How They Get Stuck? Issues of Women Entrepreneurs: An Interpretive Structural Modeling Approach

Abdul Aziz Khan Niazi[1], Tehmina Fiaz Qazi[2], Rizwana Hameed[3], Abdul Basit[4]
University of Engineering and Technology Lahore[123], Institute of Science and Technology[4]
Corresponding author: azizniazi@uet.edu.pk

Aim of the study is to identify problems of women entrepreneurs, investigate interrelationships and impose hierarchy on them. Design of study consists of a discourse of literature review, data collection and analysis. ISM approach has been used to recognize, investigate and rank problems coupled with MICMAC analysis. Eleven problems of women entrepreneurship have been identified from literature. ISM depicts that lack of finance occupies bottom level and is the most critical problem, lack of skills/training, scarcity of working capital and socio-cultural barriers occupy middle of model therefore are moderate severe, whereas, all other occupy top of model hence deserve relatively last preference. MICMAC analysis disclosed that lack of finance is independent, lack of access to technology, lack of confidence is dependent, and all other problems are in linking quadrant and there is no autonomous factor. This is a seminal study having high value for policy makers, women entrepreneurs and society.
Keywords: Women, Entrepreneurs, ISM, Problems, Pakistan.

INTRODUCTION

Spheres of men and women do overlap and in the panorama of current corporate world, role of women in business is critical for societies because business environment has become extra ordinary competitive, dynamic and volatile. Successful embarking on the regime of women entrepreneurship is vital for countries because it is going to dictate the competitive advantage over rivals in future. One can hardly find a study that attempts to address the issues of women entrepreneurs in the context of urban formal sectors particularly in developing countries like Pakistan, however, some studies have been found concerning women entrepreneurs in Western world. Pakistani young female entrepreneurs face multitude of challenges ranging from financial instability to physical insecurity therefore it is vital to probe in the problems of women's role in economic activities. Most of the graduate women want to either have a secure job or to start her own business in order to overcome unemployment and to support her family, therefore, it is imperative to study obstacles of women entrepreneurial activities. Sustainable development goals give lead to gender development therefore international agencies are all out to provide financial support for achieving gender equality globally. Pakistan is also striving to alleviate poverty by way of improving the status and autonomy of women in society (Tahir, Kauser, Bury & Bhatti, 2018). Entrepreneurship provides financial sanctuary to women (Itani, Sidani & Baalbaki, 2011) with platform for assertiveness and accomplishment (Powell & Eddleston, 2013) and simultaneously empowering them as an individual (Jamali, 2009). Encouraging women entrepreneurship helps to boost the socio-economic growth of countries (Jamali, 2009; Verheul, Stel & Thurik, 2006). Environment has the impact on entrepreneurial behavior of the individuals (Welsh, Kaciak & Shamah, 2018). Even though the number count of female entrepreneurs is on rise worldwide yet it seems far less than then that of male counterparts (De Bruin, Brush & Welter, 2006; Verheul et al., 2006).

Women entrepreneurship has resulted into female empowerment and liberalization. The growing number of women entrepreneurships in developing countries has contributed a lot in overall household wellbeing and consumption (Minniti & Naudé, 2010). In the context of developing countries, women entrepreneurial ventures are more challenging due to resource constraints with little opportunities while facing unique challenges (Verheul et al., 2006). Gender partiality, family and work life balance along with male domination as part of societal norms pose unique challenges in developing countries. More attention has been paid to female entrepreneurs in developed countries but in developing country like Pakistan, it's been considered as an inherent right of male to set up a business that is why female entrepreneurs' number count is considerably less than male. As per the World Bank's "Doing Business Report 2016, Pakistan 's ranking has dropped from 138th to 140th out of 189 countries in this respect. Therefore, serious efforts are needed to create an entrepreneurial culture even at university levels to provide enabling environment to inculcate entrepreneurial spirit among the graduates in developing countries. Since such perspective of female entrepreneurship is ignored and exclusive policy making for female students has not been addressed at large. The under-study topic is aimed at making a significant contribution to entrepreneurial theory and practice with respect to female entrepreneurship: it elaborates the entrepreneurial literature while recognizing the difficulties and challenges being faced by the female entrepreneurs in Pakistan (Tahir et al., 2018). From the above representation it can fairly be deduced that there is sever need to investigate the problems of women entrepreneurship in context of Asian Pacific rim in general and Pakistan in particular. Rest of the paper is arranged as literature review, methodology, result & discussion and conclusion.

LITERATURE REVIEW

For last 200 years, entrepreneurship had been significant topic of the investigation (Bull & Willard, 1993). Wennekers and

Thurik (1999) asserted that entrepreneurship grabbed more attention since the last few decades. However, many countries still lack driving force and requisite financial resources to encourage it. Most of the work has been done on women entrepreneurship in context of developed countries, whereas, little literature is available on the phenomenon concerning developing countries attributed to insufficient regulations and inefficient systems (Kimosop, Korir & White, 2016). Some researchers have indicated that women faced different types of issues, unique to their social status (Kaplan, 1988), region or location of industry (Sundin & Holmquist, 1988), and their roles in businesses (Gofee and Scase 1985). Castaño, Méndez and Galind (2015) argued that process of starting a business is highly dependent on combination of personal as well as environmental factors that motivate the individuals to take initiative. In developed countries like Canada and South Korea the studies have been carried out even to assess the physical infrastructure for female workers like availability of rest rooms etc. (Huh, Lee, Park & Park, 2018). Current trends of women entrepreneurship in developing countries need more attention to understand how unsuitable environments affect the success of women-owned enterprises (Welsh et al., 2018). Women are not being promoted at the same rate as that of men (Clevenger & Singh, 2013). It would be helpful to give more public visibility to the success stories of the women entrepreneurship and creating more role models in male dominated societies (Biernacka, Queder & Kressel, 2018). Although South Asian women are heavily involved in entrepreneurship (Dhaliwal, 1998), women in South Asian region are far behind than men as far as even basic human rights are concerned. Still they participate with men on an equal footing in business activities. Although, female SME owners work under the same regulatory regime and organizational context as their male counterparts, gender bias, however, limits women-owned small and medium enterprises access to credit facilities. Access to finance has popped up as the major barrier to growth and development for women entrepreneurs (Welsh, Kaciak & Thongpapanl, 2016). Women borrowers face additional barriers to become more innovative and risk-taking because they tend to be less risk taking in spite of being more dependent on family support (Dutta & Banerjee, 2018). Resultantly, their heavy reliance on non-conventional sources for working capital of finance continues. Contemporary research shows that seventy three percent (73%) of women entrepreneurs in Pakistan used personal savings as a major source of finance, on the other hand, only four percent (4%) of women entrepreneurs have access to formal sources (Goheer, 2003).

Women constitute almost half of the total population of Pakistan (Pakistan Bureau of Statistics [PBS], 2017). Women are instrumental for the fulfillment of the sustainable developmental goals of the economy by being part of agrarian work as "care economy". The need to better acknowledge women's contribution in the national, regional or global economy, has created urge among the researchers to readdress issues and challenges posed to woman entrepreneurs (Nassif, Andreassi & Tonelli 2016). In Pakistan female entrepreneurs are fewer and one of the major reasons is the male domination, among rest of the societal patterns, which inhibits the women entrepreneurs to grow further. Azam Roomi and Harrison (2010) analyzed that in the context of Pakistan, besides parochial societal patterns, the barriers may also include lack of education and training for developing required skills and capabilities among female entrepreneurs. Pakistani women in some cases have gained financial empowerment leading to social empowerment in some dimensions (Tahir et al., 2018). Young Pakistani female entrepreneurs are facing many challenges and among all, financial instability is of core value. Fewer financial resources also effect marketing and sales practices too (Khudadad, Sultana & Khan, 2013). Initially the young female entrepreneurs rely on self-generated finances for early startups (Welsh et al., 2016). Though the financial institutions like public sector banks offer loans but such offers are subject to the condition and state of the business. Usually banks offer credits once the startups get established and have a good track record of returns. Getting loans from banks becomes exceedingly difficult at times. Lack of finances also leads to maintain low inventory in terms of raw material and poor promotions (Dutta & Banerjee, 2018).

Family support is essential for the success of the business as part of social cultural. This can be both blessing and a barrier to the startup of women initiatives. Lack of family support lowers the female entrepreneur's confidence, restricts its mobility and has demotivating affect for doing business. In a male dominated society like Pakistan, females usually don't have the decision-making authority and assume subordinate positions throughout their lives even from schooling till their marriages. In some parts of the country females don't even qualify for the right of the property. Such low confidence level leads to poor risk bearing ability as she has always been protected by the male family members (Durrani & Halai, 2018). In addition, she never takes decision of her choice and always needs approval from the family and thus lacks risk bearing ability. There is a multitude of regulatory requirements that hinders the women entrepreneurs because of being small in proportion. There is yet another problem faced by women entrepreneurs that literature has spelled out like barriers are even more significant for women owned enterprises than that of male owned of same size (Chadwick & Dawson, 2018). Females by virtue of their approach tend to better solve the problems they faced during execution of initiatives (Hasunuma, 2019). Being conscious of the hardships, that they are likely to face, as result of some regulatory requirement which cause them to take lesser risks and sometimes even compromise what can be done otherwise. Adhikari, Agrawal and Malm (2019) asserts that the women not taking the risk, choose to work for firms that try to avoid lawsuits. Female entrepreneurs mostly lack management skills and work experience which is a prerequisite for running a business. Lack of training and specialized skills result into poor planning, documentation and client relationship. Personal freedom, security, and satisfaction are considered to be the main objectives of women entrepreneurship in Pakistan (Shabbir & Greorio, 1996). Similarly, it is call of the day to promote growth-oriented women entrepreneurs, rather than lifestyle entrepreneurs. Pakistani female SMEs face three times more

credit constrained than their male counterparts (Wellalage & Locke, 2017). Cultural and social norms, traditions, poverty, religious grounds, illiteracy, public awareness and high fertility rate all contribute to the powerlessness of women in developing countries. To sum it up one can find following common problems of women entrepreneurs in literature (Bharthvajan, 2014).

Table 1: List of Problems of Women Entrepreneurs

Sr. No.	Problem	Legends
1	Lack of Finance	γ_1
2	Admin & Regulatory Problems	γ_2
3	Lack of Skills/Training	γ_3
4	Marketing Issue	γ_4
5	Lack of Access to Technology	γ_5
6	Lack of Confidence	γ_6
7	Scarcity of Working Capital	γ_7
8	Limited Mobility	γ_8
9	Male Dominated Society	γ_9
10	Socio-Cultural Barriers	γ_{10}
11	Low Risk Taking Ability	γ_{11}

This list of problems was presented to panel of experts to elicit the opinion regarding relevance, importance and inclusion of these problems in development of the structural model of the issue. The panel was agreeable on the problems of women entrepreneurship listed in Table 1.

METHODOLOGY

This is a cross-sectional qualitative descriptive study based on primary data collected in field setting. Overall design of the study consists of a discourse of literature review, data collection, structural modeling and analysis. Standard Interpretive Structural Modeling (ISM) approach has been used to recognize, investigate and rank the problems (Warfield, 1974). A matrices type (sort of modified approval voting) questionnaire suitable for ISM was used to elicit data from experts. Matriced' Impacts Croise's Multiplication Appliquée a UN Classement (MICMAC) analysis has been used to classify the problems (as autonomous, dependent, linking and independent) which also displays driving and dependence power of the factors on continuum (Godet, 1986). The study uses opinion of a medium sized heterogeneous panel of women experts from the field (Clayton, 1997; Khan & Khan, 2013). A panel of 5-10 non-random heterogeneous group with expertise on a particular topic but from different social, professional stratifications is sufficient to get insight on the issue (Delbecq, Van De Ven & Gustafson, 1975; Khan & Khan, 2013). The panel consists of fifteen women experts which includes 3 experts from academics, 3 entrepreneurs, 3 from financial institutions, 4 from industry, 1 from government agency on women development and 1 expert from women chamber of commerce and industries. Criteria to include the experts on panel were at least ten years of experience relevant to women entrepreneurs.

Qualifying experts were approached individually and were briefed about the context. They were first asked to validate the list of factors that were identified from the literature and they were then asked to fill the questionnaire. The questionnaire has three sections: i) first section was about introduction to the topic and their consent to publish their responses anonymously, ii) second section asked about their personal profile and experience and iii) third section listed problems of women entrepreneurs in

rows as well as columns to which they were requested to indicate the direction of relationship (i.e. V: $i \rightarrow j$, A: $i \leftarrow j$, X: $i \leftrightarrow j$ and O: $i \nleftrightarrow j$) between each pair of factors in accordance with norms of ISM (Warfield, 1973). The experts were apprised to vote for alternatives to establish direction of the relationship between each pair of factors. Their votes were entered into spreadsheet of MS Excel in order to determine the elected alternative.

Interpretive Structure Modeling: ISM progressed stepwise as follows (Attri, Dev & Sharma, 2013):

Step 1: Identification of the problems of women entrepreneurs. This step has already been performed in literature review.

Step 2: Establish paired contextual relationships among problems. Paired contextual relationships (where contextual relationship = leads to) have been determined by way of approval voting after obtaining input from experts on four alternatives as mentioned above. Accordingly, pair-wise relationships were determined as Table 2

Table 2: **Approval Vote to Alternative**

	γ_1	γ_2	γ_3	γ_4	γ_5	γ_6	γ_7	γ_8	γ_9	γ_{10}	γ_{11}
γ_1		V	V	V	V	O	X	O	O	O	V
γ_2			A	X	O	O	A	X	O	X	V
γ_3				V	V	V	X	V	O	X	A
γ_4					V	A	A	A	A	A	X
γ_5						O	A	X	O	O	O
γ_6							O	X	A	A	A
γ_7								V	O	O	X
γ_8									X	A	X
γ_9										X	X
γ_{10}											A
γ_{11}											

Step 3: Prepare Structural Self-Interaction Matrix (SSIM) of problem. SSIM represents relationship between pair of problems (rules given below):

- For (i, j) entry V, corresponding inferred (j, i) entry is A
- For (i, j) entry A, corresponding inferred (j, i) entry is V
- For (i, j) entry O, corresponding inferred (j, i) entry is O
- For (i, j) entry X, corresponding inferred (j, i) entry is X

Therefore, SSIM emerged as follows:

Table 3: Structured Self Interaction Matrix (SSIM)

	γ_1	γ_2	γ_3	γ_4	γ_5	γ_6	γ_7	γ_8	γ_9	γ_{10}	γ_{11}
γ_1		V	V	V	V	O	X	O	O	O	V
γ_2	A		A	X	O	O	A	X	O	X	V
γ_3	A	V		V	V	V	X	V	O	X	A
γ_4	A	X	A		V	A	A	A	A	A	X
γ_5	A	O	A	A		O	A	X	O	O	O
γ_6	O	O	A	V	O		O	X	A	A	A
γ_7	X	V	X	V	V	O		V	O	O	X
γ_8	O	X	A	V	X	X	A		X	A	X
γ_9	O	O	O	V	O	V	O	X		X	X
γ_{10}	O	X	X	V	O	V	O	V	X		A
γ_{11}	A	A	V	X	O	V	X	X	X	V	

75

Step 4: Prepare initial reachability matrix. Matrix represented in Table 3 above is converted into Initial Reachability Matrix applying the rules given below:

- For (*i, j*) entry *V* corresponding entry into initial reachability matrix (*i, j*) is *1* and (*j, i*) is *0*.
- For (*i, j*) entry *A* corresponding entry into initial reachability matrix (*i, j*) is *0* and (*j, i*) is *1*.
- For (*i, j*) entry *O* corresponding entry into initial reachability matrix (*i, j*) is *0* and (*j, i*) is *0*.
- For (*i, j*) entry *X* corresponding entry into initial reachability matrix (*i, j*) is *1* and (*j, i*) is *1*.

Therefore, Initial Reachability Matrix emerged as Table 3

Table 4: Initial Reachability Matrix

	γ_1	γ_2	γ_3	γ_4	γ_5	γ_6	γ_7	γ_8	γ_9	γ_{10}	γ_{11}	Driving Power
γ_1	1	1	1	1	1	0	1	0	0	0	0	7
γ_2	0	1	0	0	0	0	0	0	1	1	1	5
γ_3	0	1	1	1	1	1	1	1	0	1	0	8
γ_4	0	1	0	1	1	0	0	0	0	0	1	4
γ_5	0	0	0	0	1	0	0	1	0	0	0	2
γ_6	0	0	0	1	0	1	0	1	0	0	0	3
γ_7	1	1	1	1	1	0	1	1	0	0	1	8
γ_8	0	1	0	1	1	1	0	1	1	0	1	7
γ_9	0	0	0	1	0	1	0	1	1	1	1	6
γ_{10}	0	1	1	1	0	1	0	1	1	1	0	7
γ_{11}	0	0	1	1	0	1	1	1	1	1	1	8
Dependence Power	2	7	5	10	6	6	4	9	4	5	7	

Driving power is calculated by counting total number of *1s* in each row whereas dependence power is calculated by counting number of *1s* in each column.

Step 5: Removing the transitivity from reachability matrix. The initial reachability matrix as given in Table 4 is converted into final reachability matrix after removing transitivity using standard procedure of ISM, therefore, some of *0s* are converted into *1* marked as *1** to keep identity.

Table 5: Final Reachability Matrix

	γ_1	γ_2	γ_3	γ_4	γ_5	γ_6	γ_7	γ_8	γ_9	γ_{10}	γ_{11}	Driving Power
γ_1	1	1	1	1	1	1*	1	1*	1*	1*	1	11
γ_2	0	1	1*	1	1*	1*	1*	1	1*	1	1	10
γ_3	1*	1	1	1	1	1	1	1	1*	1	1*	11
γ_4	0	1	1*	1	1	1*	1*	1*	1*	1*	1	10
γ_5	0	1*	0	1*	1	1*	0	1	1*	0	1*	7
γ_6	0	1*	0	1	1*	1	0	1	1*	0	1*	7
γ_7	1	1	1	1	1	1*	1	1	1*	1*	1	11
γ_8	0	1	1*	1	1	1	1*	1	1	1*	1	10
γ_9	0	1*	1*	1	1*	1	1*	1	1	1	1	10
γ_{10}	0	1	1	1	1*	1	1*	1	1	1	1*	10
γ_{11}	1*	1*	1	1	1*	1	1	1	1	1	1	11
Dependence Power	4	11	9	11	11	11	9	11	11	9	11	

Step 6: Partitioning of initial reachability matrix at different level. From reachability matrix reachability, antecedent and intersection sets for each unique problem have been calculated. Reachability set means i) factor itself and ii) other factors to which it affects, whereas, antecedent set means: i) factor itself and ii) other factors which affect it. Intersection set is created when factor in reachability set is present in the antecedent set. The levels are decided on the bases of intersections sets being identical to reachability sets. Once first level factors are identified, they are eliminated from reachability and antecedents to move on to further iterations (Table 6). The procedure continues till final level is identified (Table 7-8).

Table 6: Iteration I

Problem	Reachability Set	Antecedence Set	Intersection Set	Level
1	1,2,3,4,5,6,7,8,9,10,11	1,3,7,11	1,3,7,11	
2	2,3,4,5,6,7,8,9,10,11	1,2,3,4,5,6,7,8,9,10,11	2,3,4,5,6,7,8,9,10,11	I
3	1,2,3,4,5,6,7,8,9,10,11	1,2,3,4,7,8,9,10,11	1,2,3,4,7,8,9,10,11	
4	2,3,4,5,6,7,8,9,10,11	1,2,3,4,5,6,7,8,9,10,11	2,3,4,5,6,7,8,9,10,11	I
5	2,4,5,6,8,9,11	1,2,3,4,5,6,7,8,9,10,11	2,4,5,6,8,9,11	I
6	2,4,5,6,8,9,11	1,2,3,4,5,6,7,8,9,10,11	2,4,5,6,8,9,11	I
7	1,2,3,4,5,6,7,8,9,10,11	1,2,3,4,7,8,9,10,11	1,2,3,4,7,8,9,10,11	
8	2,3,4,5,6,7,8,9,10,11	1,2,3,4,5,6,7,8,9,10,11	2,3,4,5,6,7,8,9,10,11	I
9	2,3,4,5,6,7,8,9,10,11	1,2,3,4,5,6,7,8,9,10,11	2,3,4,5,6,7,8,9,10,11	I
10	2,3,4,5,6,7,8,9,10,11	1,2,3,4,7,8,9,10,11	2,3,4,7,8,9,10,11	
11	1,2,3,4,5,6,7,8,9,10,11	1,2,3,4,5,6,7,8,9,10,11	1,2,3,4,5,6,7,8,9,10,11	I

Following is iteration II.

Table 7: Iteration II

Problems	Reachability Set	Antecedence Set	Intersection Set	Level
1	1,3,7,10	1,3,7	1,3,7	
3	1,3,7,10	1,3,7,10	1,3,7,10	II
7	1,3,7,10	1,3,7,10	1,3,7,10	II
10	3,7,10	1,3,7,10	3,7,10	II

Following is iteration III.

Table 8: Iteration I

Problem	Reachability Set	Antecedence Set	Intersection Set	Level
1	1	1	1	III

Following is summary of iterations.

Table 9: Composite Result of Iterations

Factors	Reachability Set	Antecedence Set	Intersection Set	Level
1	1	1	1	III
2	2,3,4,5,6,7,8,9,10,11	1,2,3,4,5,6,7,8,9,10,11	2,3,4,5,6,7,8,9,10,11	I
3	1,3,7,10	1,3,7,10	1,3,7,10	II
4	2,3,4,5,6,7,8,9,10,11	1,2,3,4,5,6,7,8,9,10,11	2,3,4,5,6,7,8,9,10,11	I
5	2,4,5,6,8,9,11	1,2,3,4,5,6,7,8,9,10,11	2,4,5,6,8,9,11	I
6	2,4,5,6,8,9,11	1,2,3,4,5,6,7,8,9,10,11	2,4,5,6,8,9,11	I
7	1,3,7,10	1,3,7,10	1,3,7,10	II
8	2,3,4,5,6,7,8,9,10,11	1,2,3,4,5,6,7,8,9,10,11	2,3,4,5,6,7,8,9,10,11	I
9	2,3,4,5,6,7,8,9,10,11	1,2,3,4,5,6,7,8,9,10,11	2,3,4,5,6,7,8,9,10,11	I
10	3,7,10	1,3,7,10	3,7,10	II
11	1,2,3,4,5,6,7,8,9,10,11	1,2,3,4,5,6,7,8,9,10,11	1,2,3,4,5,6,7,8,9,10,11	I

Step 7: Building interpretive structure model. The ISM model has been developed from levels identified through iterations and reachability matrix. The *Figure 1* depicts the ISM model. Lack of finance occupies bottom level. Lack of skills/training, scarcity of working capital and socio-cultural barriers occupy middle of the model. Admin & regulatory problems, marketing issues, lack of access to technology, lack of confidence, limited mobility, male dominated society and low risk bearing ability occupy top of the model. Relationships among factors have been developed with the help of reachability matrix.
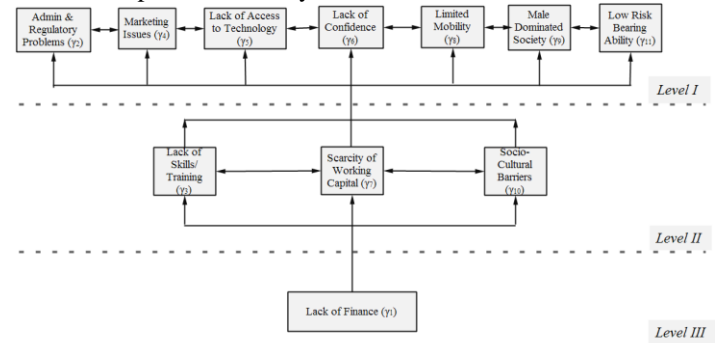

Figure 1: Interpretive Structural Model (ISM)

Lack of finance occupies bottom of the model i.e. Level III, therefore, it is the most critical barriers in women entrepreneurship and requires top priority in policy making. Lack of skills/training, scarcity of working capital and socio-cultural barriers occupy middle of the model i.e. Level II. These are moderate severs barriers and they are very critical to address the issue of women entrepreneurship. In literature, scarcity of

working capital and lack of finance have, sometimes, been used interchangeably and confusingly but in this study the experts identified them and ranked them as distinct concepts from each other. Accordingly, they occupy different positions in the model. Rest of the barriers occupy top of the model (Level I), hence, they are relatively less critical and driven by bottom level.

Step 8: MICMAC analysis. MICMAC analysis investigates driving and dependence power of factors (Figure 2).

Autonomous: Factors having weak dependence and driving power are known as autonomous. They qualify to be eliminated from model (Godet, 1986). In this research study there is no such factor in the model as autonomous cluster does not contain any factor. From this fact it is inferred that all the barriers significantly contribute to the phenomenon under study

Dependent: The factors having strong dependence and weak driving power are known as dependent factors (Godet, 1986). They are highly dependent on other factors. The quadrant of independent factors in this study contains problems of access to technology and lack of confidence.

Linkage: The factors having strong dependence and strong driving power are known as linking. They are unstable and cause of changes in system. Small change in these factors largely affects other factors and have feedback effect on themselves as well (Godet, 1986). The study found six factors in this quadrant of linkage namely admin & regulatory problems, lack of skills/training, marketing issues, scarcity of working capital, limited mobility and low risk bearing ability.
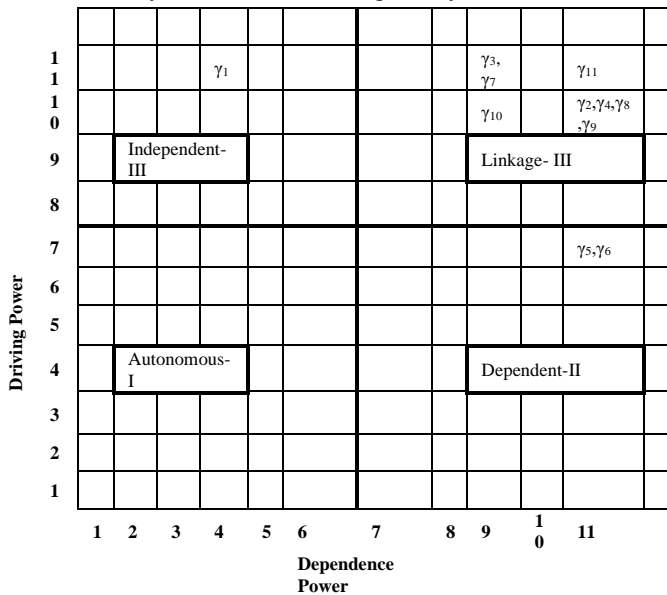

Figure 2: Driving-Dependence Diagram

Independent: The factors having strong driving and weak dependence power are known as independent (Godet, 1986). They have vital importance for the system. The study could find only one such factor i.e. lack of finance.

RESULT AND DISCUSSION

Study identified no autonomous variable, one independent variable (γ_1), eight linkage variables (γ_2, γ_3, γ_4, γ_7 γ_8, γ_9, γ_{10} and γ_{11}) and two dependent variables i.e. γ_5 and γ_6. Absence of autonomous variables means that no irrelevant factor was found in the model; rest of the factors either influence other factors or are influenced by others. Lack of Finance (γ_1) has been identified as independent factor and is at the bottom of hierarchy thus qualifies to be the most important factor meaning thereby that lack of finance is the major problem faced by women entrepreneurs in the country. Factors placed in category of linkage variables have high driving power and high dependence power which means that the factors admin & regulatory problems, lack of skills/training, marketing issues, scarcity of working capital, limited mobility, male dominated society, socio-cultural barriers and low risk bearing ability are important factors to be considered by the policy makers as change in any of these factors largely changes other factors and at the same time feedback effect on themselves as well. Lack of access to technology and lack of confidence have been identified to be the dependent factors which have high dependence power but low driving power thus can be understood as enabler for growth of women entrepreneurship. The authors explored the research databases namely Elsevier/ScienceDirect, Emerald, Taylor & Francis, Wiley etc. and could not find any study directly on barriers/problem of women entrepreneurship in general and particular in context of Pakistan using ISM. Therefore, this study is considered as a seminal study using a distinct technique of investigation for this topic of exceptional importance. However, results of the study are aligned with general literature of entrepreneurship. ISM model (the simplified form of complex relations among variables) of the problems of women entrepreneurship is a novel contribution to the literature concerning women entrepreneurship. Summary of the results is represented as Table 10.

Table 10: Comparative Summary of Results of Literature, MICMAC and ISM

	Result of Literature Review		Results of MICMAC Analysis				ISM Resu	Comments
N	Lege	Problem	Drivi	Depend	Effective	Cluster	Leve	
1	γ_1	*Lack of Finance*	7	2	5	*Indepen*	III	*Key factor*
2	γ_2	*Admin & Regulatory Problems*	5	7	-2	Linkage	I	
3	γ_3	*Lack of Skills/Training*	8	5	3	Linkage	II	Mediator
4	γ_4	*Marketing Issue*	4	10	-6	Linkage	I	
5	γ_5	*Lack of Access to Technology*	2	6	-4	Depend	I	
6	γ_6	*Lack of Confidence*	3	6	-3	Depend	I	
7	γ_7	*Scarcity of Working Capital*	8	4	4	Linkage	II	Mediator

8	γ_8	*Limited Mobility*	7	9	-2	Linkage	I	
9	γ_9	*Male Dominated Society*	6	4	2	Linkage	I	
10	γ_{10}	*Socio-Cultural Barriers*	7	5	2	Linkage	II	Mediator
11	γ_{11}	*Low Risk-Taking Ability*	8	7	1	Linkage	I	

Factor number one marked as bold and italic in Table 10 is the key factor as revealed by both of the structural methodologies. This result seems to be quite aligned with contemporary literature and also seems to be valid in terms of simple logic.

CONCLUSION

Aim of this research was to identify the problems of women entrepreneurs, investigate interrelationships among them and impose hierarchy on the factors so identified for policy preferences. The study used opinion of a medium size heterogeneous panel of women experts from the field. The panel consisted of fifteen women experts. Total eleven problems of women entrepreneurship have been identified from literature which were ratified by the experts. Lack of finance occupies bottom level and is the most critical problem. ISM depicts that lack of skills/ training, scarcity of working capital and socio-cultural barriers occupy middle of the model therefore are of moderate severity, whereas, admin & regulatory problems, marketing issues, lack of access to technology, lack of confidence, limited mobility, male dominated society and low risk bearing ability occupy top of the model hence gain relatively lesser preference. Accordingly, analysis and classification of dependence and driving also revealed that lack of finance is independent, lack of access to technology and lack of confidence are dependent while all other factors are linking. However, no autonomous factor was found in the model. The model was represented to the experts for logical and conceptual review and was found consistent. The study has ensued in recognition of significant problems of women entrepreneurs and in development of insights for prioritizing them to deal with the problems at policy levels. The study has purposively analyzed the issue in context of Pakistan; however, the results are fairly generalizable to rest of the world. It has novel theoretical, practical and conceptual contribution by way of ISM model (Figure 1), driving-dependence power diagram (Figure 2) and underpinning multitude of inter-variable relationships among problems of women entrepreneurs. Since women entrepreneurship has high value in today's complex and demanding family structures. Insights provided by this study have vibrant significance for policy makers, current and potential women entrepreneurs and the society at large.

References

Adhikari, B. K., Agrawal, A., & Malm, J. (2019). Do women managers keep firms out of trouble? Evidence from corporate litigation and policies. *Journal of Accounting and Economics*, *67*(1), 202-225.

Attri, R., Dev, N., & Sharma, V. (2013). Interpretive Structural Modelling (ISM) approach: an overview. *Research Journal of Management Sciences*, *2319*, 1171.

Azam Roomi, M., & Harrison, P. (2010). Behind the veil: women-only entrepreneurship training in Pakistan. *International Journal of Gender and Entrepreneurship*, 2(2), 150-172.

Bharthvajan, R. (2014). Women Entrepreneurs & Problems of Women Entrepreneurs. *International Journal of Innovative Research in Science, Engineering and Technology*, 3(9), 3.

Biernacka, A., Abu-Rabia-Queder, S., & Kressel, G. M. (2018). The connective strategies of Bedouin women entrepreneurs in the Negev. *Journal of Arid Environments*, *149*, 62-72.

Bull, I., & Willard, G. E. (1993). Towards a theory of entrepreneurship. *Journal of Business Venturing*, 8(3), 183-195.

Castaño, M. S., Méndez, M. T., & Galindo, M. Á. (2015). The effect of social, cultural, and economic factors on entrepreneurship. *Journal of Business Research, 68*(7), 1496-1500.

Chadwick, I. C., & Dawson, A. (2018). Women leaders and firm performance in family businesses: An examination of financial and nonfinancial outcomes. *Journal of family business strategy*, *9*(4), 238-249.

Clayton, M. J. (1997). Delphi: a technique to harness expert opinion for critical decision-making tasks in education. *Educational Psychology*, *17*(4), 373-386.

Clevenger, L., & Singh, N. (2013). Exploring barriers that lead to the glass ceiling effect for women in the US hospitality industry. *Journal of Human Resources in Hospitality & Tourism*, *12*(4), 376-399.

De Bruin, A., Brush, C. G., & Welter, F. (2006). Introduction to the special issue: Towards building cumulative knowledge on women's entrepreneurship. *Entrepreneurship Theory and Practice, 30*(5), 585-593.

Delbecq, A. L., Van De Ven, A. H., & Gustafson, H. (1975). Group Techniques for Program Planning. *Glenview, III.: Scott Foresman 83*.

Dhaliwal, S. (1998, September). Silent contributors: Asian female entrepreneurs and women in business. In *Women's Studies International Forum, 21*(5), 463-474.

Durrani, N., & Halai, A. (2018). Dynamics of gender justice, conflict and social cohesion: Analyzing educational reforms in Pakistan. *International Journal of Educational Development*, *61*, 27-39.

Dutta, A., & Banerjee, S. (2018). Does microfinance impede sustainable entrepreneurial initiatives among women borrowers? Evidence from rural Bangladesh. *Journal of Rural Studies*, *60*, 70-81.

Godet, M. (1986). Introduction to la prospective: Seven key ideas and one scenario method. *futures, 18*(2), 134-157.

Goffee, R., and Scase, R. 1985. *Women in Charge*. London: George Allen & Unwin.

Goheer, N. A. (2003). *Women entrepreneurs in Pakistan* (pp. 1-43). Geneva: International Labour Organization.

Hasunuma, L. (2019). Beyond formal representation: Case studies of women's participation in civil society in Japan. In *Women's Studies International Forum, 72*, 1-8.

Huh, W. T., Lee, J., Park, H., & Park, K. S. (2018). The potty parity problem: Towards gender equality at restrooms in business facilities. *Socio-Economic Planning Sciences*.

Itani, H., Sidani, Y., & Baalbaki, I. (2011). United Arab Emirates female entrepreneurs: Motivations and frustrations. *Equality, Diversity and Inclusion: An International Journal*, *30*(5), 409-424.

Jamali, D. (2009). Constraints and opportunities facing women entrepreneurs in developing countries: A relational perspective. *Gender in Management: An International Journal*, *24*(4), 232-251.

Kaplan, E. 1988. Women entrepreneurs: Constructing a framework to examine venture success and failure. *Frontiers of Entrepreneurship Research*. 643

Khan, S., & Khan, M. S. A, (2013). Conceptualized model of green IT purchasing enablers-An application of Delphi technique and Interpretive Structural Model. Business Sciences International Research Journal, 1(1), 24-37.

Khudadad, N., Sultana, N., & Khan, F. F. (2013). Women selling and promoting energy efficient products in Northern Pakistan. *Renewable Energy*, *49*, 271-274.

Kimosop, J., Korir, M., & White, M. (2016). The moderating effect of demographic characteristics on the relationship between strategic capabilities and firm performance in women-owned entrepreneurial ventures in Nairobi, Kenya. *Canadian Journal of Administrative Sciences, 33*(3), 242-256.

Minniti, M., & Naudé, W. (2010). What do we know about the patterns and determinants of female entrepreneurship across countries? 277-293.

Nassif, V. M. J., Andreassi, T., & Tonelli, M. J. (2016). Critical incidents among women entrepreneurs: Personal and professional issues. *Revista de Administração (São Paulo)*, *51*(2), 212-224.

Pakistan Bureau of Statistics, (2017). *Information for the Public*. Retrieved from: http://www.pbs.gov.pk/content/population-sex-sex-ratio-average-household-size-and-growth-rate

Powell, G., & Eddleston, K. (2013). Linking family-to-business enrichment and support to entrepreneurial success: Do female and male entrepreneurs experience different outcomes? *Journal of Business Venturing*, *28*(2), 261-280.

Shabbir, A., & Di Gregorio, S. (1996). An examination of the relationship between women's personal goals and structural factors influencing their decision to start a business: The case of Pakistan. *Journal of Business Venturing*, *11*(6), 507-529.

Sundin, E., & Holmquist, C. 1991. *The growth of women entrepreneurship - Push or pull factors*? In L.G. Davies and A.A. Gibb, eds., Recent Research ill Entrepreneurship. Aldershot, U.K.: Gower.

Tahir, M. W., Kauser, R., Bury, M., & Bhatti, J. S. (2018). Individually-led'or 'female-male partnership' models for entrepreneurship with the BISP support: The story of women's financial and social empowerment from Pakistan. In *Women's Studies International Forum 68*, 1-10.

Verheul, I., Stel, A. V., & Thurik, R. (2006). Explaining female and male entrepreneurship at the country level. *Entrepreneurship and regional development, 18*(2), 151-183.

Warfield, J. N. (1973). Binary matrices in system modeling. *IEEE Transactions on Systems, Man, and Cybernetics*, *5*, 441-449.

Warfield, J. N. (1974). Developing subsystem matrices in structural modeling. *IEEE Transactions on Systems, Man, and Cybernetics,* (1)*,* 74-80.

Wellalage, N., & Locke, S. (2017). Access to credit by SMEs in South Asia: do women entrepreneurs face discrimination. *Research in International Business and Finance*, *41*, 336-346.

Welsh, D. H., Kaciak, E., & Thongpapanl, N. (2016). Influence of stages of economic development on women entrepreneurs' startups. *Journal of Business Research, 69*(11), 4933-4940.

Welsh, D. H., Kaciak, E., & Shamah, R. (2018). Determinants of women entrepreneurs' firm performance in a hostile environment. *Journal of Business Research*, *88*, 481-491.

Wennekers, S., & Thurik, R. (1999). Linking entrepreneurship and economic growth. *Small business economics, 13*(1), 27-56.