Table 2). Each dimension in itself can influence the entrepreneurial process and, in turn, result in higher or lower business performance (Wales 2016), and the antecedents can differ as well in their effect on the identified dimensions of EO.

Reliability Analysis Cronbach alpha (α) indicates the internal consistency of items representing the latent variable. The value of α should be greater than 0.70 (Field 2013). This value for Innovative- and proactive EO (0.94) and Risk-taking EO (0.91), barriers in the business environment (0.75), business performance (0.73) and family livelihood (0.91) shows that items are consistent in measuring all the five latent variables.



Second Step

Structural Equation Model (SEM)

This model allows us to examine direct and indirect relations of both discrete and continuous variables (p. 661, paragraph 1) (Bowen and Guo 2011). Simultaneously, it checks for the mediating effects of variables (ibid). We run an SEM with robust covariances (Yuan and Bentler 1998) based on the final sample of 292 respondents. This number of respondents is resulted from the original set of 300 because of four outliers and four missing values of financial capital. As suggested by Hu and Bentler (1999), SRMR (standardised root mean squared residual) value is provided for the model fit indicator.

Results

Table 3 presents the baseline description and the bivariate correlation of all variables in the SEM. The descriptive statistics designate that financial capital invested by women entrepreneurs in their respective businesses on average is about US\$ 5357, suggesting that most of them operate in small-sized companies. They are experienced running their business as specified by their mean business experience (9 years). They are not highly educated (on average, completed secondary school) but receive about 34 h of business training per year. Also, their mean score on Innovative- and pro-active EO (5.88 out of 7) and Risk-taking EO (5.96 out of 7) indicates that they are innovative and pro-active and prefer to take risks in their business. These results show that women entrepreneurs in Bangladesh do not exercise pure ideal-typical EO dimension as presented in theory but combine items of different theoretical dimensions in their EO dimensions in practice. Next to EO, women face challenges in social and business environments in operating business as their average score for both barriers in social- (4.82 out of 7) and business environment (20 out 28) are quite high. Furthermore, their mean bonding- (2.55) bridging- (1.71) and linking ties (0.54) inform that they build relatively more ties with family, friends and relatives compared to ties with other women entrepreneurs and with organisations and financial institutes. Women entrepreneurs' average business performance score (about 29 out of 35) and family livelihood score (about 68 out of 77) are quite high. Their families' average other sources of income are quite low: this is about US\$ 3621 per year.

In the next step, the structural equation model illustrates which variables are the antecedents of EO, critical determinants of business performance and its influences on the family livelihood of Bangladeshi women entrepreneurs.

The structural equation model (SEM) produces a reasonably good fit: the value of SRMR = 0.043. A value of SRMR lower than 0.08 is accepted as a good fit for the model (Hu and Bentler 1999). Figure 2 and Table 4 illustrate the structural relationships in the model. On the antecedents of EO, financial capital has a positive and significant relationship with Innovative- and pro-active EO ($\beta = 0.10$, $p < 0.05$) and Risk-taking EO ($\beta = 0.15$, $p < 0.01$), which confirms hypothesis H₁ that financial



Table 3 Descriptive statistics and correlations (N=292)

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Family livelihood	68.24	8.75	1.00													
2. Other sources of income (\$)	3621.23	4698.25	.26***	1.00												
3. Business performance	29.12	3.15	.44***	.17***	1.00											
4. Financial capital (\$)	5357.55	15,773.46	.21***	.44***	.28***	1.00										
5. Business experience	9.10	6.07	-.01	.07	.11*	.13**	1.00									
6. Education level	2.19	1.08	.30***	.28***	.23***	.21***	-.05	1.00								
7. Business training	33.76	62.87	.05	-.01	.06	-.01	-.22***	.25***	1.00							
8. Innovative and pro-active EO	5.88	1.02	.52***	.20***	.41***	.16***	-.03	.31***	.07	1.00						
9. Risk-taking EO	5.96	.99	.25***	.17***	.29***	.18***	.06	.09	-.02	-.03	1.00					
10. Barriers in the social environment	4.82	1.73	.05	-.06	-.04	-.05	-.02	-.13**	.08	.01	.10*	1.00				
11. Barriers in the business environment	20.16	4.91	.07	-.02	.10	.05	-.06	-.13**	-.04	-.01	.14**	.36***	1.00			
12. Bonding ties	2.55	1.73	-.10	.07	-.10*	.08	-.12**	.22***	.06	-.03	-.01	-.24***	-.28***	1.00		
13. Bridging ties	1.71	1.71	.02	.03	.06	-.09	.15**	.07	.05	-.03	.10*	.06	.12**	-.47***	1.00	



Table 3 (continued)

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
14. Linking ties	.54		.78	-.01	.06	.09	.17***	.23***	.08	.12**	.16***	.06	.00	-.06	-.17***	-.13**	1.00

*Significant at $p < .10$ level**Significant at $p < .05$ level***Significant at $p < .01$ level

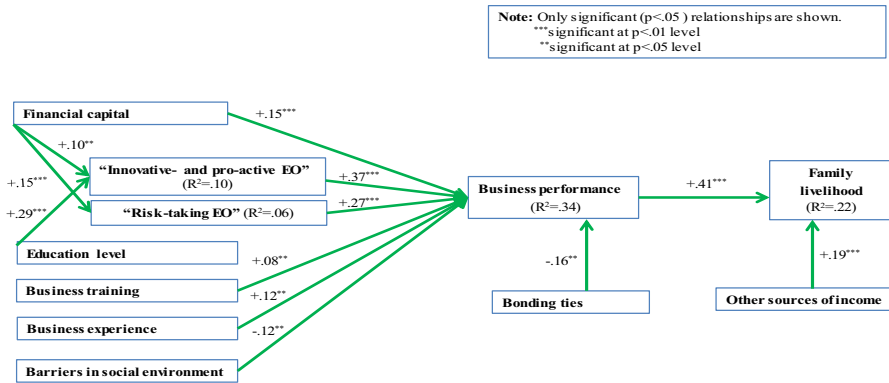


Fig. 2 Overview of results of structural equation model

capital directly triggers the EO (dimensions). Education level has a significant positive relationship with Innovative- and pro-active EO ($\beta=0.29, p < 0.01$) but not with Risk-taking EO: the hypothesis H_{2a} is partially confirmed. Innovative- and pro-active EO is driven mainly by education level. Business training, business experience, barriers- in the social and business environments are not statistically related to EO dimensions; the results do not support hypotheses H_{2b}, H_{2c}, H_{3a} and H_{3b} .

Regarding determinants of business performance, Innovative- and pro-active EO ($\beta=0.37, p < 0.01$) and Risk-taking EO ($\beta=0.27, p < 0.01$) have a positive and significant direct relationship with business performance confirming hypothesis H_4 . In line with hypothesis H_5 , financial capital ($\beta=0.15, p < 0.01$) has a significant positive connection with business performance: this capital directly and positively influences business performance. In addition to direct influence, financial capital has an indirect positive impact on business performance via Innovative- and pro-active EO ($\beta=0.10 \times 0.37 = 0.04$) and Risk-taking EO ($\beta=0.15 \times 0.27 = 0.04$) and thus, EO dimensions partially mediate financial capital. Human capital, specifically business training ($\beta=0.08, p < 0.05$) and business experience ($\beta=0.12, p < 0.05$), show a significant positive relationship with business performance as suggested by hypothesis H_{6b} and hypothesis H_{6c} . Hypothesis H_{6a} is not supported as education level is not statistically related to business performance. The education level has an indirect positive influence via Innovative- and pro-active EO on business performance ($\beta=0.29 \times 0.37 = 0.11$). As education level does not directly affect business performance, education level is fully mediated by Innovative- and pro-active EO. Thus, Innovative- and proactive EO mediates the influence of financial capital and education level on business performance. In contrast, Risk-taking EO only mediates the impact of financial capital on business performance. Business performance is negatively influenced by barriers in the social environment ($\beta = -0.12, p < 0.05$) but not by barriers in the business environment being statistically not related: hypothesis H_7 is partially confirmed. On the control variables, bonding ties ($\beta = -0.16, p < 0.05$) have a significant negative relationship with business performance. Bridging- and linking ties are not statistically related to business performance.



Table 4 Overall results of structural equation model

Path to	Path from	Coefficient ^s	z value
Innovative- and pro-active EO ($R^2 = .10$)	Financial capital	.10**	2.38
	Education level	.29***	5.96
	Business training	-.01	-.29
	Business experience	-.03	-.53
	Barriers in the social environment	.05	.64
	Barriers in the business environment	.01	.10
Risk-taking EO ($R^2 = .06$)	Financial capital	.15***	2.91
	Education level	.10	1.63
	Business training	-.03	-.52
	Business experience	.05	.89
	Barriers in the social environment	.08	1.14
	Barriers in the business environment	.07	1.62
Business performance ($R^2 = .34$)	Innovative- and pro-active EO	.37***	7.10
	Risk-taking EO	.27***	5.75
	Financial capital	.15***	2.70
	Education level	.08	1.46
	Business training	.08**	1.96
	Business experience	.12**	1.99
	Barriers in the social environment	-.12**	-2.12
	Barriers in the business environment	.07	1.29
	Bonding ties	-.16**	-2.34
	Bridging ties	-.06	-.91
	Linking ties	-.09	-1.49
	Family livelihood ($R^2 = .22$)	Business performance	.41***
Other sources of income		.19***	3.00

^s standardised coefficient

**Significant at $p < .05$ level

***Significant at $p < .01$ level

Business performance ($\beta = 0.41$, $p < 0.01$) positively and significantly influences family livelihood, confirming hypothesis H₈. Also, other sources of income ($\beta = 0.19$, $p < 0.01$) positively affects family livelihood. The results indicate that business performance contributes more to family livelihood than other income sources: these suggest that their business performance mainly induces women entrepreneurs' family livelihood. As the EO dimensions (namely, Innovative- and pro-active EO and Risk-taking EO) directly influence the business performance and the same performance directly affects the family livelihood, the EO dimensions indirectly influence the family livelihood (via business performance).



Discussions

This study aimed to gain insight into what enables women entrepreneurs in constrained conditions to fuel their EO and how they shape their EO dimensions to leverage their business performance to such an extent that they can also contribute to their family livelihood, fulfilling in this way also a societal performance. This is what we call a multi-dimensional performance. In a constrained context, the EO dimensions of entrepreneurs can be shaped in their manner (Wales et al. 2013) to achieve business performance. Specifically, innovative-proactive and risk-taking EO dimensions, characterising the EO of women entrepreneurs in the Bangladeshi handicrafts sector, leverage their business performance. This result confirms the beneficial role EO plays for performance in constrained contexts (Hughes and Morgan 2007; Kraus et al. 2012; Mozumdar et al. 2022; Mozumdar et al. 2020; Wiklund and Shepherd 2005), looking at how EO influences business performance and—from that—at the substantial contribution this performance gives to family livelihood.

The fact that risk-taking forms a separate EO dimension next to the combined innovative-proactive one—therefore, the way EO is shaped in the case of the Bangladeshi women entrepreneurs—can be interpreted against the background of the intended contribution to family livelihood next to the contribution to business performance. Inspired by family business literature, one can assume that given the longer-term goal of sustaining the family, risk-taking is important and cautiously deals with the EO dimension in the business (Kammerlander et al. 2015). In that sense, the multi-dimensionality, i.e., the inclusion of a social performance goal, could be seen as influencing the way women want to run their business, namely, the shape of their EO dimensions, or the configuration of EO in two rather than three dimensions in the Bangladeshi case.

Although the EO dimensions exert the most relevant impact on business performance in terms of magnitude, we see that financial capital, business-training and experience are direct drivers of business performance. In contrast, barriers in the social environment harm it. The result we found on financial capital is in line with the existing literature on (men and women) entrepreneurship (Acs et al. 2011; Lee et al. 2001; Wiklund and Shepherd 2005). Also, the results on the business training (Inmyxai and Takahashi 2010; Kantor 2005) and business experience confirm findings in other developing countries (Inmyxai and Takahashi 2010; Kantor 2005; Manolova et al. 2007; Roomi 2013). Besides these drivers, the results show that the social environment, namely social norms, values, customs, family and religion, pose barriers for women's business performance, which are already indicated in the literature (De Vita et al. 2014; Mozumdar et al. 2019; Mozumdar et al. 2016). Bangladeshi women operating their business within a socially constrained context can explain the negative influence of bonding ties (namely, with the family) on business performance.

To study which factors, in a constrained context, fuel the EO of women entrepreneurs, we then investigated antecedents of EO. The study results suggest that financial capital effectively helps leverage innovative-proactive and risk-taking



EO of Bangladeshi women entrepreneurs. Being a common resource, financial capital can be converted into various other resources—e.g. buying raw materials for producing products, purchasing machinery, decorating shop and advertising new products and services—needed by entrepreneurs (Cooper et al. 1994; Dollinger 2005). Entrepreneurs' financial capital is thus supportive for the development of EO (Wiklund and Shepherd 2005) since EO needs a considerable amount of resources to develop and maintain (Covin and Slevin 1991). The results align with previous research results (Filser et al. 2014). The other antecedent we found influencing EO is education: education level significantly ($\beta=0.29$) increases innovative and pro-active EO of Bangladeshi women entrepreneurs. This result aligns with Davidsson and Honig (2003) and Mozumdar et al. (2021) when considering the education and EO relationship. In our study, we refine this insight into the relationship between EO and education to the level of the EO dimensions mentioned.

Interesting as well is the non-significant relationship between environments (barriers in social and business environments) and EO. This means that environments do not seem to directly influence EO whereas, as mentioned above, individual characteristics like education and financial capital do. A possible explanation for this could be when combining this with the influence of education on EO, that environments through the mediating 'filter' of education indirectly influence EO. After all, as we stated in "Theory and Hypotheses", education can be seen as nurturing an entrepreneurial mindset with which opportunities are identified and exploited (Davidsson and Honig 2003; Hosseini and Eskandari 2013). In this explanation, the educational level supports the ability to scan the environment to identify opportunities. Based on these results on antecedents of EO, one could assume that their education and financial capital fuel the EO of Bangladeshi women. This could infer that women entrepreneurs form their EO independently from the (barriers in the) environment.

Our results show that innovative-proactive and risk-taking EO dimensions mediate the influence of financial capital on business performance. This result is consistent with Filser et al. (2014), who suggest that EO can mediate the relationship between the availability of financial resources and performance, measured by growth. Also, results indicate that the innovative-proactive EO dimension mediates the influence of education level on business performance. This result is in line with a prior study of Fuentes-Fuentes et al. (2015), who show that EO mediates the relationship between knowledge acquisition and business (financial) performance of women entrepreneurs.

In addition, business performance has a considerable influence ($\beta=0.41$) on family livelihood. Thus, we can say that women entrepreneurs contribute to family livelihood. Engaging in entrepreneurial initiatives is at the root of their contribution to family life through their high impact on business performance. Moreover, comparing women entrepreneurs' support with other sources of income to families' livelihood, the results surprisingly indicate that their business performance ($\beta=0.41$) may contribute relatively more than other income sources ($\beta=0.19$). This result seems to underpin the multi-dimensionality of women entrepreneurs' performance. In a sense, this strong relationship underpins the necessity of women's support to family livelihood (Block et al. 2015).



Overall, the results can be seen as adding to recent literature, which suggests that life challenges can be drivers for entrepreneurship rather than personal advantages or a favourable context (Miller and Breton-Miller 2017). The fact that women take up this role of contributing financially and also socially to their families (considering the lower influence of ‘contribution of other sources of income’) is in line with, amongst others, the Social Feminist Theory (SFT) (Huq et al. 2020) according to which women entrepreneurs intend to perform socially as well (McClelland et al. 2005). SFT is seen in the literature (Ali 2018; Huq et al. 2020; Wales 2016; Yadav and Unni 2016) as a way forward to explore the uniqueness of women entrepreneurship. This theory poses that women entrepreneurship can be explained (as well) by women’s norms and values (like selflessness and concern for others) that have evolved during their development within the societal context, i.e., socialisation (Huq et al. 2020). Such an assumption about gendered socialisation could explain more basically the multi-dimensionality of women entrepreneurship: the fundamental values, selflessness and concern for others could be underlying the intended performance of ‘family livelihood’.

Such a background of taking life challenges and gendered socialisation to start entrepreneurship is suggested to lead too often devoted, persistent and creative entrepreneurs (Miller and Breton-Miller 2017). This, again, can lead to further development of those women entrepreneurs when contributing to the well-being of their families (Al-Dajani and Marlow 2010; Ramswamy and Kumar 2013). Women can improve their status (Awusabo-Asare and Tanle 2008) and livelihood (Moller 2012). The cumulative effect of women’s contributions to developing countries’ social welfare and economic development is emphasised in literature (Acs et al. 2011; Ardrey et al. 2006).

Conclusion

The study is attempted for understanding the antecedents of entrepreneurial orientation (EO), critical determinants of business performance and its contribution to the family livelihood of women entrepreneurs working in a constrained context.

To pursue the aim, data are collected through a structured questionnaire implemented to women entrepreneurs ($N=292$) operating handicrafts business at the Jamalpur and Mymensingh districts in Bangladesh. The structural equation model provides the results for this study. The study results confirm that financial capital is an antecedent for innovative- and pro-active EO and risk-taking EO, whereas education level proves as an antecedent for innovative- and pro-active EO of women entrepreneurs. The findings show that EO dimensions (innovative- and pro-active EO jointly and risk-taking EO), financial capital, business training and business experience positively, but the social environment negatively influence their business performance. The results provide evidence that the EO dimensions partially mediate the influence of financial capital on business performance. In contrast, innovative- and pro-active EO fully mediates the impact of education level on the same performance. The evidence based on the analysis finally indicates that their business performance positively contributes to the family livelihood.



The study contributes to advancing knowledge in different streams of literature. First, we add to women entrepreneurship literature in two manners. By theoretically developing and empirically testing a comprehensive model explaining the contribution of entrepreneurship and its antecedents to business performance and family livelihood in a constrained context, this is the first effort to build such a comprehensive model to understand EO and multi-dimensional performance. In line with this, evidence is provided on the multi-dimensionality of performance, i.e., the relationship between business performance and the family livelihood of women entrepreneurs. Second, we provide evidence on the antecedents of EO (dimensions) in the case of women entrepreneurs. By doing that, we contribute to the extant literature on the EO of women entrepreneurs. Although prior studies have analysed the antecedent of EO (Ireland et al. 2009; Wales et al. 2011, 2013), they mainly focus on men- or general (men and women) entrepreneurs. In this domain, we assume that also individual characteristics seem to influence EO rather than only environmental factors. Third, we identify a combination of EO dimensions affecting business performance. The assumption is that the separate risk-taking dimension safeguards the intended family livelihood performance. Fourth, we add to the literature on critical determinants of women's business performance in developing countries. Fifth, we provide evidence on the mediating role of EO dimensions on different business performance determinants and contribute to both EO and performance literature.

We have some suggestions for practitioners and also for policy implications. Our study finds that financial capital is an antecedent of EO, an important factor for women's business performance. This finding focuses on the role of banks and the social constraint for women to access bank facilities and do business. Special facilities which lower the threshold for women to gain credits within bank facilities could support women's entrepreneurship. As education is also found as an antecedent of innovative- and pro-active EO, entrepreneurship courses could be introduced in formal and informal educational institutes so that especially underprivileged women can increase their entrepreneurial capabilities by following those courses. Moreover, practical and need-oriented business training should be designed to increase their performance in a focused manner. As the social norms, values, and attitudes pose barriers for women's business development, the government, NGOs, and private organisations can arrange different awareness increasing programmes to change social attitudes towards women's business. A campaign, for example, with successful women entrepreneurs who contributed to family income through their business, could trigger insights in the weighing by individuals between constraining social norms and women's contribution to family livelihood, and more generally to society and national economy as well.

Limitations and Future Research

Our study has some methodological limitations and, at the same time, uncover the avenue for future research. First, we only analyse the handicrafts sector of two selected districts in Bangladesh due to time and budget constraints. Future research may conduct similar studies in different sectors (e.g. food processing sector) with



representative samples from this context or other developing countries. Our theoretical model can be used as a reference. Second, we employ the perceived measure for business performance, and family livelihood rather than the objective measure needed the archival data due to problems of obtaining such data in our context. Further research with archival data on business performance and family livelihood is required to validate our study results. Third, as the results of our analysis are based on self-reported data collected through a questionnaire, potential common method variance (CMV) or measurement bias might affect the results. However, a marker variable analysis outcome shows that the CMV does not seriously hamper our study results. Fourth, as in our study, the cross-sectional data might limit causal relationships between the variables (for example, the relationship between business performance and family livelihood). The longitudinal data in this context may provide further insights into the dynamic nature of business performance and family livelihood. Future research may use longitudinal data to validate the causal relationships shown in our model. Fifth, CR and AVE for the reliability of latent variables, and CFI, TLI and RMSEA for model fitness, were not considered in this study. However, such an attempt would add value to future research.

Concerning the theoretical angle of SFT, we would encourage further research according to the assumption that fundamental gendered values underlie women's entrepreneurship. For instance, researching the relation between the actual gendered values could add to the understanding of the research result that social and business environments do not influence EO and that (only) the social environment influences business performance. These results could indicate that women take their position, influenced by their fundamental values, in running their business (EO) despite social and trade barriers. This could be an SFT induced specific lead to further women entrepreneurship research: although both men and women can take a particular, unique position to run their business, a difference can be that women—because of their different gendered socialisation—have their way of running their business (think of the role the EO dimension risk-taking takes) and appreciate multi-dimensional performance more than men. This could enhance existing, inconclusive research on risk-taking and gender (Ali 2018) and add specifically to the call into EO and the multi-dimensionality of performance.

Acknowledgement This study was supported by the Nuffic (Niche-BGD-156 programme).

Declarations

Conflict of interest The authors declare that they have no conflict of interest.

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