

# **FEMALE ENTREPRENEURS IN DEVELOPING COUNTRIES: A REVIEW OF RURAL VERSUS URBAN REGIONS**

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## **ABSTRACT**

The paper provides a literature review on female entrepreneurship studies in developing countries. To contribute to the gender and entrepreneurship literature the study aims to identify the research gap on the impact of several context and content-wise factors with a focus of rural versus urban regions, industry sector, socio-economic and cultural setting and educational attainment on female entrepreneurs in developing countries. The study aims to bring an understanding on how women entrepreneurs recognize opportunities and pursue entrepreneurial activities in rural regions in developing countries. Based on a multidisciplinary theoretical framework the paper intends to build theoretical explanations for the current issues and generate questions for further studies.

## **INTRODUCTION**

Women entrepreneurs play a substantial role in growing their economies (Terjesen & Amoros, 2010; GEDI, 2013; Sarfaraz et al., 2014). Female entrepreneurs contribute greatly to the acceleration of economic growth through job creation and innovative products and services (Yadav & Unni, 2016; Lock & Smith, 2016). More studies on female entrepreneurship are needed to develop theories, raise awareness, address challenges and advance policy and programs (Brush & Cooper, 2012; Jadav & Unni, 2016). Although over the years female entrepreneurship studies have increased still there is a growing need to understand female entrepreneurship, especially in the developing countries (Brush & Cooper, 2012; Jadav & Unni, 2016). A cross-disciplinary systematic literature review on female entrepreneurship studies between 2000-2013 indicates that most female entrepreneurship studies have increasingly focused on developed countries compared to developing countries (De Vita et al., 2014a).

To date studies on female entrepreneurs in developing countries were usually focused on certain topics such as gender differences and findings were generalized. Earlier studies on women entrepreneurs in developing countries reported multiple challenges such as accessing resources, finances and networks (Goyal & Yadav, 2014; Ramadani, 2015; Beqo & Gehrels, 2017); societal inequality (Jones & Lefort, 2006); cultural and social limitations (Akhawaya & Havenga, 2012); economic, legal and technological barriers (De Vita et al., 2014b; Della-Giusta & Phillips, 2006; Fletschner & Carter, 2008; Nagadevara, 2009; McIntosh & Islam, 2010; Welsh et al., 2013). Although these findings on female entrepreneurship highlight challenges that female entrepreneurs face in their entrepreneurial activities in developing countries, literature reported that usually most earlier studies have rather weak theoretical framework (De Vita et al., 2014b). It was indicated that

there is a need to include a multidisciplinary framework, build more theoretical explanations for the current issues and especially analyze the female entrepreneurship through a feminist theory (De Bruin et al., 2007), shifting the focus from gender-based differences to how social circumstances impact gender (Ahl & Nelson, 2010; Naudé, 2010; De Vita et al., 2014b).

Most of the earlier studies did not provide comparison on different other contexts and contents as well and findings were generalized. Literature survey also indicates that there is a need to include various context and content factors (Ahl, 2006; De Vita et al., 2014b) to advance female entrepreneurship studies.

## **THE PURPOSE OF THE STUDY**

To contribute to the gender and entrepreneurship literature and to respond to the need to further study various content and context dimensions and build more theoretical explanations, the paper aims to review several context and content dimensions that impact female entrepreneurial activities in developing countries. Based on a multidisciplinary theoretical framework the paper intends to build theoretical explanations for the current issues and generate questions for further studies on a few other context and content dimensions. The context dimension includes rural versus urban regions and the type of the industry sector and the content dimension includes socio-economic factors and educational attainment.

## **THEORETICAL FRAMEWORK**

### **Social Feminist Theory (SFT)**

Literature survey suggested there is a need to include feminist theories to study female entrepreneurship as feminist theories may bring unique insights in understanding female entrepreneurial activities. (Bird & Brush, 2002; De Bruin et al., 2007). In this study we will refer to social feminist theory. SFT argues that, variances in female and males' social relations stem from early socialization and lead to differences in certain traits and power relations between genders (Shava & Rungani, 2016). SFT posits that due to differences and, at the first stage of socialization and learning experiences, there are inherent unique characteristics that define genders (Fischer et al., 1993; Greer & Greene, 2003). These specific characteristics that occur through socialization impact how genders perceive themselves and their environment, and how they view the world (Johnsen & McMahon, 2005). As a result, the society may ascribe roles in gender and that results in females and males differing in self-perceptions. Unlike liberal feminist theory, social feminist theory does not suggest that women are disadvantaged or discriminated nor are they inferior. SFT suggests that women and men may develop different but equally effective characteristics, skills, psychological traits, motivation and intentions due to the differences in socialization (DeMartino & Barbato, 2003; Camelo-Ordaz et al., 2016). For instance, due to gender ascribed roles that arise from earlier socialization, males exhibit higher levels of self-assertion and

autonomy and risk-taking propensity than females (Gottschalk & Niefert, 2012). Females also tend to exhibit higher level of fear of failure than men (Minniti, 2009; Sánchez-Cañizares & Garcia, 2010; Camelo-Ordaz et al., 2016). Also, in some cultures due to social expectations of traditional gender stereotypes that men are considered self-assertive and forceful while women are expected to be emotional and conservative (Eagly & Wood, 1991; Powell & Ansic, 1997). In some societies, women may not be socialized to “negotiate” (Greene et al., 1999). Earlier studies found that these inherent characteristics are relevant to entrepreneurship and reflect in females’ entrepreneurial intentions, firm size and performance. A study using the social feminist theory found that differences in socialization of female entrepreneurs may be related to smaller size, slower income growth, and lesser sales per employee of their firms compared to male entrepreneurs (Fischer et al., 1993). Other studies using the SFT found that females have less intention than men to engage in entrepreneurial activities (Veciana et al., 2005, Wilson et al., 2007). Further Camelo-Ordaz et al. 2016 study found that fear of failure acts as a critical barrier in reducing the entrepreneurial intention of female non-entrepreneurs.

A Lao People’s Democratic Republic (PDR) study on micro, small, and medium sized enterprises (MSMEs) aimed to understand the applicability of social feminist theory and liberal feminist theory suggested that social feminist theory is more applicable than liberal feminist theory in the entrepreneurship context (Sengaloun et al., 2014). The study empirically tested 1,534 Lao enterprises from different industries and found that consistent with social feminist theory social and cultural structures exist in micro, small, and medium sized enterprises. The study found that there are socially inherent differences between males and female entrepreneurs’ experiences earlier on, such as socially segregated duties and cultural norms and expectations, and this reflect in genders’ venture activities, entrepreneurial decision making and strategic approaches (Sengaloun et al., 2014). In sum, based on the SFT, it is argued that society may condition potential for entrepreneurship generating differences in gender’s behavior.

### **Austrian School of Thought**

Austrian School of Thought associated with the work of Kirzner (1973) and Hayek (1945) defines entrepreneurship based on mostly asymmetry of information and suggests that information gaps exist. Austrian School of Thought posits that in a competitive market economy, knowledge is unevenly dispersed (Hayek, 1945), and only ‘alert’ individuals engage in non-random discovery and become entrepreneurs (Kirzner, 1973). Austrian school of thought stresses the importance of market arbitrage in identifying opportunities (Kirzner, 1973) and posits that marketplace inefficiencies create disequilibrium profit opportunities (Kirzner, 1979; Kaish & Gilad, 1991). Kirzner (1973, p. 16) argued that “the entrepreneurial element in the economic behavior of market participants consists....in their alertness to previously unnoticed changes in circumstances which make it possible to get more in exchange for whatever they have to offer than was hitherto possible.”

Austrian School of Thought proposes that opportunity recognition is critical in entrepreneurship (Kirzner, 1973, 1979). Opportunity recognition is defined as perceiving a profitable business opportunity (Bygrave & Hofer, 1991; Kourilsky, 1995; Hills et al., 1997). According to the

Austrian School of Thought, opportunities are recognized as individuals have asymmetries of information (Hayek, 1945; Shane & Venkataraman, 2000). Only alert individuals who discover profit opportunities can identify and exploit market opportunities (Kirzner, 1973).

Therefore, opportunity recognition occurs by random discovery without having been planned (Kirzner, 1973). Kirzner (1997, p. 71-72) noted that “an opportunity for pure profit cannot, by its nature be the object of systematic search. Systematic search can be undertaken for a piece of missing information but only because the searcher is aware of what he does not know and is aware with greater and lesser certainty of the way to find out the missing information. But is the nature of an overlooked opportunity that it has been utterly overlooked, i.e., that one is not aware at all that one has missed the grasping of any profit. What distinguishes discovery (relevant to hitherto unknown profit opportunities) from successful search (relevant to the deliberate production of information which one knew one had lacked) is that former (unlike the later) involves the surprise that accompanies the realization that one had overlooked something in fact readily available.” The Austrian School of Thought offers insights into opportunity recognition with respect to alertness and possession of information. (Westhead & Wright, 2000, p. xiv).

## **Institutional Theory**

Institutional theory posits that social structures establish as authoritative formal (i.e. legislature) and informal (i.e. shared norms, values and beliefs) guidelines for social behavior. The theory argues that institutional environment sets the standards of the appropriate behavior and pressure the society to conform (Suchman, 1995; Brundin & Wigren-Kristoferson, 2013). Institutions refer to formalized rational beliefs displayed in individuals’ behaviors (Lammers & Barbour, 2006). Institutions are also considered as drivers of change that lead to a social process by which individuals in a society form their policies, work habits, beliefs, expectations and values and norms (Scott, 1981; Palthe, 2014). Social structures refer to cultural-cognitive, normative, and regulative elements that are rooted in societies and guide social life (Scott, 2004).

Regulative elements within the institutional system refer to the legal political environment that includes policies, rules and regulations (Leaptrott, 2005). Regulative elements represent the legal obligations that society must conform (Palthe, 2014). Normative elements refer to societal factors that include society’s expectations on work roles, habits, norms, duty and responsibilities (Scott, 1995). Normative elements are moral obligations that emphasize informal structures and guide towards preferred behavior (Palthe, 2014). Cognitive elements refer to commonly shared values, beliefs and mindset (Baughn et al., 2006; Vossenber, 2013; Palthe, 2014) that reflect social identity and personal desire (Palthe, 2014). In sum institutional theory suggests that regulative, normative and cognitive elements of the external environment provide a social structure and framework that organizations and people in a society must conform.

We now return to female entrepreneurial activities in developing countries. Earlier female entrepreneurship research indicated a need to include various context and content factors (Ahl, 2006; Naudé, 2010; De Vita et al., 2014b) to advance female entrepreneurship studies. Including

various contexts plays a critical role in entrepreneurship studies because of the unique choices and circumstances that entrepreneurs have.

## **CONTEXT DIMENSION**

### **Rural versus Urban Areas**

Entrepreneurial start-up rate is reported lower in rural areas than urban areas (Sternberg, 2009; Yu et al., 2008). Yet there are very limited comparative studies on rural versus urban areas in a developing economy context. Literature review indicates there are limited studies on female entrepreneurship from developing countries and these studies usually generalize findings without separating rural versus urban areas. Most of the few studies that explore rural female entrepreneurs in developing countries were not rural-urban comparative studies (Maruthesha et al., 2018; Chakravarty, 2013). Very few studies on rural-urban female entrepreneurship did not include a theoretical framework and focused on individual specific characteristics excluding the social, economic and political conditions in the external environment (Bello-Bravo, 2015; Sivanesan, 2014; Savitha et al., 2009).

Savitha et al. (2009) study aimed to develop a scale to measure entrepreneurial behavior of female urban and rural entrepreneurs looked into mainly individual specific variables (i.e. demographic characteristics such as marital status, birth order, etc.; socio-economic background; and individual's venture-related characteristics such as her ownership, investment, training). The study found differences in education, socio-economic status, and investment level of urban and rural female entrepreneurs. Yet, since the study's focus was mainly on individual entrepreneurial behavior, many other factors in the national entrepreneurial framework setting were not included in the study. Another rural-urban female entrepreneurship comparative study also focused on individual specific factors such as education level, age, marital status and socio-economic background to analyze motivational forces and address challenges among rural and urban women entrepreneurs (Sivanesan, 2011). Another study that investigates reasons for migration of female entrepreneurs from rural to urban areas in West Africa also focused individual characteristics of the participants (i.e. marital and educational status, family support) and the impact of migration on their personal and professional lives, excluding the effects of numerous factors in the external environmental setting of rural and urban regions (Bello-Bravo, 2015).

Although these earlier studies had a good start towards creating awareness on female entrepreneurs, still there is a growing need to address the external environment and national entrepreneurial framework setting and address unique circumstances of the rural and urban regions. Since urban and rural regions present unique characteristics for female entrepreneurial activities, comparative studies will provide more specific suggestions and action plans and even potential cooperative strategies for the improvement of entrepreneurial activities.

Rural areas in developing countries present multidimensional complex issues, such as low population density, limited local demand, limited access to qualified labor, distance to services,

weak infrastructure, limited access to credit providers and localized markets, climate, public policy, limited resources (Costa et al., 2011; Kumar, 2014), patriarchal life and lack of ownership (Olja, 2016). These findings highlight the needs of rural female entrepreneurs yet, due to a lack of comparison with urban regions, the actual differences in available individual, economic, and social support resources between two regions may not be identified properly.

Institutional theory posits that legislature and cultural social structures established in communities provide guidelines for expectations on work roles, habits and social behavior and these sets of standards pressure the individuals of the society to conform. Therefore, institutional structures need to be addressed in entrepreneurial studies as they guide the entrepreneurial behavior in that community. For instance, “Gender and Rural Employment Policy Brief # 3” (2010a) reports that discriminatory laws, regulations and social norms in rural areas in developing countries prevent females from starting their entrepreneurial ventures. Further, institutional structures in rural and urban communities may differ and, as a result, expectations and norms may vary in regions, especially in rural and urban areas. Due to a lack of comparison between institutional structures of urban and rural regions, either issues in rural areas can be magnified; not be accounted properly or entrepreneurial behavior in that region that guide entrepreneurial activities cannot be addressed effectively through proper aid programs. Therefore, based on the institutional theory it is imperative to study extensively critical parameters such as legislation, social and cultural norms in each area to better reveal the specific needs of each area and highlight the contrast between them. Addressing the contrast between rural and urban regions in developing countries reveals the situation of institutional structure and highlights the extent of social and legislative expectations gap between them. In sum, based on the institutional theory, comparative studies on rural-urban areas better pinpoint the needs and provide suggestions for entrepreneurial policy and programs, NGO and international aid programs that are more tailored to the specific needs of the female entrepreneurs in rural and urban areas. Based on this rationale we will develop the propositions below and suggest the following questions for further studies.

### ***Proposition #1***

Institutional structure impacts female entrepreneurial activities in rural and urban regions in developing countries.

### ***Proposition #2***

Female entrepreneurial activities differ in rural and urban regions in developing countries due to differences in institutional structure in each region.

### *Questions for further studies*

What specific institutional structure differences do play a role in female entrepreneurs' entrepreneurial activities in rural versus urban regions in developing countries?

What mechanisms may influence the institutional structure to facilitate female entrepreneurial activities in rural versus urban areas in developing countries?

How does the institutional structure influence female entrepreneurs' goal orientation and motivation in entrepreneurial activities in rural and urban regions in developing countries?

## **CONTENT DIMENSION**

### **Culture: (Rural versus Urban areas)**

Societal inequality was considered one of the important challenges for female entrepreneurs in developing countries (Jones & Lefort, 2006). United Nations (2008) report indicates that gender-based stereotypes and discrimination due to social norms escalate more in rural areas than urban areas. Cultural and social structural constraints pose more obstacles for rural women than urban women (United Nations, 2011) in developing countries. United Nations (2011) report indicates that

rural women spend more time than urban women and men in reproductive and household work, including time spent obtaining water and fuel, caring for children and the sick, and processing food. This is because of poor rural infrastructure and services as well as culturally assigned roles that severely limit women's participation in employment opportunities. Faced with a lack of services and infrastructure, rural women carry a great part of the burden of providing water and fuel for their households. In rural areas of Guinea, for example, women spend more than twice as much time fetching wood and water per week than men, while in Malawi they spend over eight times more than men on the same tasks. Girls in rural Malawi also spend over three times more time than boys fetching wood and water.

Numerous earlier studies on rural female entrepreneurs in developing countries are all in common that female entrepreneurs are constrained by societal norms and prejudices (Fletschner & Carter, 2008; Chitsike, 2010; Nguyen, Nguyen, Frederick, 2014; Rani and Sinha, 2016; Pathak and Varshney, 2017). Rural female entrepreneurs are expected to adopt culturally assigned roles and act within the cultural restraints of the rural society (Fletschner & Carter, 2008; Chitsike, 2010; Nguyen et al., 2014).

According to the social feminist theory, early socialization and learning experiences define gender ascribed roles, and society's expectation of females' responsibilities and household chores may impact the quality and rate of rural women entrepreneurs' entrepreneurial activities. For instance,

rural female entrepreneurs may more likely perceive entrepreneurial activities as part time than full time compared to their urban counterparts due to their household chores. Rural female entrepreneurs may suffer from lack of society support (Rani & Sinha, 2016; Akhalwaya & Havenga, 2012). Rural societies may differ from urban societies in occupational mobility, density of population, homogeneity of people, and pace of life, which all shape the social learning experience and inherent gender values that lead to gender perceived roles and responsibilities. Based on the social feminist theory, since urban regions may have different socialization than rural regions, then we expect differences in female entrepreneurial activities in each region.

To date, earlier research brought attention to the cultural restraints that rural female entrepreneurs face, yet most female entrepreneurial studies were not rural-urban comparative studies. In fact, based on the social feminist theory, due to the different socialization process, rural-urban female entrepreneurs may have inherent different characteristics which reflect in their entrepreneurial activities. Therefore it will be valuable to understand how differences in rural-urban socialization impact female entrepreneurial activities: the choice of the venture, the amount of time they devote on the venture, and the growth prospects, size and the profitability of the venture. Based on the social feminist theory, we suggest that more rural-urban comparative studies that explore the socio-cultural differences and various dimensions of social cultural norms are needed to better understand female entrepreneurial activities.

### ***Proposition #3:***

Female entrepreneurial activities differ in rural and urban regions in developing countries due to differences in cultural norms and societal expectations.

### ***Questions for further studies***

How does various dimensions of culture, such as social status, family life, cultural heritage, religion, social mobility, and socialization, influence female entrepreneurial activities in rural versus urban regions in developing countries?

How does socialization in rural and urban regions in developing countries differ in female entrepreneurs' choice of the venture, the amount of time devoted on venture, the growth prospects, size and the profitability of the venture?

What specific policy and programs that address social norms and cultural expectations should be implemented to empower female entrepreneurs in rural regions in developing countries?

How policies and programs that address social norms and cultural expectations to empower female entrepreneurs will differ in rural and urban regions?

## **Socio-economic institutions: Rural versus Urban areas**

While there are numerous socio-economic institutions in this study, we will mainly focus on government spending and financial freedom as these factors may highly moderate entrepreneurial activities and play a critical role in female entrepreneurship rates.

### ***Government spending***

This important socio-economic factor includes government spending on infrastructure and human capital provisions. We will focus here on infrastructure. A well-developed infrastructure facilitates innovation-driven entrepreneurial activities in a region/country responding to potential demand (Fuentelsaz et al., 2015). Infrastructure development includes transportation, communications network, water, legal system access to electricity, infrastructure projects, etc.

Infrastructure development is crucial for the enterprise development in a region. Yet in many developing countries, urban areas have more infrastructure development projects planned and underway compared to the rural regions. For instance, it was reported that in Vietnam, a developing country, urban regions have vast infrastructure projects and much higher rates of entrepreneurial start-ups than rural areas (Santarelli & Tran, 2013). Having access to a well-built infrastructure facilitates access to large and differentiated markets for production factors, such as capital, labor and services. Inadequate supply of physical infrastructure such as irrigation, transport, and communications may create an obstacle in access to markets, capacity building, limited mobility and access to raw materials and resources.

Poor rural infrastructure hinders female entrepreneurs' access to resources, markets and services (United Nations, 2011). Earlier research on female entrepreneurs in rural regions found numerous obstacles for female entrepreneurs that relate to weak infrastructure. For instance, it is reported that poor infrastructure of roads and transportation in India cause barriers in rural female entrepreneurs' access to raw materials (Mishra & Kiran, 2014). Further "limited mobility" and "access to transportation" and "inability to drive" and "possible problems of traveling alone" cause hurdles for female entrepreneurs in rural India (Mishra & Kiran, 2014, pp.95).

Institutional theory presumes that individual actions are guided by rules and norms set by institutions. Therefore, some prevailing formal institutions, such as government laws and regulations on the extent of government spending on infrastructure in a region, may affect the tendency and ability of individuals to undertake entrepreneurial activities in that region. The strength of infrastructure in a region may play a role in perceived opportunities, human coordination and the allocation of resources and prepare entrepreneurial framework for potential entrepreneurs.

#### ***Proposition # 4***

Government spending on infrastructure, a socio-economic factor, plays a role in female entrepreneurial attempts in rural regions. Female entrepreneurs are expected to have more challenges in rural regions than urban regions in accessing adequate supply of infrastructure in their entrepreneurial attempts.

#### ***Questions for further studies***

How will government spending on infrastructure development influence female entrepreneurial activities in rural versus urban regions in developing countries?

What drives growth in government spending on infrastructure in rural vs urban areas in developing countries and how does it relate to the rate of female entrepreneurial activities?

To what extent is differential quality in government spending on infrastructure impacting the types of female entrepreneurial outcomes in rural vs urban regions?

#### ***Financial Freedom***

Financial freedom as another key socio-economic factor is defined as access to an unrestricted banking environment. The availability of adequate credit and access to financial resources in a society are found highly correlated with the level of entrepreneurial activities in a society. (Drori et al., 2009; GEM, 2013; Fuentelsaz et al., 2015).

In some developing countries such as Vietnam rural regions have a lower ranking in access to finance than those in the urban regions (Vietnam Provincial Competitiveness Index, 2014). Further, credit institutions and banks require literacy, formal education, the knowledge of the business and a proper business plan for the entrepreneurial loan applications. In rural regions where female entrepreneurs have already hurdles with access to education and low literacy rate and lack of networking, they have more difficulty in accessing credit than those in urban regions.

Based on the institutional theory, we suggest that formal institutions, such as laws and regulations on the extent of government spending on infrastructure in a region, may affect the tendency and ability of individuals to undertake entrepreneurial activities in that region. Unfavourable conditions in local regulatory systems, such as a heavy regulated banking/financial system, place additional burdens on female entrepreneurs in accessing to the credit and raising investment capital. Especially in rural regions, heavily regulated banks could be more restrictive for female entrepreneurial loan applications as females in rural regions are reported to have many hurdles such as lack of collateral, lack of financial literacy, lack of physical access, lack of networking and lack of established track record. Credit institutions and banks require literacy, formal education,

the knowledge of the business and a proper business plan for the entrepreneurial loan applications. While it is relatively easier for the female entrepreneurs in urban regions to provide these requirements, usually these requirements are more difficult to meet by their counterparts in rural regions. Further, formal credit institutions and banks in urban regions could more easily collect personal credit information about the female entrepreneurial loan applicant or collateral than those in rural regions where credit information or collateral could be difficult to extract. As a result female entrepreneurs in rural regions could have more impediments than those in MDCs. In sum, the perceived difficulty in accessing credit and financial freedom especially in rural regions may hamper female entrepreneurial pursuits more than those in urban regions.

### ***Proposition #5***

Economic freedom, a socio-economic factor, plays a role in the difference of female entrepreneurial attempts in rural and urban regions.

### ***Proposition #6***

Female entrepreneurs are expected to have more challenges in rural regions than urban regions in accessing finance in their entrepreneurial attempts.

### ***Questions for further studies***

What policy and programs could be applied to increase female entrepreneurs' access to financing in rural versus urban regions in developing countries?

What factors may influence the access to credit in rural versus urban regions in developing countries?

Is there any difference in commercial, social, necessity-based and opportunity-based female entrepreneurs' access to credit in rural versus urban regions in developing countries?

### **Educational Attainment: Rural versus Urban Areas**

Education increases the quality of human capital and impacts the rate of entrepreneurial activities (Petrin & Gannon, 1997). Having an education is crucial in absorbing new knowledge (Knudsen et al., 2001), identifying opportunities. (Shepherd & DeTienne, 2001), getting collateral and improving entrepreneurial relates activities. Lack of education, limited access to education and lack of entrepreneurial training are challenges for rural female entrepreneurs in developing

countries (Gender and rural employment policy, 2010b). For instance, lower literacy rate of women and inadequate government support in educational attainment are considered as some of the major obstacles for rural female entrepreneurs in Bangladesh (Bhuyan & Abduhalla, 2007). 76.3% of rural Bangladeshi female entrepreneurs have no formal education, and 17% are illiterate (Gender and rural employment policy, 2010b). Similarly, in Nepal, women have poor access to education and health services, and gender disparities exist in literacy rate (42.8 to 68%). GEM 2016-2017 report indicates that entrepreneurship education at school stage is lowest at the factor-driven (necessity-based) developing countries (2.8) compared to innovation-driven economies (3.4) with GEM average 3.4 (Herrington & Kew, 2017). In India, where the education gender gap is greatest, most of the women in rural areas are reported as illiterate and are deprived of their rights (Mahendran & Babu, 2014).

Based on the feminist theories and the institutional theory context, due to the society's expectations of gender roles, females are not given equal rights in accessing education in most rural areas in developing countries. For instance, in rural areas, society's expectation of females' duties that include considerable agricultural work and household duties create time constraints for training and getting education. Further growing up and living in a *disprivileged* area, having an education or access to entrepreneurial training programs may not be societal expectation or norm.

Australian School of Thought argues that to identify an idea and pursue an opportunity in a specific field, one must be knowledgeable about the field and have a profound knowledge base. Lower literacy rate and limited access to education and entrepreneurial programs could hinder rural female entrepreneurs' getting industry specific knowledge, being aware of their rights on property, family and inheritance laws and practices, which all impact the quality of their entrepreneurial pursuits.

To date, previous research pointed out the need for education is among the barriers for rural female entrepreneurs in developing countries and also female entrepreneurs in general in developing countries. Location plays a role in the access and quality of education (Porter, 1990). To date, there appears to be a lack of research on specific comparative studies on rural vs urban areas in developing countries regarding priority differences on specific education and training needs and the mechanisms to deliver the needed education and training programs in these two locations. Further studies on these issues would expand the knowledge base on female entrepreneurs in developing countries.

### ***Proposition #6***

Female entrepreneurs in rural regions in developing countries may face more challenges in their entrepreneurial attempts regarding access to education and training programs than those in urban areas in developing countries.

### ***Proposition #7***

Female entrepreneurs in rural regions in developing countries may have different needs in education and training programs than those in urban areas in developing countries.

### ***Questions for further studies***

What are priority differences on specific education and training needs for female entrepreneurs in rural versus urban regions in developing countries?

What factors may influence the mechanisms to deliver the needed education and training programs to female entrepreneurs in rural versus urban regions in developing countries?

How to apply targeted public sector credit programs to the rural and urban female entrepreneurs in developing countries?

## **CONTEXT DIMENSION**

### **Industry Sector: Technical versus Nontechnical Fields**

Global Entrepreneurship Monitor (GEM) 2017-2018 states that wholesale and retail trade accounts for about 60% of female entrepreneurial activity around the world compared to less than 2% in the Information and Communications Technology sector (Herrington et al., 2018). Kuschel & Lepeley (2016) literature review on female start-ups in technology reported that the majority of the studies of women entrepreneurs in the technology field was in developed countries, particularly USA (Cohoon & Aspray, 2007; Colombo & Grilli, 2005; Dautzenberg, 2012). The literature survey reported that, to date, no studies have been conducted on female entrepreneurs in technology sectors in developing countries, and there is very limited information on women entrepreneurs and their needs and challenges in technology sectors (Kuschel & Lepeley, 2016).

The respective environments of technical and non-technical sectors are different as technical environments are more complex, uncertain, and dynamic than nontechnical sectors. The changing pattern of environmental factors in technology domains creates technological uncertainties. As the technical environment gets more complex, entrepreneurs need more information to handle the complexity. As they have more information, they increase their capability to understand the technical environment and become more active in pursuing opportunities for viable ventures in the technology sectors. Therefore, understanding the entrepreneurial process in technology domains may help understand the challenges women face in entrepreneurial ventures in technical fields as well as assuring that their talents are being used effectively.

The Austrian School of thought regards opportunity recognition as the key for an entrepreneurial activity and suggests that in a competitive market only the individuals who possess specific information can recognize opportunities (Kirzner, 1973). Therefore, individuals who are good at rationalizing resources and accessing information are better at recognizing opportunities in their entrepreneurial pursuits. Prior knowledge prepares the mind and increase the ability to detect information related with that background (Shane, 2000). As a result, having technical training may help individuals filter signals from the environment, adapt complex technical developments and utilize available information processing in identifying profitable opportunities for viable new ventures. Previous research found that the low level of technical and business skills could prevent individuals from starting a venture in the technology sector (Davidsson, 1991). In sum, research on female entrepreneurs in technology sector in developing countries could facilitate “funding sources,” establishment of training programs and necessary networking infrastructure to support women’s capacity to develop opportunities in this domain (Kuschel & Lepeley, 2016).

### ***Proposition #8***

Female entrepreneurs in developing countries may face more challenges in their entrepreneurial attempts in technology sector than non-technology sector.

### ***Questions for further studies***

How to increase women’s participation in technical programs and encourage their starting new ventures in technical fields in developing countries?

What are the appropriate policy interventions that might help women entrepreneurs in technical fields in developing countries?

How could training and support programs be designed to help women entrepreneurs in technology ventures have a larger impact in business, achieve success, and foster new ventures in developing countries?

## **CONCLUSION**

At present, much research still has to be done to understand female entrepreneurship in rural areas in developing countries. Female rural entrepreneurs play a vital role in the overall economic development of the country in terms of proper utilisation of local resources, employment generation, fostering economic development, reducing disproportionate growth of towns and cities, and entrepreneurial development. Understanding and addressing the needs of female entrepreneurs in rural areas also prevent a large-scale migration from rural areas to urban areas.

Therefore, it is particularly important to understand how women entrepreneurs recognize opportunities and pursue entrepreneurial activities in rural regions in developing countries. Such a study would be very timely and helpful in our understanding the challenges women face with in starting new ventures in rural areas as well as assuring that their talents are being used effectively. Studies that raise awareness among financial and micro-finance institutions about rural women entrepreneurs' needs and introduce incentives for them to provide appropriate, accessible and flexible financial products and services (including affordable insurance and savings), at fair interest rates and foster coordination, (Gender and rural employment policy, 2010b) could be helpful.

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