

An Innovative Entrepreneurial Ecosystem-Based Model For Supporting Female Entrepreneurship

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Abstract

Entrepreneurship is a well-established area of research and practice which continues to grow with the addition of new perspectives. This paper is based on literature research and the application of empirical knowledge to the design of an innovative entrepreneurial ecosystem-based model for supporting female entrepreneurship in Latin America and the Caribbean as its main purpose. The approach to the research combines an exploration of the literature on entrepreneurship development with special focus on female entrepreneurship for the purpose of identifying the peculiar characteristics and challenges; and empirical application of the features of female entrepreneurship and experiences of the author to the design of a model for supporting women entrepreneurs.

The main finding is that an entrepreneurial ecosystem, which incorporates the key elements of entrepreneurship education programs within a quadruple helix collaborative environment, is a worthy approach to supporting the development of female entrepreneurs in the LAC region and areas at a similar level of development. The article contributes to an increased understanding of female entrepreneurship globally, and, specifically, in the LAC region as one of the most dynamic areas for women entrepreneurship worldwide. The novelty of the article derives from incorporation of quadruple helix collaboration of the private, public, and non-governmental sectors plus the wider community in the proposed entrepreneurial ecosystem. The main result is the formulation of a model designed to address the requirements of female entrepreneurs within Latin America and the Caribbean.

Keywords: Entrepreneurial ecosystems, female entrepreneurship, entrepreneurship in Latin America and the Caribbean, models of entrepreneurship development, entrepreneurship support programs, triple and quadruple helix collaboration.

Introduction

The main aim of this article is to design an innovative model for supporting the development of entrepreneurship with special focus on women entrepreneurs in the Latin American and Caribbean (LAC) region. This aim is pursued by obtaining relevant insights and approaches to the development of female entrepreneurship from an exploration of the relevant literature which was combined with the empirical knowledge of the author in formulating and implementing support systems for entrepreneurs involved in micro, small and medium enterprises (MSME). The relevance of this subject is the emergence of female entrepreneurs as a distinct group increasingly active in developing regions such as LAC. The model incorporates the concept of creating an entrepreneurial ecosystem which embraces institutions and actors from the

private, public, and non-governmental sectors and adoption of quadruple helix collaboration as an innovative approach to entrepreneurship development in developing countries.

Research on entrepreneurs and the field of entrepreneurship emerged in the 18th century as a predominantly male occupation with research focused on celebrity business men and entrepreneurs (McMullan & Long, 1990). Consideration of women as entrepreneurs did not feature in the literature until the 1970s when female entrepreneurship was introduced as an area of study (Yadav & Unni, 2016). In the intervening years, a significant body of published research on the question of entrepreneurship emanated from the more developed countries of North America and Europe. The term entrepreneurship has wide implications involving “innovation, ideas, creativity, new venture development, discovery and economic growth” which led to many disparities and contradictions in the literature (Audretsch, Kuratko, & Link, 2015, p. 4). As such, the subject has been studied from different perspectives including: entrepreneurship from an organizational perspective of firm size and age, or ownership structure; personality traits and characteristics of individuals; entrepreneurial behavior across organizational types such as corporate entrepreneurship; and entrepreneurial performance measured by growth, innovative activities, and extent of social entrepreneurship initiatives (Audretsch et al. 2015).

With growth in the literature, the focus widened to the current stage where the study of female entrepreneurship is a significant pursuit as evidenced by the publication of special reports by the Global Entrepreneurship Monitor, highlighted in the next section. This article therefore, highlights female entrepreneurship with a focus on LAC, because of the increasing involvement of women in business and entrepreneurial activity in that region (Bartesaghi et al., 2016; Fernández-Robin, 2017; Global Entrepreneurship Research Association, 2017). Despite the increased presence of women in entrepreneurial ventures, the literature on female entrepreneurship in LAC remains sparse (Kobeissi, 2010), so this paper contributes to partly filling that gap, which is significant to researchers of the field of entrepreneurship and female entrepreneurship particularly, associations of entrepreneurs in the LAC region, and policy officials concerned with providing support to women entrepreneurs.

Entrepreneurship is generally viewed as a multifaceted phenomenon involving entrepreneurial vision, strategy, tools and talents, and the entrepreneurial venture as the means of creative expression (McMullan & Long, 1990). Many theories of entrepreneurship have been espoused by researchers with perspectives that tended to separate entrepreneurship study from the practice of small business and strategic management. Thus, the ‘strategic-creativity

theory of entrepreneurship' emerged as an integrative construct which interpreted venture development as a process that began with the search for opportunities and advanced to the small business development stage and beyond (McMullan & Long, 1990). This theory is applicable to all new ventures whether started by men or women and is therefore gender neutral consistent with modern business development practice. Thus the practice of entrepreneurship is viewed as those sets of activities involved in the initiation and development of new growth ventures, a practice that is consistent with the aim of this paper.

The research approach involves: (1) an exploratory phase of identifying, collecting, and analyzing relevant themes from secondary literature on entrepreneurship, with specific focus on female entrepreneurship, to gain a deeper understanding of the concepts for application to this article, and (2) an empirical phase of designing an innovative entrepreneurship development model for supporting entrepreneurs in starting up and growing their ventures. The published data were downloaded from leading online journal databases and from specialist organizations that research female entrepreneurship. The empirical data for the model were based on the author's accumulated experiences of over 30 years in the positions of CEO of a small business development company, and an entrepreneurship educator at a university business school involved the early stage building of an entrepreneurial ecosystem. The ecosystem integrates a business school pursuing the entrepreneurial ideal, entrepreneurship education, business incubation, and university-government-industry (triple helix) collaboration as the key ecosystem components. The rest of the article follows the following sequence: presentation of the background research on entrepreneurship with an emphasis on female entrepreneurship; description of the global phenomenon of female entrepreneurship; a situational analysis of female entrepreneurship in LAC; discussion of the relevant models of entrepreneurship development; design of an ecosystem-based female entrepreneurship support model; and conclusions, implications, and future research.

Background Research

The study of entrepreneurship is derived from the study of management, small business, and several areas of the social sciences such as economics and sociology (McMullan & Long, 1990). The management discipline provided insights into accounting, finance, marketing and organization behaviour which has become specialized into several sub-disciplines. Small business studies focused on technique and method, providing the practical orientation which sought to explain the reasons for success and failure of small businesses. The social science approach has been varied with economists considering the theoretical value of entrepreneurs, psychologists looking at the entrepreneurial personality, and the sociologists examining the environment as

to conduciveness to entrepreneurship development. Definitions of entrepreneurship abound, but the perspective selected for this paper focused on the view of entrepreneurship as venture development, because of the perceived gap in creating innovative ventures in LAC (Bartesaghi et al. 2016).

More recently, entrepreneurship research was further extended to include several sub-categories of entrepreneurs including informal, immigrant, corporate, strategic, social, green, and female entrepreneurs. In summary, informal entrepreneurs are described as part of a hidden enterprise culture which exists in rural areas that are more entrepreneurial than perceived and often driven by necessity as a means of survival (Williams, 2011), but in many cases informality is increasingly a matter of choice (Siqueira, Webb, & Bruton, 2016). It was also argued that informal entrepreneurial activities are attempts to deal with unemployment and under-employment especially in developing countries and among women (Kasseeah & Tandrayen-Ragoobur, 2014). Immigrant entrepreneurs turn to business activities in foreign countries or even return to their home countries as high-skilled persons to engage in entrepreneurship, as documented in the case of immigrants returning to Colombia from Spain (Bulla & Hormiga, 2011). Corporate entrepreneurs operate within existing medium and large businesses often introducing innovative initiatives which become a major strategy for gaining and sustaining competitive advantage in the marketplace (Kuratko & Morris, 2018). It was argued that corporate entrepreneurship or intrapreneurship relied upon an appropriate supporting environment created within an organization (Yariv & Galit, 2017).

Strategic entrepreneurs are linked to the concept of corporate entrepreneurship, and combine the practice of entrepreneurship with strategic management by connecting the entrepreneurial mindset to strategic thinking regardless of firm size which are applied to wealth-creating actions (Kim, 2018). Strategic entrepreneurship focuses on opportunities for creating competitive advantage and is built on the principles of opportunity identification; innovation; risk acceptance; flexibility in responding to change; establishing a clear vision; and growth in creativity and innovation, and a structure for developing profitable ventures (Kyrgidou & Hughes, 2010). Social entrepreneurs seek to devise entrepreneurial solutions to social problems within a community, as such social ventures are increasingly viewed as a means of delivering social impact and change for the benefit of the community (Kimmitt & Muñoz, 2018), and empowers women in less developed countries (Datta & Gailey, 2012). Green entrepreneurs are concerned with sustainable development and environmental issues which offer opportunities for new entrepreneurial ventures involving climate change related issues and the need for pollution reduction through recycling (Nikoulaou, Tasopoulou, & Tsagarakis, 2018).

Observations of women in business in the LAC region revealed that female entrepreneurs operate in all the categories discussed, but studies of female entrepreneurship are an under-researched area in LAC (Kobeissi, 2010; Yadav & Unni, 2016). Further, women are mainly involved in informal and social entrepreneurial activities out of necessity (Minniti & Naudé, 2010), but are increasingly becoming involved in green entrepreneurship because of the immediate impact of environmental issues on their types of businesses. These variations on the types of entrepreneur confirm the applicability of the strategic-creativity theory of entrepreneurship adopted in this article. More recently, the leading cross-country researcher of world entrepreneurship, GEM, moved to remedy that deficiency in its annual reports on world entrepreneurship (Bartesaghi et al, 2016; Bosma & Kelley, 2019), and special reports on female entrepreneurship (Kelley et al., 2015; Kelley et al., 2017). The findings of these reports form part of the discussion on entrepreneurship in LAC and female entrepreneurship in a subsequent section.

Female Entrepreneurship as a Global Phenomenon

It was argued that there were unresolved methodological issues in the study of female entrepreneurship because of the lack of consensus on whether female entrepreneurship was an individual or collective concept, or considered a social or natural phenomenon, which led to difficulties in defining, classifying, and measuring its characteristics (Paoloni & Serafini, 2018).

Female entrepreneurship is a counter to the male-dominated world of entrepreneurs and constitutes the main focus of this paper. However, the literature on global comparisons of female entrepreneurship, especially of developing countries, is limited and scarce (Kobeissi, 2010). In a study of 44 countries, the author found that in developing countries the level of education of women is generally low negatively impacting entrepreneurial activity, while, even if relatively empowered, female entrepreneurs were affected by cultural conditioning and socialization into different roles from men (Kobessi, 2010).

From an analysis of female entrepreneurship in the Southern Italy, three clear issues emerged: the growth rate of women in business exceeded that of their male counterparts even though women's participation in entrepreneurial activity was lower than men; the growth was assessed as a sustainable trend and not a passing phenomenon; and clear gender differences existed in opportunities available to women, obstacles faced, and the impact on their expectations and motivations (Bianchi, Parisi, & Salvatore, 2016). In respect of the latter, the authors indicated that the most important motivation factor for women was the opportunity to create a positive work environment with freedom to choose collaborators, customers, and express their individual management style.

Studies of female entrepreneurship revealed that women entrepreneurs became prominent in the late 1990s spurred by feminist theories, and became well established as a defined area of academic inquiry by the end of the 1990s. In the succeeding period of the 2000s, the study of female-owned businesses concentrated on growth and performance, management style, human capital, accessing finance, labor markets, and social entrepreneurship (Minniti & Naudé, 2010). Such studies confirmed that more men own and manage businesses (gender gap), and women have less experience in business; however female entrepreneurship was expanding in developing countries as women's role as drivers of entrepreneurship gained momentum because of their role in the household and the growing economic and social impact of micro and small business on communities (Minniti & Naudé, 2010). The research by Bianchi et al. (2016) revealed the main clusters of business activity by women as agriculture, retail trade, provision of services; and delivering personal services to specific clients. These clusters are consistent with the experience of female entrepreneurs in LAC and many developing countries.

In a similar vein, extensive research on female entrepreneurship demonstrated considerable growth over the past two decades, and a review of 248 papers from 2000-2015 identified the key features of women-owned businesses as: educational attainment was similar for both women and men but women lacked formal training in business; women business persons had less managerial experience and were motivated by survival requirements; women were considered more risk adverse, less self-confident, and viewed as less credible by financial lending institutions; women businesses were smaller in assets, sales, and employees, and concentrated in the service and retail sectors; family responsibilities made women more conservative in business with limited growth plans and weaker networks; and in gauging performance women focused on personal fulfillment and community services than financial returns (Poggesi, Mari, & De Vita, 2016). These factors partly explain why necessity-based female entrepreneurship is more the norm in most developing countries and the LAC region (Estrin, Mickiewicz, Stephan, & Wright, 2018).

Yadav and Unni (2016) explained that the early literature on entrepreneurship assumed that there was little difference between male and female businesses, which factor delayed research on female entrepreneurship. In this context, the authors reviewed 185 articles on female entrepreneurship and suggested that: the scope of studies of women entrepreneurs should be expanded to cover the context including class comparisons, sectors, and regions; there is a need for studies of the phenomenon in developing countries; regarding study content, comparative studies were needed and external contingency factors such as policies, family, labor market, and the degree of female-owner involvement should be included (Yadav & Unni, 2016). An analysis of 108 articles on entrepreneurship, with emphasis on women, found that entrepreneurship is a

process that begins with motivation to be an entrepreneur followed by the search for and identification of opportunities, resource acquisition, and performance achievement (Cabrera & Mauricio, 2017). However, the literature on female entrepreneurship in developing countries, including the LAC region, is concerned mainly with the differences in economic, political, cultural and religious factors as cited by Cabrera and Mauricio (2017). In the context of developing countries, a review of 70 articles on female businesses concluded that the literature on female ventures focused on disseminating results about characteristics, implications for national development, and the behavior of women entrepreneurs; disregarding the success factors connected to female-owned businesses (De Vita, Mari, & Poggesi, 2014).

A recurring issue in the discussion of female entrepreneurship is the concept of 'gender gaps' which asserted that, despite heightened recognition of the positive contribution of women to socioeconomic development; in developing countries women manage fewer business than men, generate lower revenue than male operated businesses, experience slower growth, are more likely to fail, and tend to be necessity driven (Vossenber, 2013). A variation from the norm is the case of Ghana where women were observed to be significant in the ownership and management of small businesses (Anim, Agbemabiese, Acheampong, Adams, & Boakye, 2018). The factors that contribute to gender gaps were identified as: restricted access to finance for women; business and management training and communication deficiencies; poor access to ICT; work-family interface in which household responsibilities may restrict business operations; limited assurances against personal safety and gendered-based violence; lack of societal support; and legal barriers and governmental procedures (Vossenber, 2013). According to Bernat, Lambardi, and Palacios (2017), women are also disadvantaged in the menu of educational choices offered, the extent of social networks available, and the type of business venture selected.

Recent literature on women in the public sector, suggested that gender issues also exist with gendered career systems often leading to gendered public management (Maranto, Teodoro, & Carroll, 2018), while women who rise to executive levels are treated as tokens which works against their aspirations for managerial roles (Nielsen & Madsen, 2018). Thus, the existence of gender gaps in the business and public sectors, act to dissuade women from careers as entrepreneurs, especially in developing countries. In this context, Vossenber (2013) argued that, the promotion of female entrepreneurship within the public and private sectors of developing countries should be pursued, but as long as the gender bias persists, development efforts will lack positive macroeconomic and social impact.

In the face of heightened interest in research on female entrepreneurship, the current expansion of research is considered dramatic and contributes to correcting historical neglect (Hughes, Jennings, Brush, Carter, & Welter, 2012). The more recent empirical data were selected for discussion including: the most extensive global studies of female entrepreneurship (Kelley et al., 2015; 2017); research studies concerning women ownership of businesses (Minniti & Naudé, 2010); female entrepreneurial actives in LAC (Terjesen & Amorós, 2010); and expansion and growth of female entrepreneurship (Datta & Gailey, 2012; Poggesi, Mari, & De Vita, 2016). This article makes a significant contribution by addressing the issues relating to female entrepreneurship in developing countries, and filling the gaps in the literature on the LAC region.

A Situational Analysis of Female Entrepreneurship in LAC

The LAC region is recognized as among the most dynamic for entrepreneurial activity in the world based on opportunity seeking entrepreneurs, and regionally as having the highest average female entrepreneurial activity rates (16.7%); the highest levels of youth entrepreneurship (16.5%), and the highest total entrepreneurial activity rate for the 35-44 year group (20.6%) and the 45-54 year group (17.9%) (Bosma & Kelley, 2019). However, there are deficiencies in the entrepreneurial ecosystem highlighted as: inadequacy and low quality of entrepreneurial education at the school level; poor access to finance; inappropriate government policies; lack of promotion of creativity, self-efficacy, and personal initiative; low level of R&D transfer to ventures; limited availability and access to professional support services; however, entrepreneurship education at the post-school stage, as well as physical and services infrastructure, were judged as acceptable (Bartesaghi et al., 2016).

A general assessment of the context for all female entrepreneurs in the LAC, concentrated on the factors affecting women entrepreneurs operating MSME (The Economist Intelligence Unit, 2013), which are the dominant enterprise forms found in the LAC region (Kantis et al., 2002). The main output of the study was the development of the Women's Entrepreneurial Venture Scope (WEVS) which assessed the factors that influence the start-up and growth of women's businesses. The WEVS ranked 20 countries in the five areas with the most significant impact on women's entrepreneurship: business operating risks, including macroeconomic risks, security, and corruption; the entrepreneurial business environment, including costs and regulatory requirements associated with starting businesses; access to finance, including the availability and use of formal financial products by women; capacity and skills, including educational advancement by women and availability of business-skills training; and social services, including the availability of family support programs such as childcare.

The top-ranked LAC countries in the WEVS were all Latin American countries with Chile, Peru, Colombia, Mexico, and Uruguay occupying the top five spots; while the three Caribbean countries of Trinidad and Tobago, Dominican Republic, and Jamaica were placed in 8th, 11th, and 20th positions respectively. The rankings revealed that the top performing country overall was Chile, with low macroeconomic risk, particularly strong supplier diversity initiatives, robust social services, strong business networks, knowledge of business operating risks, a stable macroeconomic environment, and low perception of corruption. Peru was favorably ranked due to an enabling business environment and effective private and public training programs. Colombia occupied third position for its well-developed SME training programs, while tertiary education, vocational programs, and critical support services for starting and growing businesses were generally accessible to women. These entrepreneurial support features are integrated into the ecosystem model proposed in this article.

It was remarked that women in Latin America usually opted for self-employment, or starting microenterprises for more stable income, rather than engaging in full entrepreneurial activities. This finding was confirmed by the case of Colombia and Uruguay (Lora & Castellani, 2014), and Chile where 96% of women operated microenterprise (Terjesen & Amorós, 2010). Mexico gained from relatively easy access to finance, while Brazil (10th) ranked high in childcare and elderly care with 86% of the elderly population receiving public pension benefits. Generally, a networking system was considered vital to the performance of female businesses globally (Raghuvanshi, Agrawal, & Ghosh, 2017). The matter of access to finance is a persistent obstacle to women in LAC where the evidence is that less than one-third saved money in a financial institution, and the greatest financial gaps existed at the MSME level. However, access to microcredit was more accessible with the establishment of micro-credit institutions, which served the survival businesses where women predominate. The study also confirmed that bank financing was difficult with approximately 21% of women entrepreneurs' working capital, and 22% of capital investments were sourced from banks. The difficulty in accessing bank finance was heightened by limited access to equity financing, and supplier credit which was reflected in smaller business size at start-up and lower growth potential.

In addition to the issues highlighted in the WEVS rankings, the matter of the governmental regulatory environment is frequently cited as impediments to doing business that impacts all entrepreneurs (Kantis et al., 2002; Lora & Castellani, 2014). However, female entrepreneurs encounter gender inequality in securing employment or starting a business, although significant progress was registered over the past decade (World Bank Group, 2019). This study on women, business and the law, and legal gender differences, the LAC region was

ranked as 79, much lower than the OECD group (93.5), and Europe and Central Asia (84.7). Within the LAC, Peru (95), Ecuador (89.3), St. Lucia (89.3), El Salvador (88.7), Trinidad and Tobago (77.5), and Barbados (73.75) were highest ranked (World Bank Group, 2019).

Relevant Entrepreneurship Development Models

There are several models associated with the promotion of entrepreneurship development in the literature, but they are largely based on developed-country contexts (Kobeissi, 2010). The GEM model, developed by Bosma, Acs, Autio, Coduras, & Levie (2008), categorizes countries as either: factor-driven economies, which are primarily based on extractive industries; efficiency-driven economies in which scale-intensity is a major driver of development; and innovation-driven economies within a process that assumes that, as countries developed, they would shift from one stage to the next. This model is relevant to a broad-based analysis of countries that span all stages of development, but is not detailed here because most countries in the LAC region are located somewhere between the factor and efficiency stages and do not fit easily into the GEM categorization. Rather, this paper sought to explore models more relevant to developing countries and the LAC region, and identified a study of new firms in Latin America and South East Asia (Kantis, Ishida, & Komori, 2002); an entrepreneurship model for LAC (Vicens & Grullón, 2011); and a system for fostering entrepreneurial development (Kantis, 2005), as appropriate to the task of formulating an entrepreneurship development model that fits the needs of women in developing regions. The approaches to entrepreneurship development proposed in the above cited literature were generally aligned to the concept of female entrepreneurship, but the emphases were different as described below.

Kantis et al. (2002) identified five critical pillars for supporting entrepreneurship development:

- Enlarge the base of potential entrepreneurs by stimulating motivation and business skills focused on youth, single mothers, and retrenched workers.
- Educational programs should be designed for primary, secondary, and tertiary schools to create entrepreneurial mindsets, to shape attitudes that favor entrepreneurial behavior, and foster critical entrepreneurial competencies such as risk-taking, teamwork, and creativity
- Develop entrepreneurial networks and teams through embracing mentorship and knowledge sharing and creating fora for new entrepreneurs to meet experienced entrepreneurs, consultants, financiers, and policy makers; team building exercises; and encouraging business development in tertiary educational institutions
- Accelerate business start-up by researching business opportunities, encouraging innovative behavior, adopting practical business planning

- inclusive of market planning and financing sources, and introducing business incubators as new venture development tools
- Reduce barriers to growth and development of new businesses by offering a menu of financial instruments, minimizing red tape, tailoring training and support services to early stage ventures, facilitating exports, and promoting business to business relationships
 - Strengthen the institutional context and entrepreneurial ecosystem by developing a value-added institutional network that pools the complementary skills and resources of institutions, and encouraging governmental agencies and corporations to act as catalysts in conceptualizing, mobilizing, and promoting entrepreneurship.

These pillars of entrepreneurship development suggested specific actions by educational authorities, widening entrepreneurial networks and the key participants, business planning and establishment of incubators, reducing barriers many of which are faced by women entrepreneurs, and attending to the institutional framework and ecosystem development (Kantis et al., 2002). An alternative approach featured a person-centered model of entrepreneurship for the LAC region based on three components: entrepreneurship education; entrepreneurship and innovation promotion; and a supportive entrepreneurship development ecosystem (Vicens & Grullón, 2011). In relation to entrepreneurship education, the incorporation of design thinking, case analysis, simulations, and development of business competencies was stressed. In this model, entrepreneurship education was viewed as moving beyond the preparation of business plans, to the development of a way of thinking and acting, observing the process of ideation, business creation, and managing growth (Vicens & Grullón, 2011). The approach to business planning was centered on field activity to validate the idea within the potential market as suggested by Blank (2013). It is also argued in the literature that the development of entrepreneurship is contingent upon higher education institutions and corporations placing a focus on creativity, innovation, integrating creative thinking into programs and projects, and conducting exercises on developing creative mindsets (Carson, 2010; Samañonok & Leškienė-Hussey, 2015). It was suggested that centers of entrepreneurial learning should be established based on the model of existing sports' academies in the LAC region, which successfully graduated first class footballers and other sports personnel who operate on the international stage. Regarding the promotion of entrepreneurship and innovation, Vicens and Grullón (2011) argued that the importance of these elements for the LAC region requires "the unleashing of an epidemic that will spread the entrepreneurial virus to everyone" (p. 13). Further it was suggested by these authors that it was necessary to foster mentorship and specialized networks for providing guidance and support.

In practice, the suggested approach emphasized the following actions: identify and develop entrepreneurial talent rather than a preoccupation with idea generation; build capacity for opportunity identification based on observation, creative solutions, and prototype construction; incorporate an entrepreneurial culture in educational curricula and building entrepreneurship development centers that create entire businesses; engage in a wide search for entrepreneurial talent and support high-value businesses regardless of their knowledge base; shape business and innovation as the engines of growth for the most dynamic sectors of the economy rather than develop isolated programs; and develop global businesses on a local foundation (Vicens & Grullón, 2011).

The entrepreneurship support model proposed in this paper is built upon the influential work on fostering entrepreneurship internationally which contemplates the creation of an entrepreneurial ecosystem with private and public stakeholders, entrepreneurship education, non-governmental organizations, and targeted specific beneficiaries including women and youth (Kantis, 2005). The empirical experience of designing and conducting entrepreneurship education programs, involvement as an insider in business incubation, and participating in the building of an entrepreneurial ecosystem strengthened the model design as discussed by Allahar and Brathwaite (2016; 2017), and Allahar and Sookram (2019).

An Ecosystem-Based Female Entrepreneurship Support Model

It is argued in the literature that the differences in male and female entrepreneurship lie in the circumstances of the female condition, family responsibilities, and societal biases, rather than any innate characteristic. There are no existing models in the literature that specifically target female entrepreneurship especially in the context of LAC countries. Therefore, this article serves to partly fill this gap by proposing a new model for providing critical support to entrepreneurs and, particularly, female entrepreneurs in LAC and regions in similar circumstances (Figure 1).

The model was inspired by the concept of entrepreneurial ecosystems (Stam & Spiegel, 2016) and was designed to promote entrepreneurship development and business development with special focus on female entrepreneurs in LAC as discussed in this article. The concept of entrepreneurial ecosystems was developed by Isenberg (2010; 2011) as an environment that fostered innovation, to which was added factors such as market access; human capital availability; education, training, and university opportunities; financial instruments, and governmental regulations and support (Spigel, 2017). The importance of community, culture, and location were recently added for promoting entrepreneurial processes (Stam & Spigel, 2016). The model was design by distilling the insights on entrepreneurship support systems gleaned

from relevant literature (Kantis et al., 2002; Kantis, 2005; Vicens & Grullón, 2011; Allahar & Sookram, 2019), and the evolution from triple to quadruple helix collaboration (Carayannis & Campbell, 2009; Leydesdorff, 2012; Ranga & Etzkowitz, 2013; McAdam & Debackere, 2018).

The entrepreneurial ecosystem model is built on a range of entrepreneurial development programs as the heart of the ecosystem that is integrally linked to key actors and participants from the private, public, non-governmental sectors, and civil society participants in a quadruple helix system of collaboration. The development programs specifically target female entrepreneurs' issues, encourage youth entrepreneurship, facilitate MSME development, introduce entrepreneurship education into the school and university environment, and embrace the pursuit of creativity, innovation, and technology in organizations. As suggested by the previous discussion on entrepreneurship development models, female entrepreneurs make a significant contribution to socioeconomic development in developing countries especially in LAC, and any support framework should emphasize entrepreneurship education at all levels of the education system, practical training programs which provide business skills, networking opportunities, and improved access to business finance. Most female entrepreneurs are involved in MSME activities, and special programs must be designed to target this segment, particularly the microenterprises which dominate in numbers. To provide for tapping the potential of young entrepreneurs, youth entrepreneurship programs in the LAC region are critical to partly deal with high youth unemployment in LAC and the tendency to be seduced into illegal activities. The world is increasingly becoming a technology-based environment to which young people easily adapt which emphasizes creativity and innovation at the individual, team, and organizational levels (Samañonok & Leškienė-Hussey, 2015; Allahar, 2018).

The key participants from the private sector include private higher learning institutions, business corporations, industry partners, financial institutions, and venture capital providers. The public sector includes state-supported universities and business incubators, training institutions for targeting aspiring youth and female entrepreneurs, R&D agencies for researching business opportunities and markets, local authorities, and MSME support organizations. It is acknowledged that access to entrepreneurial finance constitutes a major obstacle to new and growth entrepreneurs, while venture capital and angel finance models need to be created to suit LAC contexts (Allahar, 2014). The non-governmental sector, which is important to entrepreneurs in developing countries, is made up of development foundations which provide loans to micro and small business, community-based organizations which operate community business investment funds, not-for-profit organizations which provide business advice, networking, and mentoring for female entrepreneurs,

and associations of female executives and entrepreneurs. The fourth element of the quadruple-helix is the civil society beneficiaries who include women entrepreneurs, graduates of the educational institutions and incubators, youth entrepreneurs, businesses whether early-stage or dynamic, technology firms, and the wider community comprising the media, creative industries, culture, values, life styles, and art (Carayannis & Campbell, 2009).

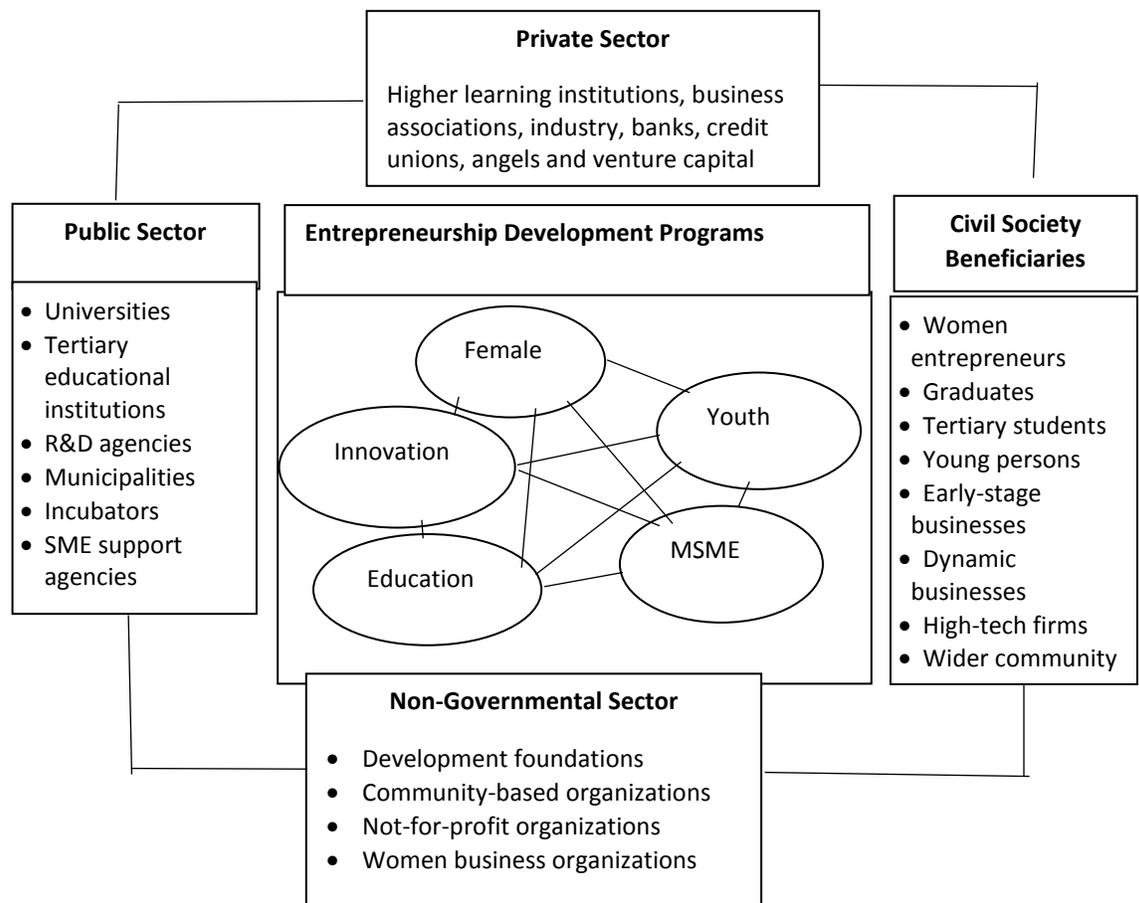


Figure 1. Entrepreneurship Support Model

Source: Designed by author from relevant literature and empirical knowledge

Specific lessons were gleaned from the literature which were reinforced by the accumulated experience of the author that provided the following guidelines: pursue the ideal of building the entrepreneurial ecosystem as an umbrella (Allahar & Sookram, 2019); promote a culture of entrepreneurship through the various media but specifically the social media (Kantis, 2005); embed entrepreneurship education, including creativity and innovation, in the curricula of schools particularly universities and business schools (Allahar & Brathwaite, 2017; Allahar, 2018); connect prospective entrepreneurs through networks of clubs, associations, and forums including women

associations; provide support services for new enterprises involving business services centers, mentoring and incubators as discussed in the context of South America and the Caribbean (Allahar & Brathwaite, 2016); simplify the regulatory system by reducing the administrative burden involved in registering businesses, meeting safety requirements, and tax compliance (Kantis, 2005); target specific groups such as youth, women, and university graduates in science and technology where the potential for entrepreneurship exists (Kantis, 2005), and facilitate access to finance for start-up and expansion including a venture capital model appropriate to the LAC region where funding is very scarce (Allahar, 2014).

Conclusions, Future Research, Policy Implications

The main conclusion is that an innovative ecosystem for promoting female entrepreneurship needs to build on a quadruple helix collaborative arrangement of universities and training institutions, governmental support institutions, business and industry corporations, and the public and civil society. This article set out to present the design of such an innovative ecosystem as a model for supporting entrepreneurs with specific focus on female entrepreneurs. Based on the research reviewed in this article, it was further concluded that, because of the dynamic involvement of women in developing countries in entrepreneurial activities, the introduction of a support model was highly relevant. The model is applicable to new entrepreneurs, especially those located in developing countries, and was specifically designed to address the needs of female entrepreneurs with its emphasis on entrepreneurship education and training, and a collaborative environment. Future research should evaluate the progress of the ecosystem in facilitating the development of female entrepreneurship in LAC or wherever the model is applied. The following specific policy implications, derived from the research and empirical knowledge gleaned from the article, should be pursued at the official level:

- Female entrepreneurs in the LAC region must be supported through facilitating broad-based entrepreneurship education, business and social networks, business start-ups, and introducing programs that enhance the skills and competences of women
- Entrepreneurship education should focus on creativity, innovation, and design thinking at the key levels of education including university
- Providing mentors for women is vital, and facilitating female networks and use of social media to reach greater numbers is recommended
- Initiatives to close gender gaps, create greater gender equity, and removing barriers to the progress of women entrepreneurs in business should be implemented
- Attention should be devoted to prospective female entrepreneurs in the public sector where women are playing a greater role in the operation and management of these institutions

- Improving access to finance, especially by MSME, is vital because most female entrepreneurs are concentrated in such enterprises

Guidelines for Applying Research to Practice

Business professionals and practitioners can make significant contributions to the subject of the research by:

- **Guest lectures.** Volunteer to deliver guest lectures on business and entrepreneurial practice at secondary and tertiary institutes of learning.
- **Mentorship.** Act as mentors to nascent entrepreneurs by providing guidance in overcoming the barriers to entrepreneurship and navigating the regulatory environment.
- **Business networks.** Contribute expertise and experience for building effective business networks to facilitate women entrepreneurs.
- **Support MSMEs.** Provide strategic support for the start-up and growth of small enterprises which are largely initiated by women and youth entrepreneurs.
- **Ecosystem development.** Engage proactively in the development of the entrepreneurial ecosystem within the region, and establish formal collaboration with the key actors in the ecosystem for achieving an effective quadruple helix.

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