

## Gender Differences of Social Networking in SME's: An Explanatory Study of Pakistan

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**Abstract:** The purpose of this paper is to examine the gender differences in the social networks of small and medium enterprises of Pakistan. For this purpose data has been collected through survey questionnaire. The questionnaire were distributed among male and female entrepreneurs of different industries through probability random sampling. 200 questionnaires were distributed in the different industries of Lahore, Pakistan and 163 valid questionnaires were received at a response rate of 81.5%. SPSS 21.0 is used in which independent sample t-test is used in order to examine the gender differences in social network. Findings of this study shows that there is no difference between gender relating to network size, network activity, network centrality and network density.

**Keywords:** Network size, Network Activity, Network Centrality and Network Density.

### 1. Introduction

Social networks are important for getting access to resources which are essential for entrepreneurial activity (Antoncic & Hoang, 2003; Davidsson and Honig, 2003; De Carolis et al., 2009; Mosey and Wright 2007). According to Aldrich & Zimmer (1986) entrepreneurs through networks can build their contacts with external environment and also get an access to useful information of essential business opportunities and of necessary resources required for their business developments.

Entrepreneurship is important for the economic development of a country, as it helps in generating the employment opportunities. In Pakistan more than 50% of the population consists of women and only 16% of that population is participating in entrepreneurship (Anjum et al., 2012). Such a smaller fraction is playing role in economic development of country; the reason behind it is the restricted

access to women to necessary opportunities and resources. Women are facing many challenges including socio-cultural factors like "purdah" or "honor" which impose different restrictions on women regarding their mobility or to work with men (Ahmad & Naimat, 2011; Roomi & Parrott, 2008; Gregorio and Shabbir, 1996).

In addition to that in a patriarchal society like Pakistan; roles of women are bound to caretaker and to giving birth to children (Ahmad & Naimat, 2011; Goheer, 2003; Roomi & Parrott, 2008). As a result in Pakistan mostly women are engaged in small-scale businesses, usually in services sector. According to Goheer (2003) almost 54% women are engaged in services sector, 19% are in retail sector and 27% are in manufacturing sector. This means that a larger segment of women entrepreneurs are engaged in services sector (Ahmad & Naimat, 2011) where women have the least interaction with males.

According to Antoncic & Hoang (2003) social networks are important for getting access to resources which are essential for entrepreneurial activity. Studies showed that through networks, entrepreneurs receive several resources including tangible like capital resources or intangible like emotional support or information etc. (Aldrich et al., 1987; Hybels and Lumpkin, 1999).

As per literature, previous studies have been focused on examining the cause & effect of social networks (Antoncic & Hoang, 2003; Hu et al., 2011), while little attention has been given to make a comparison between the genders regarding use of social networks (Surin et al., 2015). The previous study conducted in Malaysia, investigated the difference between male and female entrepreneurs in terms of network size, activity and density (Surin et al., 2015).

This study contributes to the literature by examining the differences in male and female social networks in a difficult contextual setting like Pakistan. This study helps in giving attention to research in social network in Pakistan as a result structural perspective will be highlighted in understanding the phenomena of social network. In addition to that this study will encourage others to enter in entrepreneurship.

## 2. Literature review

Network has been defined as “a social structure, comprised of a set of relationships between a set of individuals, which is viewed as being greater than the sum of its parts” (Carter & Evans, 2006). Borgatti and Foster (2003) also defined network as “a set of actors connected by a set of ties”. Network ties have been explained as “the relationship between actors within a network” (Antoncic and Hoang, 2003; Borgatti and Foster, 2003).

The research studies of networks and their importance for small and medium enterprises is now not a novel thing. DeWine & Casbolt (1983), Lipnack and Stamps (1982) started their studies in this domain in an era of 1980's while this research has been further done by Aldrich et al. (1989), Brereton & Jones (2002). Entrepreneurial process has been defined as “a complex and pluralistic pattern of interactions, exchanges, and relationships between actors” (Jones-Evans et al., 1999). Brereton and Jones

(2002) mentioned two main types of networks including formal and informal. Formal networks is defined as a relationship with some financial institutions including banks or professional organization such as “Chamber of Commerce”, moreover it also includes interactions with professional bodies like accountants or lawyers (Sharafizad, 2014). On the other hand, informal or social networks consists of family, business contacts, friends and relatives (Brereton and Jones, 2002; Sharafizad, 2014). Both formal and social networks are important for business development (Brereton and Jones, 2002) however the focus of this study is on social networks.

### 2.1 Social network theory

According to Hatala (2006) social network theory usually helps in determining the social structures for functioning of individuals within it. It is mostly used for determining the different aspects of relationships between individuals for variety of tasks and in diverse situations (Jones, 2009; Wicks, 2004). Baines and Chell (2000) mentioned that social networks are built upon trust and mutual support. Chatman (1992) defined social networks as “a set of personal contacts through which the individual maintains his or her social identity while giving and receiving emotional support, material aid, services, information, and social contacts”. These social contacts include family, friends, relatives and business contacts (Chatman, 1992). Neergaard et al. (2005) found that social contacts are viewed as “nodes” and “ties”.

According to Borgatti (2009) & Jones (2009) “nodes are the individual actors within the network and ties are the relationship between these actors”. They mentioned in their studies that network structure can be measured by the extent of interactions between actors in the network. In studies of social network, the structural perspective is espoused when measuring the networks. Structural perspective “included constructs related to the location of actors within the network relative to one another (Biswas and Prajapati, 2011; Marval and Sullivan, 2011). According to them (Who?), this perspective investigates the relationships which are consisted of network size, density, activity, centrality and virtual intimacy of ties. Another research study found 4 dimensions of structural

perspective including density, range, reachability and anchorage (Boissevain and Mitchell et, 1973). This paper is based on structural perspective for measuring the differences between male and female in terms of network size, activity, density and centrality

### **2.2 Network size**

As per network literature, it is found that network size is viewed as a significant measure of business performance. As Hansen (1995) showed in his study that network size has a positive relation with business performance. Studies conducted by Fischer (1982) and Marsden (1987) found that in USA there is a small difference in networks sizes of men and women. A study conducted in Malaysia has shown no significant differences in network size of male and female entrepreneurs (Surin et al., 2015). Renzulli (1998) found that networks of women entrepreneurs included more relatives as compared to male entrepreneurs and he also discovered that networks of male entrepreneurs consisted of more business contact than women entrepreneurs. Aldrich et al. (1989) and Batjargal et al. (2009) also found that networks of women entrepreneurs included more women than men, as compared to networks of their male counterparts. As per literature, it is found that in networks of women entrepreneurs there are a larger proportion of their family members than business contacts (Harrison and Roomi, 2009).

This finding is also supported by D'Exelle and Holvoet (2011), Wellman et al. (1985) as they also found that networks of women entrepreneurs included a higher proportion of family members and friends. Similarly in Pakistani context, it is also expected that significant differences may exist between male and female entrepreneur's network size.

### **2.3 Network Activity**

Network activity is defined as the time invested in developing and sustaining the business contacts (Aldrich & Reese, 1995). Reese (1992) found in his study that as compared to females, males used to spend a larger amount of time in their network activities. Another research conducted in Bulgaria showed that due to lesser degree of networking, women entrepreneurs might be at disadvantageous position in networks (Manolova et al., 2006). While Birley and Cromie (1992) showed in a study conducted

in UK that women networks were as same as their male counterparts. Another study conducted in Malaysia has also shown a similar finding that in terms of network activity of men and women entrepreneurs, no significant differences have been observed (Surin et al., 2015). In Pakistan, women roles are mostly limited to care taker or child bearing; as a result the priority for women is their home (Roomi and Parrott, 2008). Moreover, they are also facing discrimination particularly in their dealings with male entrepreneurs (Qureshi et al., 2012). So it is expected that in terms of network activity significant differences may exist between male and female entrepreneurs in Pakistan.

### **2.4 Network Density**

Marsden (1990) defined network density as "the extensiveness of contact among the members of an individual's social network". The network density is focused on the extent to which an individual is influenced by the relationships amongst his/her contacts (Ibarra, 1993). When all contacts of an individual's network have a close interaction with one another, then network density will be high. Density is operationalized by evaluating the entire number of contacts through the possible number that will be occurred when every member in network have been connected to other in the network, according to Marsden (1990).

According to Aldrich et al. (1989), Marsden (1990) network density has some important implications in literature including "tie strength" and "degree of control". According to Burt (1992) former is important because, lesser density network shows efficiency or returns for the amount of energy and resources utilized in continuing the predetermined amount of relationships. Higher density network is generally for the provision of emotional support (Kadushin, 1982; Berkowitz and Wellman, 1988).

Density is important for determining the differences between various parts of a network. Burt (1992) mentioned that other implication of network density is "degree of control" and it is referred to the extent to which focal person in network can employ his/her control over other contacts. According to Surin et al. (2015) little research studies have been conducted on gender

comparison and network density. Aldrich et al. (1989), Birley and Cromie (1992) have shown that there is no gender differences for network density. Similarly, a study conducted in Malaysia has also shown that there are no significant differences in network density of male and female entrepreneurs (Surin et al., 2015). While Greve and Salaff (2003) found in their study that in female entrepreneur's network, family members played major role and Robinson and Stubberud (2009) mentioned that women used to take names of their family members and of friends as a major contact. Usually professional organizations are not in accessibility of women; therefore they mostly rely on strong ties including friends or family members (Watson, 2007). In addition to that women are also facing lack of time to develop a network so they used to avoid intimate contacts with others. (Martin, 2001) On the base of above findings, it can be hypothesized that in Pakistani context significant differences may exist between male and female entrepreneurs in terms of network density.

### **2.5 Network Centrality**

According to Frazier (2000), Freeman (1979), Gulati et al. (2002) network centrality is defined as "the relative importance of the position held by an actor within the network". As per literature there are 3 forms of centrality including closeness, degree and betweenness. The closeness centrality means that the extent to which one actor is close to another in the network. This closely connected, means that in terms of accessibility how easily one actor is able to contact with others in the network (Sullivan, 2006). Betweenness centrality is defined by Burt (1992) as "how frequently an actor falls between at least two other actors that are not connected with each other". It is related with having power over others. In the last, degree centrality is dealt with involvement of an actor in his networks (Sullivan, 2006).

The past studies have empirically tested the importance of network centrality in the business performance. Sparrowe et al. (2001) showed in his study that acquiring a central place in social network would increase the probability of better individual and business performance. The network centrality has also been vital for transmitting the information from alters to the

entrepreneurs (Cantner and Joel, 2011; Tsai, 2001). Therefore, it is shown that network centrality is vital for shortening the distance among network relations and also allowing the exchange of resources at minimal charges (Surin and Wahab, 2013). In a research study, it was found that in social network relations women occupy similar central position as their male counter parts acquire (Brass, 1985).

While another study conducted in Tanzania found that mostly women possess less human capital including education, business related knowledge or experience and also faced limited access to necessary opportunities. So it was observed that they are disadvantageous in social network relations and they acquired a marginal position in social networks (Rutashobya et al., 2009). In Pakistan, it is observed that women have been facing problems and have limited access to necessary skills, so there is a probability that significant differences may exist between male and female entrepreneurs in terms of network centrality in Pakistani context.

### **3. Research Hypotheses**

There are following research hypotheses:

1. There is no difference between male and female entrepreneurs in terms of network size.
2. There is no difference between male and female entrepreneurs in terms of network activity.
3. There is no difference between male and female entrepreneurs in terms of network density.
4. There is no difference between male and female entrepreneurs in terms of network centrality.

### **5. Research Methodology**

The research methodology consists of research design, population and sample size, instruments used in collection and analysis of data. The study examines the existence of significant differences between male and female entrepreneurs in Lahore, Pakistan. Therefore, the unit of analysis of this study is Pakistani entrepreneurs. For this study entrepreneurs is defined as an owner/manager who is running the enterprise for earning profit (Surin et al., 2015). The study is only focus on manufacturing sector because of important contributions made by this

sector to country's economy and it is also useful to conduct research on network via single industry based studies.

### 5.1 Research design

This study used a positivist paradigm and quantitative approach for examining the existence of significant differences between male and female entrepreneurs. The rationale behind using this quantitative approach is that it yielded generalized results.

### 5.3 Sample size

In this study simple random sampling method was used. This method helped in generalization of the results of this study and also in inferring the conclusions. The sample frame of this study consisted of Lahore Chamber of Commerce and Industry (LCCI), Export promotion Bureau (EPB), Small Medium Enterprise Authority (SMEDA). This list of SMEs then carefully analyzed to select only manufacturing businesses.

### 5.4 Data collection

The data was collected through a questionnaire, originally developed by Surin et al. (2015), Surin and Wahab (2013). The questionnaire consisted of 5 point Likert scale questions, multiple choice questions and other close ended questions. The data was gathered through self-administered and also through mailing the questionnaires to owner/managers from sample directory

## 6. Results and Discussions:-

**Table 1**

Category	Classification	Frequency	Percentage%
<b>Age</b>	Below 26	22	13.5
	26-30	30	18.4
	31-35	44	27.0
	36-40	42	25.8
	41 and above	25	15.3
<b>Marital Status</b>	Married	120	73.6
	Unmarried	43	26.4
<b>Gender</b>	Male	95	58.3
	Female	68	41.7
<b>Business Type</b>	Sole proprietorship	26	16.0
	Partnership	36	22.1
	Private limited	72	44.2
	Family business	29	17.8
<b>Job Tenure</b>	Food & Beverage	51	31.3
	Wood based product	22	13.5
	Rubber based product	23	14.1
	Electric & electronics	24	14.7
	Textile, apparel & leather	43	26.4
	Food & Beverage	51	31.3

Table 1 shows the frequency of the data gathered through survey from the respondents. Of the total 163 respondents, 95 (58.3%) are males and 68 (41.7%) are females. Majority of the respondents (27.0%) fall within age bracket of 31-35. (26.4%) are single, while (73.6%) are married. Most of the respondents have a private limited business (44.2%) in which they mostly belong to food and beverages industry (31.3)

**Table 2: Group Statistics**

	Gender	N	Mean	Std. Deviation	Std. Error Mean
NS	Male	95	7.6737	1.53725	.15772
	Female	68	7.7243	1.95478	.23705

In table 2 the mean of network size in male is 7.67 and in female is 7.72. The standard deviation of network size in male is 0.15 and in female is 0.23

**Table 3: Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
NS	Equal variances assumed	1.297	.256	-.185	161	.854	-.05058	.27375
	Equal variances not assumed			-.178	122.357	.859	-.05058	.28473

Table 3 shows the levene`s test for equal variances and t test for equality of means. In levene`s test for equality of variances the value of  $P=.256$  which means that the variances differences is statistically insignificant. In t-test the value of  $P=.854$  (Sig 2 tail) is greater than  $P=0.05$  which means that there is no significant difference exist in network size between male and female.

**Table 4: Group Statistics**

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Network Centrality	Male	95	3.8982	.55719	.05717
	Female	68	4.0025	.40364	.04895

In table 4 the mean of network centrality in male is 3.89 and in female is 4.00. The standard deviation of network centrality in male is 0.05 and in female is 0.04.

**Table 5: Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Network Centrality	Equal variances assumed	3.398	.067	-1.314	161	.191	-.10421	.07927
	Equal variances not assumed			-1.385	160.969	.168	-.10421	.07526

Table 5 shows the levene`s test for equal variances and t test for equality of means. In levene`s test for equality of variances the value of  $P=.067$  which means that the variances differences is statistically

insignificant. In t-test the value of  $P=.191$  (Sig 2 tail) is greater than  $P=0.05$  which means that there is no significant difference exist in network centrality between male and female.

**Table6: Group Statistics**

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Network Density	Male	95	4.0316	.58563	.06008
	Female	68	4.0931	.51783	.06280

In table 6 the mean of network density in male is 4.03 and in female is 4.09. The standard deviation of network density in male is 0.060 and in female is 0.062.

**Table 7: Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Network Density	Equal variances assumed	.312	.578	-.694	161	.489	-.06156	.08870
	Equal variances not assumed			-.708	153.896	.480	-.06156	.08691

Table 7 shows the levene`s test for equal variances and t test for equality of means. In levene`s test for equality of variances the value of  $P=.578$  which means that the variances differences is statistically insignificant. In t-test the value of  $P=.489$  (Sig 2 tail) is greater than  $P=0.05$  which means that there is no significant difference exist in network density between male and female.

**Table 8: Group Statistics**

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Network Activity	Male	95	3.9789	.50485	.05180
	Female	68	4.1078	.40540	.04916

In table 8 the mean of network activity in male is 3.97 and in female is 4.10. The standard deviation of network activity in male is 0.060 and in female is 0.062.

**Table 9: Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Network Activity	Equal variances assumed	1.601	.208	-	161	.084	-.12890	.07403
	Equal variances not assumed			1.741	158.818	.073	-.12890	.07141

Table 9 shows the Levene's test for equal variances and t test for equality of means. In Levene's test for equality of variances the value of  $P=.208$  which means that the variances differences is statistically insignificant. In t-test the value of  $P=.084$  (Sig 2 tail) is greater than  $P=0.05$  which means that there is no significant difference exist in network activity between male and female.

### 7. Conclusion

This research study has **been** contributed to existing literature by focusing on a neglected areas i.e. entrepreneurial social network theory and comparing the difference in male and female entrepreneur's social networks, specifically in structural dimensions of social networks. This study has extended the conclusion drawn by other research studies based on social network by comparing the social networks used by male and female entrepreneurs (Birley and Cromie, 1992; Surin et al., 2015). This study has been concluded that no significant differences exist between male and female entrepreneurs with respect to their social networks in Pakistani context.

There has been a number of studies conducted based on social network in various countries while this area has been neglected in Pakistan, therefore this study tries to rectify this omission and invests in finding out any differences exist between male and female entrepreneurs with respect to their social networks. However, more investigations in area of social network is needed, as this study is only focused on structural dimensions, so future studies can be conducted on network's interactional dimensions. Moreover, future studies can acquire qualitative approach to deeply investigate the inner functioning of networks. This study is focused on social networks of entrepreneurs and investigating the influence of gender on four dimensions of social network including size, activity, density and centrality. The future researchers can investigate differences between male and female entrepreneurs in terms of their formal networks.

### Acknowledgement

We would like to thank Ehsan Fansuree Surin for his cooperation and support during this research study.

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