1. Introduction

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INTRODUCTION

The Diana International Project\(^1\) is committed to advancing knowledge about the status of women's entrepreneurship around the world. This book is the sixth volume in the series associated with the Project and will not only build on the success of the first volume (Brush et al. 2006)—but will also further consider the various national, international, social, and contextual influences on women's entrepreneurship by examining ecosystems, and how these affect and influence growth strategies and business potential. Women entrepreneurs continue to start, grow, and innovate in their businesses worldwide. The latest Global Entrepreneurship Monitor (GEM) report shows more than 200 million women entrepreneurs starting or running new businesses in 83 economies across the globe. An additional 128 million are running established businesses. Among 61 economies (out of 83) featured in this report and also in the previous report based on 2012 data, overall total entrepreneurship activity (TEA) rates have increased by 7 percent since 2012, and the gender gap (ratio of women to men participating in entrepreneurship) has narrowed by 6 percent (Kelley et al., 2015).

The objective of this book is to foster a provocative discussion about women's entrepreneurship and growth within an ecosystem framework. We chose the theme of “women entrepreneurs in ecosystems” for three reasons.

First, there is a dramatic rise in attention to the concept of entrepreneurial ecosystems in the entrepreneurship arena especially with regard to entrepreneurship policy, regional clusters, innovation, context, and institutional frameworks that promote entrepreneurship. The notion of ecosystem implies that there is a design and implementation of certain strategies and programs that stakeholders act on in order to create entrepreneurial communities (Brush et al., 2014; Feld, 2012; Fetters et al., 2010; Isenberg, 2010; Stam, 2015). For instance, Isenberg (2010) presents the domains of an entrepreneurship ecosystem: conducive culture, enabling policies and leadership,
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availability of finance, quality human capital, venture-friendly markets for products and a range of institutional and infrastructural supports that can help a community to become more entrepreneurial over time. The World Economic Forum (2013) identifies six similar components: markets, culture, education and training, regulatory framework and infrastructure, funding and finance, and human capital. In these cases, regional or community efforts are involved to develop a vibrant ecosystem. New firms emerge and grow not only because talented and visionary individuals (entrepreneurs) created them and develop them but also because they are located in an environment or “ecosystem” made of private and public players, which nurture and sustain them, making the actions of entrepreneurs easier. For example, the existence of prior ventures, the availability of start-up financing mechanisms, a patent system, and a culture tolerating failure all facilitate the creation of new firms through a supportive entrepreneurial ecosystem. Conversely, an ecosystem might hinder entrepreneurship as in corrupt societies or if an entrepreneur tries to introduce a radical innovation when no technical standard yet exists (Stam and Bosma, 2015).

As a result, countries, governments, communities, institutions and cities are making efforts to deliberately develop local conditions by involving a wide variety of stakeholders to become more entrepreneurial, in a way unique to their area (Isenberg, 2010).

Second, besides the current attention to entrepreneurial ecosystems generally, there is growing awareness and attention to the role that women entrepreneurs play in these ecosystems (Kelley et al., 2015). As the GEM Women’s Report shows, the rate of start-up for women entrepreneurs varies widely, with only 10 of 85 economies showing women as likely to start businesses as their male counterparts (Kelley et al., 2015). While there is wide variation across levels of economic development, higher start-up rates are associated with perceptions of opportunities, role models, knowing entrepreneurs, and confidence in entrepreneurial capabilities, which are all associated with ecosystem factors. Countries including El Salvador, Brazil, Vietnam, Indonesia, Ghana and the Philippines are showing nearly equal rates of start-up for women and men. In contrast, expectations for women’s family roles, subtle biases against women in entrepreneurship, challenges in raising growth capital, and industry segregation can limit entrepreneurial possibilities for women in other countries. Women are influenced by ecosystem factors, but they also influence ecosystems. Women entrepreneurs tend to mentor other women, and to invest in the education of their children at a higher rate than men do (Brush et al., 2014). Likewise, in some countries women entrepreneurs are showing higher rates of internationalization and innovation than their male counterparts (Kelley et al., 2015).
Third, with this volume we contribute a gender perspective to the recent debate around the contextualization of entrepreneurship (Welter, 2011; Welter and Gartner, 2016a; Zahra and Wright, 2011; Zahra et al., 2014). Recent theoretical work in women’s entrepreneurship provides compelling arguments as to why we need to more carefully consider the institutional, cultural, social and spatial contexts within which entrepreneurs enact and grow their ventures (Welter et al., 2014). Contexts for entrepreneurship are more than just the objective business environment “out there”. Contexts for entrepreneurship consist of social relationships, they are constructed and interpreted by individuals, and changed through their interactions; they simultaneously are constraining and enabling for entrepreneurship (Welter and Gartner, 2016b). However, research studying context using a gendered perspective is still scarce.

An ecosystem perspective on women’s entrepreneurship puts the spatial and institutional contexts and their intersections and interactions at the forefront of our analysis. Even though the number of empirical studies on ecosystems is increasing, the attention to the different populations of entrepreneurs participating in ecosystems and their potentially unique influences or needs is still minimal. In the policy arena, reports are emerging which offer recommendations as to how to support or strengthen opportunities for women in local ecosystems (Fries et al., 2014; NWBC, 2014; Brush et al., 2014; Dass and Kumar, 2014). This volume adds an explicit gender perspective to the research on entrepreneurial ecosystems.

The following sections will discuss the biological roots of entrepreneurial ecosystems and recent work on the entrepreneurship ecosystem concept. This is followed by a presentation of the chapters in the book and how they collectively elucidate the gendered aspects of entrepreneurial ecosystems and their impact on women entrepreneurs’ growth strategies in different regions around the world. We conclude by summarizing the major insights from this collection of studies and by suggesting some directions for future research.

**BIOLOGICAL ROOTS OF ENTREPRENEURIAL ECOSYSTEMS**

The ecosystem concept in the business arena draws on the biological aspects of the interactivity—interaction of living organisms in the physical environment-community of inter-dependent actors (Stam, 2015). The term “ecosystem” was developed in 1930 by Roy Clapham to denote physical and biological components in an environment and their relationship to each other. British ecologist Arthur Tansley adapted the term
describing it as the interactive system established between bicoenosis (a group of living creatures) and their biotope (environment in which they live). Christopherson (1997) specifies that an ecosystem is “a natural system consisting of all plants, animals and microorganisms (biotic factors) in an area functioning together with all the non-living physical (abiotic) factors of the environment.” Central to the concept is the idea that living organisms are continually engaged in a set of relationships with every other element of the environment. Ecosystems are dynamic, interdependent, and can be bounded within a small or large scope. They are subject to disturbances—some controllable, some not (e.g. weather)—and there is often a hierarchy or social order (first, second or third level consumers). There are two general types of ecosystems, terrestrial (forest, desert, mountain) and aquatic (marine, freshwater, or swamps). Another way to characterize ecosystems is by whether they are natural or artificial. Natural ecosystems are found in a natural environment (e.g. river, pond, forest), whereas artificial are environments modified by humans in some ways (e.g. farm, crops).

Early ideas of business ecosystems are linked to Alfred Chandler’s (1969) work, which described an automobile-centric ecosystem. He articulated a variety of complementary goods necessary for cars to be useful—roads, gasoline service stations, retailers as well as steel makers, component manufacturers, tire makers and chassis builders. More recently, James Moore (1993) characterized the business ecosystem in terms of a new ecology of competition, arguing that a company is not viewed as a member of a single industry, but as part of a business ecosystem, cutting across a variety of business ecosystems, companies, products and customer sets.

Other work pairs the concept of a business ecosystem to networks and industry structures. For example, Prahalad and Hammond (2002) applied the concept of a business ecosystem to forms of economic coordination to explain the symbiotic nature of relationships between various private sector and social institutional players that can lead to rapid development of markets. Drawing heavily from network theory, Iyer et al. (2006) proposed that an IT ecosystem is the complex pattern of relationships among key players in the software industry that can be analyzed by examining their key relationships and dimensions. In marketing, an ecosystem is described as “a set of entities – say products or customers – that are mutually interconnected based on preferences, likelihoods of purchase, or similarity in interests” (Dass and Kumar, 2014, p. 229). In sum, a vibrant ecosystem set up around a lead firm can enable activities, assets, and capabilities to be flexibly and constantly reconfigured in response to changes in the environment (Williamson and De Meyer, 2012).
THE CONCEPT OF AN ENTREPRENEURIAL ECOSYSTEM

Ecosystems form not only along industry value chains, but also within spatial boundaries. Despite recent attention, the concept of supporting, developing and growing regional economies is not at all new. Early macroeconomic theory concerned with the operation of the total economic system considered the role of the supply and demand aspects of entrepreneurship in economic development (Kent, 1982). The role of environmental factors contributing to entrepreneurship, such as financing, presence of experienced entrepreneurs, labor force, access to suppliers, access to customers, favorable policies, proximity of universities, receptive population, availability of support services, and infrastructure were noted by several early entrepreneurship authors (Cooper, 1970; Bruno and Tyebjee, 1982; Vesper and Albaum, 1979). Early work in entrepreneurship suggests that new firm formation is influenced by industry structural factors, such as entry barriers (Baumol, 1982). More recent work has examined other structural factors, such as the industry life cycle, competition, spatial concentrations of activities, and the localization of certain industry economies (Armington and Ács, 2002; Feldman, 2001; Stam and Bosma, 2015). In addition, other factors also influence the extent to which entrepreneurial opportunities may emerge or be created (Shane and Venkataraman, 2000; Korsgaard et al., 2015). Several decades ago the landmark study by David Birch created widespread attention to the importance of new firms as providers of jobs in the US, and the ways that new and small firms contributed to local economies (Birch, 1979; 1987).

More recently, economic studies and research on regional economics and clusters argue that environmental, industry, economic and social factors are critical to economic development (Saxenian, 1994; Porter, 1990; Hall and Markusen, 1985). Several studies consider agglomeration and cluster development to be essential to developing regionally competitive economies (Porter, 2000). These studies trace their intellectual roots to Alfred Marshall’s (1890) work on collocation. Marshall theorized three reasons why firms from the same industry would tend to collocate: labor market pooling, common infrastructure, and spillovers. More recent work has brought forward the argument that agglomeration forces may cut across adjacent industries and operate at the capability, rather than at the industry level (Pisano and Shih, 2012).

The concept of an entrepreneurial ecosystem is argued to differ from previous concepts largely because the central focus is on the entrepreneurs rather than the firms (Stam, 2015). However, the entrepreneur is not a lone individual relying primarily on his/her own talents; rather, social ties,
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personal relationships, family and networks become essential to the process (Cooper and Folta, 2000; Stuart and Sorenson, 2003). Entrepreneurs more generally bridge economics (markets) and innovation; wherein entrepreneurship is not just the outcome of the process, but entrepreneurs are central players—and their enterprises can be feeders to the system rather than the leader or outcome (Ács et al., 2014; Feld, 2012).

The concept of an entrepreneurial ecosystem refers to the collective and systemic nature of entrepreneurship, where the individual entrepreneurs interact with the external business environment. A recent definition by Stam synthesizes a number of key factors: “[T]he entrepreneurial ecosystem is a set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship” (Stam, 2015, p. 5). In this volume, the concept of entrepreneurship ecosystem is multi-level, and rather than only statically identifying the stakeholders and components, reflects inputs and outputs or a dynamic flow, similar to biological ecosystems. The framework below is adapted from several authors who identify framework conditions and other influences that lead to a successful ecosystem. For instance, Feld (2012), Isenberg (2010) and the World Economic Forum (2013) all include markets, human capital, funding and finance, education and training and policy. Most frameworks also

![Figure 1.1 The entrepreneurial ecosystem: an organizing framework](image-url)
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recognize that there are essential framework conditions such as formal institutions, culture, infrastructure and demand, as well as other elements which are systemic such as networks leadership, talent, finance and support services. Most frameworks are somewhat static, however Koltai has created a six by six model that highlights the six key components (academia, investors, governments, corporations, nongovernmental organizations (NGOs) and foundations) as well as the functions that they must carry out for a successful ecosystem (identify, train, connect and sustain, fund, enable public policy and celebrate). Stam (2015) synthesizes several models including framework conditions and systemic conditions, as well as outputs (entrepreneurial activity) and outcomes (aggregate value creation). This model notes that the systemic conditions are the “heart” of the activity where connections and processes are taking place. Ecosystems can be of a variety of spatial or geographic scales (national, regional, local). The framework shown in Figure 1.1 is adapted from several authors, and includes framework conditions, entrepreneurial activity and outcomes (Stam, 2015; World Economic Forum, 2013; Koltai, 2014; Feld, 2012).

THE CHAPTERS IN THIS VOLUME

Given this framework, this edited volume seeks to better understand where and how gender plays a role in the entrepreneurial ecosystem. The call for submissions requested papers that covered the following factors:

- key cultural, historical, social, political and economic (contextual) influencing factors on the ecosystems and how these influence growth and development of women’s entrepreneurship in a particular country (or group of countries);
- strategies which were successfully adopted by nascent or established women entrepreneurs (or which could logically be adopted by them) to enhance the growth potential of their business within their ecosystems;
- comparisons of country, regional or area ecosystems and their influence on growth strategies for women entrepreneurs; and
- deep analysis of a single ecosystem considering its gendered aspects and how these influence growth strategies for women’s entrepreneurship.

The overall aim of the book is to highlight important growth influences on women’s entrepreneurship, and to offer valuable insights into the mechanics of women’s entrepreneurship within entrepreneurship ecosystems globally.
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We do so by examining women’s entrepreneurship in entrepreneurial ecosystem both cross-nationally and through in-depth country studies, and highlighting key public policy implications. The following text provides a short description of the chapters that comprise this volume.

Part I of the book provides cross-country comparisons of the ecosystem for women’s entrepreneurship. Guelich and Xavier describe the current landscape for women’s entrepreneurship in South East Asia and examine the existing ecosystem, using primary data augmented with relevant national and regional evidence. This study shows how the ecosystem shapes challenges and opportunities for women entrepreneurs, especially in the context of the Association of Southeast Asian Nations (ASEAN) economic community (AEC) at the end of 2015. Giménez, Gabaldón, and Seierstad draw on a gender-aware framework and institutional theory and use data from the 2014 Global Entrepreneurship Monitor and Women, Business, and the Law data from the International Finance Corporation (IFC)-World Bank on 14 Latin American and Caribbean countries to provide a deeper understanding of the role formal institutional factors play in women's entrepreneurship in a developing region.

Part II of the book features a collection of cross-country studies which provide an in-depth examination of the key components of the entrepreneurial ecosystem and their gendered influences on entrepreneurial activity. Two of the chapters focus on the ecosystem for women’s entrepreneurship in the US. Dutta and Yavuz examine how gender inequality influences the business outcomes of women-owned new ventures relative to men-owned new ventures across different states in the US. Neumeyer, Santos, and Poncela-Casasnovas study a team-based entrepreneurship program as well as the wider university entrepreneurial ecosystem and find that, depending on the composition of the team and the role assignment, female participants are less embedded in the venture development and formation process than male participants, and that their networks contain a lower proportion of investors, but a similar proportion of multiplex ties, compared to their male counterparts. Lugalla, Karsten, and Lutz draw from Bourdieu’s theory of practice, in particular the concept of cultural capital, to examine women’s growth aspirations in an ecosystem framework, applied to the tourism industry in Tanzania. Hailemariam, Kroon, and van Veldhoven use self-determination theory to better understand the motivation to form and develop a new venture, with a special interest in how women’s motivation changes in relation to the entrepreneurial ecosystem in Ethiopia, whereas Sandhu, Scott, Gibb, Hussain, Akoorie, and Sinha illustrate women’s embeddedness within a cultural milieu, social structure, and family role expectations across urban and rural settings in the Punjab state in northern India. Amorós and Mandakovic use GEM...
data from 2008 to 2013 in order to evaluate the differential outcomes of government policies and programs on men and women entrepreneurs across 15 Chilean regions.

Part III of the book highlights important public policy implications. Alsos, Haugum, and Ljunggren examine efforts taken by a policy program in Norway to adjust the inherent gender bias in regional entrepreneurial ecosystems. Henry, Orser, Coleman, Foss, and Welter (with the contribution of 14 other Global WEP Project members) draw on gender and institutional theory to report on the status of female-focused small and medium-sized enterprises (SME)/entrepreneurship policies and how women’s entrepreneurship policies differ among countries.

ADVANCING KNOWLEDGE ABOUT ENTREPRENEURIAL ECOSYSTEMS AND GROWTH OF WOMEN’S ENTREPRENEURSHIP

Collectively, the studies included in this volume provide numerous insights and provoke fruitful directions for future research on the role of entrepreneurial ecosystems for promoting women’s entrepreneurship around the world. First, the studies document the significant heterogeneity in ecosystem composition and dynamics not only cross-nationally, but also across regions and smaller localities within a country. Future research should further unpack this heterogeneity and its differential impact for women entrepreneurs and the performance prospects of their new ventures. Second, the studies highlight the complex interplay between formal institutions, such as national and local governments and regulatory bodies, and informal customs and rules in shaping the entrepreneurial ecosystem. We call on future research to further explore the dynamics of this interaction and how it affects the resources and social support available to women entrepreneurs seeking to establish and grow their ventures. Finally, the studies show that women entrepreneurs adopt a variety of strategies in order to enhance the growth potential of their business within the respective ecosystem. Further research is needed to gain a deeper understanding of the effectiveness of these growth-oriented strategies.

Entrepreneurship is a critical tool for economic development and the economic empowerment of women around the world. A dynamic and self-sustaining entrepreneurial ecosystem can enable productive entrepreneurship and significantly enhance the opportunities for growth-oriented women entrepreneurs. With the studies included in this volume, we make a substantial contribution to advancing knowledge about women in
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entrepreneurial ecosystems and extend an invitation for future scholarship in this exciting area of research.

NOTES

1. The Diana Project was launched in 1999 by Professors Brush, Carter, Gatewood, Greene, and Hart to study the phenomenon of women’s entrepreneurship in the US. The Diana Project team, in partnership with ESBRI (Entrepreneurship and Small Business Research Institute, Sweden), inaugurated the Diana International Project (DIP) in 2003. DIP currently involves researchers from 16 countries worldwide and aims to provide a platform from which to develop, conduct and share a global research agenda dedicated to answering questions about women entrepreneurs and growth oriented businesses.


REFERENCES


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Stam, E. and Bosma, N. (2015), ‘Growing entrepreneurial economics:
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