

WHAT CAN SCHUMPETER TELL US ABOUT WOMEN ENTREPRENEURSHIP IN IRAN?

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Abstracts

Offering a view of entrepreneurship enhanced by innovation, Schumpeter underlined its importance in modern economics and business. The case of Iran, an economy recently opening to international markets and recovering from international sanctions, will be interesting when it comes to entrepreneurship. The aim of this paper is to reflect on women entrepreneurs in Iran using a Schumpeterian framework, in an attempt to come up with recommendations for the challenges they are facing. A review of contemporary research on entrepreneurship and innovation is conducted, taking into account their contributions to the initial theory built by Schumpeter. This is complemented with the Global Entrepreneurship Monitor (GEM) report for 2015-2016, as it provides comprehensive data on the target country (Iran) and topic (Entrepreneurship). It results that entrepreneurship in Iran demonstrates a relatively low inclination for innovation following the Schumpeterian thought, in which it is central along with other factors. A gap therefore exists between the approach taken and what Iranian new ventures feature. An enhanced entrepreneurial education is eventually identified as a way of fostering innovation to Iranian women entrepreneurs, a solution that could help overcome their issues. Thus, they would be able to take part more efficiently in entrepreneurial ventures, acting as a disruptive factor following Schumpeter's view of innovation. A review of the literature about Schumpeter's approach is conducted first, followed by a focus on women's entrepreneurship in Iran. In addressing this issue, several recommendations providing ground for future research are suggested.

Research paper

Keywords: Iran, Entrepreneurship, Innovation, Education, Women Entrepreneurship

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Introduction

“Can capitalism survive? No I do not think it can” supports Schumpeter in the prologue of his famous book *Capitalism, Socialism and Democracy* (Schumpeter, 1942). With this statement he introduces a paradox between his thought based on capitalism its subsequent free market, and the pessimistic condition under which it evolves, including the entrepreneur due to his central position in this system. However Schumpeter was foreseeing it, his contribution to the subject, although initially omitted, was eventually found to be very useful to explain modern economics. Entrepreneurship is an important part of international business thanks to its potential outcomes, especially when conjointly operating with innovation. This will be the purpose of this paper, the role of entrepreneurship as a disruptive force in creating opportunities for female entrepreneurs in Iran taking a Schumpeterian perspective on the literature. Here the case of women entrepreneurs will be studied because they have an intriguing condition compared to their male counterparts in Iran. The country is trying to catch up with international trade after a long period of international sanctions (Sick, 2000) and needs to involve women in its economy (Kumar et al., 2013). Men and women are displaying very different figures when it comes to economic variables such as employment, but also entrepreneurship for which improvements are required. A justification of the focus of the study will be done in the first place, followed by a literature review of models. Iranian entrepreneurship as a context will be then observed to finally present recommendations. Findings of this study include a call for a revision of entrepreneurial education according to challenges faced by this specific group.

Literature review

Innovation and Entrepreneurship

Two concepts hard to define so far, entrepreneurship and innovation are nowadays part of economics as a whole and, consequently, they are used in business and management sciences. Literature has generated considerable amounts of theories and frameworks over time not only about each of these taken separately but also as a combination.

Firstly, innovation is an issue of relevance for many different disciplines, including business and management ones. Thus, innovation is being subject to a wide range of definitions due to the different dimensions, and the large number of existing definitions somehow creates confusion and ambiguity (Baregheh et al., 2009). To define it would help moving forward into the identification of what is an innovation and the authors, exposing how typologies would help classify by, give a potential solution:

- **Nature:** a new or an improved organisational aspect
- **Type:** a product, service, process or technical
- **Means:** the balance of technology, ideas, inventions, creativity and market

Another study puts more emphasis on the distinction between innovation and invention (Fagerberg, 2006) because they are so closely linked it is difficult to distinct one from the other. A considerable lag in between the two concepts is very often the way to determine whether we refer to an invention or an innovation. According to Fagerberg, the former is “the first occurrence of an idea for a new product or process”, while the latter stands for “the first attempt to carry it out in practice”. According to the author, innovation mostly appears in the commercial sphere. To be obtained, “a firm normally needs to combine several different types of knowledge, capabili-

ties, skills and resources” with an invention. Besides, Johansson (2010) has identified innovation as a result of creativity, as opposed to imitation. To define innovation is still under way and accordingly extensive research has been conducted to shape it according to different approaches. Numerous studies could be cited and the subject would surely be relevant for a comprehensive literature review but so far innovation is a confusing process and when included in an analysis it is necessary to be cautious and be explicit about the term.

Secondly, interest in entrepreneurship has been observed for a long time and the first considerable contribution on the role of the entrepreneur dates back to Cantillon during the early 18th century. From his idea subsequent economists elaborated their own approach including Schumpeter, Knight, Schultz or Kirzner (Van Praag & Versloot, 2007; Hébert & Link, 1989). In spite of contributions to the subject by many more other scholars, no consensus has been reached and the notion remains boundaryless in terms of interpretation. Some are calling for an interdisciplinary theory due to the numerous approaches that might be taken (Ripsas, 1998), while others underline the challenges associated with the finding of a definitive theory (Bull & Willward, 1993).

To summarise research on entrepreneurship up until now, not a single definition has emerged and this is why it is so important to be clear of what we imply when we refer to it for a study (Gartner, 1990). This will be eventually determined throughout this review of the literature in order to avoid any misleading conceptualisation of the term. To this end, the contribution of Schumpeter to entrepreneurship, which has been a significant and

widely used one, even in contemporary studies (Ripsas, 1998; Bull & Willard, 1993) will be of a great help.

Innovation through entrepreneurship

Indeed, Schumpeter made an important contribution to economical sciences by paying attention to the relationship between innovation and entrepreneurship as a factor for economic development that he first introduced as early as 1934 in his *Theory of economic development* (Schumpeter, 1934). He coined the expression of creative destruction, this process essential to capitalism that “incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one” (Schumpeter, 1942).

As Oser and Blanchfield (1975) explain Schumpeter’s thought, “without innovation, economic life would reach static equilibrium, and its circular flow would follow essentially the same channels year after year ... The entrepreneur, seeking profit through innovation, transforms this static situation into the dynamic process of economic development”. Development as a result consists of a dynamic process in his view, not only disturbing the economic status quo but also making room for change. The entrepreneur is undoubtedly linked to the economy in the Schumpeterian view and the subsequent development can only be made possible if innovation is undertaken in during the activity. Schumpeter asserted the person to introduce innovation in the economy is the entrepreneur, hence his positive effect on economic development. As a mean to identify entrepreneurial ventures, five categories exist in his words (Schumpeter, 1934):

- The introduction of a new good, that is one with which consumers are not familiar, or a new quality of a good.
- The introduction of a new method of production, that is one not yet tested by experience in the branch or manufacture concerned, which need by no means be founded upon a discovery scientifically new, and can also exist in a new way of handling a commodity commercially.
- The opening of a new market, that is a market into which the particular branch of manufacture of the country in question has not previously entered, whether or not this market has existed before.
- The conquest of a new source of supply of raw materials or half manufactured goods, again irrespective of whether it has first to be created.
- The carrying out of the new organisation of any industry, like the creation of a monopoly position (for example through trustification) or the breaking up of a monopoly position.

The above criteria underline the necessity of innovation for any successful firm, and are incidentally what he refers to as an entrepreneurial venture. This kind of entrepreneurship of the Schumpeterian type would lead to creative destruction due to radical changes caused by its innovative content, creative destruction, which he said, would benefit to the economy as it drives economic development. Schumpeter's distinctive contribution to economics is very much visible regarding this theory (Śledzik, 2013) as he was highlighting the function of entrepreneur via a combination with innovation for the first time and is a model more relevant now than ever. Although the terms he used for his definition have experienced some slight differences over time, the ideas remain the same as entrepreneurship enjoys a constant consideration (Kiessling, 2004).

Also studying the interaction of entrepreneurship and innovation on each other, Drucker elaborated an important perspective, notably in his *Innovation and entrepreneurship* (Drucker, 1985), where he sets what he thinks to be the connection between the two concepts. He, as a matter of fact, built his thought on Schumpeter's theories pointing out innovation is a centrepiece of entrepreneurship and this innovative process is the reason why so many of them carry out their activity. Drucker outlines what he believed to be the 7 sources of opportunity to innovate and ranks these categories according to their predictability and reliability for which he dedicates sections of his work (Drucker, 1985). He assumes that "The essence of entrepreneurship is motivated by doing something different rather than doing better what already is being done" (Kiessling, 2004). And this view is very similar to that of Schumpeter, in the way that Drucker reminds innovative process is a key component of the entrepreneurial journey.

Because Schumpeterian entrepreneurship is a driver for economic development, economic results such as growth, job creation or higher salaries are very often taken into account in scholarship to observe the consequences.

Contemporary approach

Based on this Schumpeterian view of entrepreneurship, which, combined with innovation fosters economic development, a review of the literature and the analysis they make of this model will help understand the different approaches that are arising regarding this process. Schumpeter's approach is about theory and since then scholars have tried to use his view of entrepreneurship to observe the effects in practice. By showing the different conclu-

sions obtained in various studies, it will allow the scope to be broader and to offer more diversity.

The results of a creative destruction process have been widely studied and one distinctive approach supported by Aghion and Howitt (1990) who adopted Schumpeter's obsolescence of old technologies, or creative destruction, to explain economic growth resulting from competition that firm engage in using innovation. The need to explore spillovers is stressed in this paper, as well as capital, and notably human capital to gain more understanding of reality.

In observing this effect of entrepreneurship on invigorating the economy, Kritikos (2014) draws conclusions regarding job creation, economic performance and contribution to productivity and competition. The accent is on innovative entrepreneurs who affect positively the previously mentioned economic variable using "new products, methods and production processes". Even though innovation is found to be of importance here, the definition of an innovative entrepreneur is very broad and quite blurry. The study gives limitations and how negatively the market might be affected by entrepreneurship. There is however a lack of identification of what clearly influences entrepreneurial behaviour to make it innovative and therefore influence the economy.

Regarding incumbent and entrants on a market, there might be dynamics and more specifically a spillover effect (Agarwal et al., 2007) accounting for a creative destruction. The framework taken is following a Schumpeterian assumption that the entrepreneur creates a higher value than that of incumbent firms, and identifies knowledge spillovers as a key factor in new ventures creation and growth. It is rather optimistic and limits the

analysis to an elementary connection without trying to fit innovation in the context.

The type of small business matters when we decide to study entrepreneurship and innovation and although it is generally accepted that the two affect other variables, we need to differentiate some categories (Carland et al., 1984). Small business venture, entrepreneurial venture, small business owner and entrepreneur are the four identified forms of firms. The entrepreneurial venture features an organisation that engages in one of Schumpeter's 5 processes, namely an innovative practice. This focus on models of entrepreneurship and how they influence economic growth accordingly is studied again through a different angle (Carree & Thurik, 2003). The Schumpeterian entrepreneur is not the only one that might result in economic growth, as the Kirznerian and Knightian may also do.

Considering new venture creation as an indicator of entrepreneurship, Sternberg and Wennekers (2005) argue about the positive effect the latter has on economic growth but spotted differences across countries on the basis of their level of development. Plus, is identified as a vector of efficiency the type of venture, high growth and opportunity entrepreneurship being seen as championing it (Wong et al., 2005). In this study, where Schumpeterian entrepreneurs and economic growth are seen as correlated, firm formation and technological innovation are taken as separate factors. An important distinction is made regarding new ventures and innovative start-ups, to rule out any "shopkeeper" or "refugee" effect, consisting of strict business owners. This is why high potential TEA (Total Early-Stage Entrepreneurial Activity) is emphasised as a marker for success of entrepreneurial ventures and, using the GEM data, it is shown that fast growing

firms are indeed positively affecting growth. Birch (1996) used the term “gazelles” to identify this sort of ventures and their characteristics, and was later used by others (Henrekson & Johansson, 2010; Dautzenberg et al. 2012). However, it is concluded that even though they are contributing to economic growth, they do not necessarily contribute to job creation. Other types of entrepreneurship are not studied in this paper and might share the same outcomes, in fact only highly technological venture are here taken into consideration which is quite exclusive and not representative of entrepreneurship as in Schumpeter’s approach.

Using TEA as well as a hypothesis for GDP growth, a study (Van Stel et al., 2005) measured the impact entrepreneurship would have on the economy across different countries. Economic development was taken into account as a variable and it was negatively correlated in developing economies due to “marginal entrepreneurs (shopkeepers) in small crafts who may be more productive as wage earner in a bigger firm”. Despite this remark, authors concluded that a solution might lie in innovation by the entrepreneur in these developing countries.

A recent study (Boyer & Blazy, 2014) conducted on SMEs underlines the importance of personal criteria on both innovative and non-innovative enterprises survival. By personal criteria the authors refer to as variables such as age, gender ethnicity, professional experience, and financing resources. Far from being a beneficial factor, as it is usually perceived, innovation is here unfavourable for SMEs, leaving room for the above personal characteristics to play a greater role. It however maintains a very general stance when it comes to personal characteristics, only taking into account physical, financial aspects or working experience.

Relationship between innovation following entrepreneurial activities of the Schumpeterian type and economic growth was found to be substantial (Galindo & Méndez, 2014). Innovation is found to be playing a central role in economic growth and because entrepreneurs serve as the vehicle to introduce them in the market they are seen as innovators. By doing so they improve their firm's activity and obtain higher profits. A circle including economic growth, innovation and entrepreneurship activity has been noticed, which support Drucker's idea of feedback that "would result in the economy achieving higher levels of employment and welfare". Nonetheless, other factors arise in this process, namely social climate and institutions.

The entrepreneur and innovation as a combination working together is allowing tangible results for organisations. Zhao (2005) recognized the two concepts extensively studied by both Drucker and Schumpeter to be positively related and to help an organisation flourish. Combining innovation and entrepreneurship is a complementary and vital way to success and sustainability even in subsequent steps after the creation of a venture. The author proposes a framework as issues emerged to implement such a synergy between entrepreneurship and innovation: Strategy (pro-active behaviour), System (balanced managerial control), Staff (knowledgeable asset), Skills (capacity to perceive opportunities) and Style (empowering and motivation).

Wealth distribution is another conclusion drawn from the combination of entrepreneurship and innovation following a Schumpeterian process of creative destruction (Spencer et al., 2008). "Disruptive technologies and discontinuous innovations" handled by entrepreneurs who operate new firms play a role in maintaining an equitable redistribution of wealth. Under

these circumstances dominant, incumbent players in the market decline under the pressure of new entrants and a creative destruction is observed. On the other hand creative destruction through entrepreneurship has been pointed out as having a positive effect on incumbent firms, called “delayed entry effect” (Andersson et al., 2012). Although negative in the short term due to a “business turbulence”, it conversely affect them in a positive way after some years.

Other approaches include the Schumpeterian business cycles as part of the connection entrepreneurship and innovation have. According to Parker (2012) and the review he does of previous theories, three models arise: models of creative destruction, models of innovation and implementation cycles, and models of production under asymmetric information.

For entrepreneurship to fuel a process of creative destruction process using innovation as a disruption depends on a certain number of variables besides the tenets prescribed by Schumpeter. Schumpeter’s capitalistic entrepreneur has been regarded as part of a bigger whole by Drucker who introduced other entities later. Recent studies on the subject show that other variables are necessary for the conditions have changed since the early 20th century. Approaches taken by some authors (Zhao, 2005; Galindo & Méndez, 2014; Carland et al. 1984; Van Stel et al., 2005) reveal interesting findings for the focus of this paper that is to say women entrepreneurs in Iran and the application of a Schumpeterian model on it. These studies show to what extent innovation is considerable for entrepreneurship, along with other factors, and how together they are beneficial for economic growth and firms’ activity.

Research Method

A review of the extent literature about Schumpeterian entrepreneurship is used as research methodology. Ranging from the initial thought developed by Schumpeter to more contemporary approaches, this literature review aims at giving the study a framework to apply to a certain environment, women entrepreneurship in Iran. The objective is to analyze the gap between what makes entrepreneurship efficient according to Schumpeter and the current situation of a specific group of entrepreneurs. The GEM database as well as academic papers will provide evidence about this Iranian environment or ecosystem, on which the rest of the study is based. As solutions to fill in the gap between theory and reality, recommendations will be proposed giving orientation for future studies on the subject.

Iranian Entrepreneurship

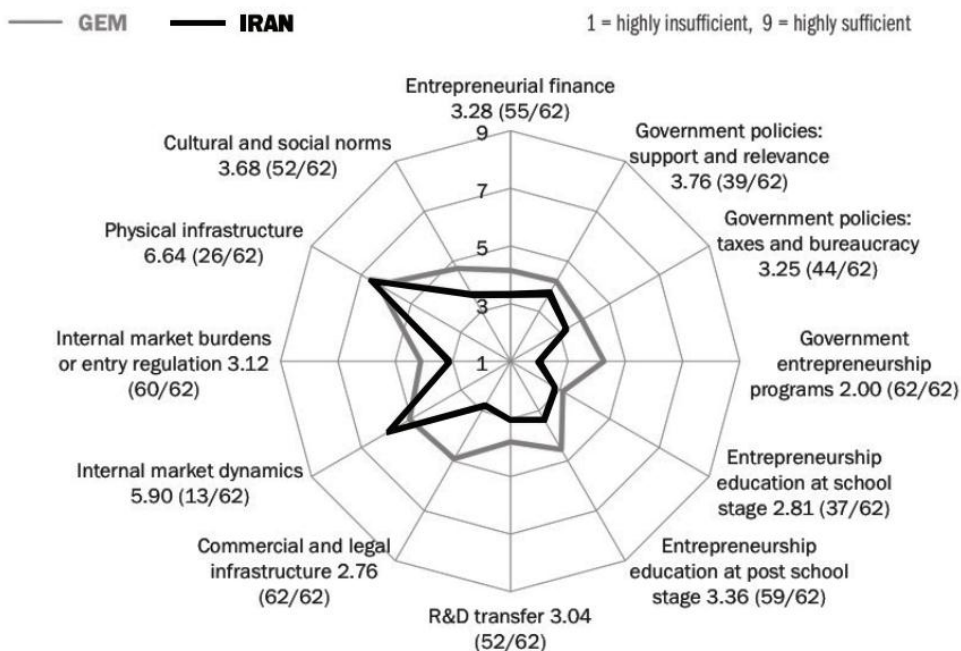
Following the review of the literature that has just been conducted, the context corresponding to the study will be analysed. In this case the focus will be on the current state of entrepreneurship in Iran and more specifically on women entrepreneurs. By using evidence it will be showed how the models above might fit into the case study and what conclusion can be drawn from it.

The case of entrepreneurship in a country as Iran was introduced in the GEM and it is therefore possible to obtain similar information than in the other countries of the organisation since the implementation of a branch at the University of Tehran. Many studies are now using this monitoring tool as a basis for their investigations because it provides them with comprehensive data on Iran. Among the factors facilitating entrepreneurship the

government's development plan and the access to physical infrastructures, and on the contrary bureaucracy and taxation are seen as the main constraints. Trends are positive and showing a decrease in necessity-driven entrepreneurship and conversely a rise in the opportunity-driven one. GEM offers annual global reports (60 countries in 2015) and the findings are put into tables which is what we will use here. In the 2015/2016 report (Kelley et al., 2016), experts from the organisation have rated Iran according to several criteria and created a diagram showing the Entrepreneurial Eco-system (Figure 1). In this snapshot of the situation it can be observed the different areas to develop and to take advantage of, while comparing it to the mean of the total studied countries.

Figure 1. Expert Ratings of the Entrepreneurial Eco-system (Kelley et al., 2016)

Expert Ratings of the Entrepreneurial Eco-system (rank out of 62 recorded in brackets)



Gender is an issue in terms of male/female ratio (0.5) but the opportunity ratio is of 1.0 though, showing a dichotomy (Figure 2).

Figure 2. Iranian Entrepreneurship Gender Equity (Kelley et al., 2016)

Gender Equity		
	Value	Rank/60
Female/Male TEA Ratio	0.5	38T
Female/Male Opportunity Ratio	1.0	11T

Iran is ranked very low on innovation (Figure 3), only 12.1% of TEA being innovative (new product to consumer or a low number of competitors) and it represents a serious opportunity to exploit when we can see that other developing countries such as India (51.1%) or Lebanon (38.4%) record relatively high rates. Innovation indexes reveal how innovative are

entrepreneurs but also indicates the market characteristics and how saturated it is.

Figure 3. Ranking of Job Creation Expectations of TEA by Region, 2015
(Kelley et al., 2016)

Region	Economy	Innovation (product is new to all or some customers AND few/no businesses offer the same product)	
		Rank/60	Value
Africa	Botswana	39	20.3
	Burkina Faso	57	11.6
	Cameroon	52	14.8
	Egypt	36	22.3
	Morocco	55	12.6
	Senegal	60	8.2
	South Africa	21	30.1
	Tunisia	15	32.2
	Total		19.0
Asia & Oceania	Australia	17	31.7
	China	31	25.8
	India	2	51.1
	Indonesia	46	17.3
	Iran	56	12.1

When it comes to job creation (Figure 4), TEA provides a high value in the short term but decreases a lot both in intermediate or long term, pinpointing the shortcomings regarding sustainability of ventures in Iran. Another issue concerns entrepreneurship education at school and post school stages (Figure 4), which is insufficient in both cases for Iran.

Figure 4. Ranking of Gender Distribution of TEA, Necessity TEA & Opportunity TEA by Region, GEM 2015 (Kelley et al., 2016)

Region	Economy	0 Jobs in 5 years (% TEA)		1 – 5 Jobs in 5 years (% TEA)		6 or more jobs in 5 years (% TEA)	
		Rank/60	Value	Rank/60	Value	Rank/60	Value
Africa	Botswana	53	26.2	17	42.2	9T	31.7
	Burkina Faso	60	5.6	1	81.4	41	13.0
	Cameroon	12T	52.1	39	34.5	40	13.3
	Egypt	14	51.4	58	22.8	19T	25.7
	Morocco	24	45.5	27	38.0	35	16.5
	Senegal	46	32.0	11	45.3	23	22.7
	South Africa	51	29.8	13	44.5	19T	25.7
	Tunisia	58	19.0	18	40.9	3	40.1
	Total		32.7		43.7		23.6
Asia & Oceania	Australia	50	31.0	20T	39.9	15	29.1
	China	44	32.4	44	32.6	5	35.0
	India	6	59.9	30	36.6	58	3.5
	Indonesia	5	60.7	31T	36.2	59	3.1
	Iran	10	54.3	56	25.1	27	20.6

Additionally, repartition of TEA in the population (Figure 5) shows a significant difference between male (17.5%) and female (8.5%), although necessity-driven entrepreneurship is in both cases low.

Figure 5. Ranking of Industry Distribution of TEA by Region, GEM 2015 – Percentage of TEA (Kelley et al., 2016)

Region	Economy	Male TEA (% of Adult Male Population)		Female TEA (% of Adult Female Population)		Male TEA Opportunity (% of TEA Males)		Female TEA Opportunity (% of TEA Females)		Male TEA Necessity (% of TEA Males)		Female TEA Necessity (% of TEA Females)	
		Rank/60	Value	Rank/60	Value	Rank/60	Value	Rank/60	Value	Rank/60	Value	Rank/60	Value
Africa	Botswana	2	36.6	3	30.1	47	68.6	53	54.3	14T	28.2	7	44.0
	Burkina Faso	5	33.6	4	26.6	26T	77.5	39	66.5	29	22.0	18	33.0
	Cameroon	7	27.2	6	23.6	52	67.1	48	61.0	17	27.2	20	32.5
	Egypt	39	11.1	52	3.7	56T	61.3	57	45.0	4	38.3	3	55.0
	Morocco	57T	6.1	60	2.8	43	70.9	42	65.5	20T	25.4	15	34.5
	Senegal	1	40.5	1	36.8	17	80.5	46	62.9	39	18.0	12	36.2
	South Africa	36T	11.6	35	7.0	48	68.0	47	62.2	10T	30.2	9	37.8
	Tunisia	23	15.0	43	5.3	16	80.8	22	75.1	41	16.9	41T	21.1
	Total		22.7		17.0		71.8		61.6		25.8		36.8
Asia & Oceania	Australia	21	15.5	22T	10.1	2T	87.3	10T	81.7	57	10.6	48	16.0
	China	22	15.3	21	10.2	56T	61.3	33T	69.0	5	37.8	25T	29.8
	India	28	13.6	31	7.9	29	76.9	8T	82.1	31T	20.9	50	15.3
	Indonesia	17	17.6	14	17.8	11	82.8	16	77.8	43	16.6	38	21.3
	Iran	18	17.5	30	8.5	49T	67.6	38	67.4	12	29.1	29	28.2

Industry distribution of TEA (Figure 6) reveals a focus on Wholesale/Retail activities as well as Manufacturing, which might be consistent with the lack of innovation observed earlier. These figures explicit the features of entrepreneurship in Iran and are found to be helpful although numbers should be carefully interpreted.

Figure 6. Innovation Levels of % TEA by Region (Kelley et al., 2016)

Region	Economy	Agriculture		Mining		Manufacturing		Transportation		Wholesale/Retail		Information/Communications Technology		Finance		Professional Services		Administrative Services		Health, Education, Government and Social Services		Personal/Consumer Services	
		60	Value	60	Value	60	Value	60	Value	60	Value	60	Value	60	Value	60	Value	60	Value	60	Value	60	Value
Africa	Botswana	6	18.0	30T	5.1	48T	4.8	17	3.7	24	46.9	29T	3.0	32T	2.0	47	2.2	31	3.4	51	7.7	20	3.2
	Burkina Faso	3	23.7	40T	3.3	36T	6.6	53T	1.2	13	60.8	58T	0.0	52T	0.2	59T	0.0	60	0.1	59	3.9	55	0.1
	Cameroon	4	22.1	39	3.6	32	7.0	11	4.3	26	45.6	27T	3.1	52T	0.2	51	0.9	49T	1.5	38	11.6	53T	0.2
	Egypt	26	6.6	55	0.7	1	21.9	46	1.7	18	53.6	51T	0.2	48T	0.5	52	0.8	54	1.0	49T	8.5	11T	4.3
	Morocco	42T	3.1	42T	3.2	10	12.7	2	6.7	14	59.7	58T	0.0	55T	0.0	46	2.3	55T	0.9	39	11.4	56T	0.0
	Senegal	5	20.5	51	2.5	33T	6.9	16	3.8	17	54.7	51T	0.2	36T	1.5	57T	0.2	47T	1.8	52	7.4	52	0.4
	South Africa	24	7.2	21T	6.3	53	3.6	9T	5.1	21	50.4	43T	1.0	26T	2.5	39	3.1	39	2.5	20T	16.8	32	1.6
	Tunisia	14T	9.6	1	25.5	15T	10.0	56	1.0	41	28.0	32	2.4	47	0.6	29	7.3	7	5.7	49T	8.5	33T	1.5
	Total		13.9		6.3		9.2		3.4		50.0		1.2		0.9		2.1		2.1		9.5		1.4
Asia & Oceania	Australia	35T	4.1	5	11.5	51	4.6	24T	3.1	44	26.7	20	4.9	10	4.5	13T	12.2	20T	3.9	7	21.9	26T	2.5
	China	40	3.3	25T	5.9	52	4.5	18T	3.6	11	62.2	34T	1.8	7	5.1	56	0.4	55T	0.9	41	11.0	37T	1.2
	India	1	42.4	42T	3.2	54	3.5	41T	2.1	32T	37.2	51T	0.2	50T	0.3	57T	0.2	57	0.8	44	10.0	53T	0.2
	Indonesia	31	4.8	54	1.5	15T	10.0	53T	1.2	3	73.0	55T	0.1	39T	0.9	55	0.5	34T	2.8	57	5.1	56T	0.0
	Iran	29	5.2	15	7.9	2	19.3	22T	3.3	32T	37.2	23	4.5	20T	2.7	35	4.8	49T	1.5	36T	12.5	41T	1.1

Literature focused on Iran as far as entrepreneurship is concerned is not as extensive as it is for other regions but in spite of their number, contributions exist and represent a real asset to get an insight.

Underlining the positive and negative impacts of environmental factors on entrepreneurship development, a study (Davari et al. 2014) argues in favour of its importance for economic growth. Unemployment as a social and economic problem is given as a reason for the research, which highlights the existing gap between the determinant of entrepreneurship and policies to favour it. Entrepreneurial capabilities are notably exposed as an issue in Iran.

Based on college students, another research (Karimi et al., 2011) stresses the role of universities and that they “should more extensively ad-

dress entrepreneurship education and provide students with the knowledge and skills required to start a business”. Academic environment is therefore seen as a driver for entrepreneurial activities. These articles were focused on general entrepreneurship in Iran and gave some ideas on the environment. But for the focus of this study, we will be even more specific and see what challenges women face in their entrepreneurial activities.

It has been observed that women-owned firms experience different dynamics than their male counterparts (Arasti et al., 2012) and economic, socio-cultural and legal factors are identified as responsible for it. Access to financial resources and support represent two main difficulties for them to expand their business furthermore.

But women do have assets to help them achieve successful entrepreneurial ventures, such as creativity and competence (Mehrganrad, 2012). More educated than before, they nevertheless suffer from high rates of unemployment, which are on the rise, which questions the potential for this part of Iran’s society. They are predicted a role in GDP growth and diversification of the Iranian economy and at the same time able to create jobs. Options to facilitate entrepreneurship among women include recognition of opportunities, educational changes or providing financial as well as non-financial sources.

The concern about unemployment among women is under-evaluated in Iran (Bahramitash & Esfahani, 2014) in spite of the significant issue it represents. A low rate is particularly observed in SMEs when at the same time they are more represented in large firms. They experience inequalities in entrepreneurial activities albeit more present in the service sector, electronics and information technology. These sectors being more prone to

technology and foreign trade, women might take it as an opportunity to expand their participation in entrepreneurial ventures. A reason that could explain this specific participation in some sectors of the economy is education according to the authors, academic background consisting of an important determinant for entrepreneurial orientation. Status and barriers for women entrepreneurs in Iran is providing ground for research trying find out the issues at the origin of this gap.

In arguing for more participation of women in the workforce, estimated at around 27%, a study defined the challenges faced (Noorinasab & Azmoon, 2014). Due to a limited private sector and the difficulties it had to expand in the country, women could not have used it as a source of employment. Therefore, to seek opportunities in entrepreneurship is an option that could provide them with jobs and besides contributing to national economic growth. Barriers are of different aspects: environmental, individual and organisational. The authors stress the importance and potential of women entrepreneurs according to the significance of what they have achieved given the minimal support they benefited from.

The GEM database introduced above is used to describe Iranian women entrepreneurship by Sarfaraz and Faghieh (2011) in their intention to understand the barriers associated entrepreneurial activities for this specific group. They are social and cultural such as gender discrimination. Economic figures are not favouring women at all when it comes to Iran and on the other hand educational gender gap has been reduced. Iran is an oil-based country and a lot of private companies are owned by the government thus affecting allocation of resources. A substantial difference between men and women was reported by the authors concerning a survey by national experts for

GEM where they expressed strong negative opinions to the questions asked, the highest concern being 78% somewhat or completely disagreeing with the fact that “men and women had the same level of know-how and skills to start a new business or company”. Again barriers are identified, both visible and invisible, that prevent women entrepreneurs from performing as efficiently as they should, and in that sense more accessibility to resources should be an option to support them.

Iran has the potential to see an increase in women entrepreneurship, which would eventually lead to more job creation and more economic activity as seen with Schumpeter, provided that existing barriers (mainly administrative) are reduced to allow more participation for women in entrepreneurial activity. Although initiatives can be observed, there is still work to do (Davari et al., 2012) in order to achieve a better integration of this group in economic activities through entrepreneurship.

A gap exists between Schumpeterian approaches to entrepreneurship regarding innovation associated with new ventures. The literature review highlighted the importance of this combination. Role models exist (Sarfraz, 2016), and with it an orientation for future research. A solution might lie in the educational aspect of entrepreneurship, in terms of knowledge and resources, to support them and give to these entrepreneurs what they are missing from a Schumpeterian entrepreneurship, which is based on an innovative process to ensure a firm succeeds. In addressing concerns of women entrepreneurship and how to facilitate its development, education might be the answer (Radovic Markovic et al., 2012): A redefinition of programs, notably to foster creativity and innovative ideas to turn into an entrepreneurial venture.

Recommendations

Literature on Iranian entrepreneurship is very often omitting innovation as a determinant in their studies. But as we saw in the literature review it consists of a determinant factor to differentiate business ownership from innovative start-ups. The former will not have the same impact on the organisation itself and on the economy. Fostering innovation among student at university and supporting them in their entrepreneurial aspirations would be a way to engage in a solution to this issue of gender gap.

This is consistent with an investigation (Karimi et al., 2010) to assess entrepreneurship education in Iran. After reviewing the positive outcomes of such activities and effects observed in other regions, the authors engage in recommendations and many of them stress educational and supportive changes: less formal lectures and more practical workshops, start up trainings, embedding entrepreneurship in mainstream curricula to reach a diversity of students, promotion of science and technology parks and business incubators. A similar call is made to implement changes in education for entrepreneurship through diversity of students outside business schools (Salamzadeh et al., 2014).

Diversity by incorporating entrepreneurship teaching in engineering departments for instance might lead to innovative ideas by a combination of a knowledge or perception of the environment and entrepreneurship support to give birth to an idea. This challenge has been underlined by Kirby (2004) in a publication regarding entrepreneurship education and business schools. Entrepreneurship is an activity requiring creativity and change, which is not what most business school students are educated for, but rather for manage-

rial sciences. On the same argument business schools are corporate in culture, Gibb (2002) explains the revolution needed in education, following here the idea that “there is a need for a radical Schumpeterian shift in entrepreneurship education involving creative destruction and new ways of organising knowledge and pedagogy”. Emphasising the importance of entrepreneurship and innovation in economic development, a research (Mok, 2012) established the necessary balance between different variables arising for a government and how strategic it is. Universities might be a factor for such a change in entrepreneurship education and create synergy to support economic development in Iran (Guerrero et al., 2014; Salamzadeh et al., 2016b).

Not only programmes but also internal structure to provide support to start-ups within universities is necessary. Start-up is indeed a type that should be considered more often to ensure ventures are successful (Salamzadeh 2017), because they integrate innovation as a key component. Iran already enjoys a developing ecosystem of these start-ups that could act disruptively in the economy (Salamzadeh & Kawamorita, 2017).

Following this paper’s assessment of women entrepreneurs in Iran, some practical recommendations are given for future research. Here are examples of ways to engage in such a rethinking of entrepreneurship education in Iran:

- ◆ The development of special programs (Ramadani et al., 2013) for women entrepreneurs to be adequately educated for entrepreneurship in Iran. An example being MOOC courses (Al-Atabi and DeBoer, 2014) addresses to a larger audience of student throughout universities depart-

ments. Institutions may be part in this reshape, as the European Network of Mentors for Women Entrepreneurs regarding several European and neighbouring countries.

- ◆ Increased cooperation between academic and professional environment to deliver a sound entrepreneurial training (Mueller, 2011). Examples can be taken from the University of Gothenburg in Sweden or its Turkish counterpart, Özyeğin University. The latter managed to implement a centre for entrepreneurship mixing academic and professional elements for ventures to thrive through innovation.
- ◆ Reinforcement of Iranian universities' incubators. As they provide a popular and dynamic (qualitative and quantitative) accelerator for start-ups (Salamzadeh, 2015), they might provide the adequate ground for students in order to initiate an entrepreneurial venture.

The next stage of the study would be the analysis of these frameworks to see if educational and supportive structures could indeed foster innovation among women entrepreneurial ventures.

Conclusion

His vision of entrepreneurship far from being outdated, Schumpeter's principles of entrepreneurship give us indication for women entrepreneurs in Iran, namely the need for them to be innovative (amongst other factors). Thus, innovation will enable them to act as disruptive force and engage in a creative destruction process. Following this pattern, they might achieve bet-

ter entrepreneurial results and contribute to economic progress in an opening economy as Iran finds itself at the moment. Creative destruction provides a solution for women entrepreneurs in Iran to succeed and this is what was studied here.

One way to reconnect the current situation with Schumpeter's entrepreneurship would be through the adoption of a corresponding education to foster it. Although it may not double the figures of the Iranian growth, women entrepreneurs might earn a lot besides and it may result in a growth regarding their condition in the society (Hanson, 2009). Schumpeter's entrepreneurial approach would contribute in changing women's condition in Iran by indirectly breaking some barriers they are currently facing by stimulating their performance. Especially cultural and social barriers such as society's perception, or gender discrimination/inequities. Women's entrepreneurship in Iran is in that sense strongly motivated by intrinsic reasons (Modarresi et al., 2016), notably the desire for achievement, independence or proving competency. In order to give more consistency regarding the outcomes of this study, some examples for future application were given as recommendations. They consist of educational solutions that could be a way to foster innovation, as Schumpeter conceived it, among women entrepreneurs in Iran.

The orientations given are consistent with the earlier studies (Karimi et al., 2010; Salamzadeh et al., 2014, 2016a; Guerrero et al., 2014) calling for a transformation of entrepreneurial education within universities. The Schumpeterian approach is also in line with the findings of Gibb (2002), and although Kirby (2004) does not identify this specific type of innovation he concludes business schools might not be the ideal place for teaching entre-

preneurship. Consistency with recent literature (Salamazadeh, 2017; Salamzadeh & Kawamorita, 2017) can be found too regarding a preferred start-up form of venturing. Further analysis can however, be done regarding the critical relationship between various entities (government, industry and universities) as Mok (2012) mentions.

Schumpeterian theories may as a result be applied on non-capitalistic systems. Iranian entrepreneurship environment is Islamic-shaped (Ratten et al., 2017) and this religious variable affects its characteristics, thus different from Schumpeter's capitalist system. This study is a Schumpeterian, classical view on the matter. It represents one potential explanation of the topic, and other explanations may lead to identical findings.

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