IMPACT OF SOCIO-PSYCHOLOGICAL BARRIERS ON STRATEGIES EMPLOYED BY WOMEN LEADERS IN INFORMATION TECHNOLOGY SECTOR IN INDIA

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Abstract: Leadership development for women plays an indispensable function in economic progress of India. The present study tries to analyze the relationship between sociological and psychological barriers on various strategies employed by women leaders in IT/ITeS Sector in Bengaluru and Coimbatore in India among 436 samples using a structured questionnaire consisting of 83 constructs. Smart PLS SEM was used to test theoretical framework since the present study tries to explore an area which is relatively less researched in India. The results of the study found the existence of statistically significant path between socio-psychological barriers and the strategies.
Key Words: Women Leaders, Socio-Psychological Barriers, Strategies
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1. INTRODUCTION
Women are the embodiment of strength, love, sacrifice and courage and thus play a pivotal role in today's economy. Today, about 45.4 percentage of female contribute to the global workforce. Gender related patriarchal values are so deeply ingrained in our society's consciousness that they are largely invisible and top posts are offered only to men by most of the corporate firms. This leads to women facing more negative requirements and responses than men. So it is all the more difficult to attain respectful roles, influence, and leadership (Jakobsh, 2012). The integration of women in the leadership of society and other systems of human life is becoming necessary. In India, specifically sectors such as information technology (IT), financial services, media, health care, and hospitality are demonstrating that women are integral to their workforce, thus reducing the ratio between men and women. Leadership development for women plays an indispensable function in economic progress of India. In India, women make up 42% of new graduates, but only 24% of entry-level roles professionals. Of these, about 19% reach senior-level management. Women hold only 7.7% of management board seats and just 2.7% of board chairs (Financial

Express, 2017). The present study tries to analyze the impact of sociological and psychological barriers on strategies employed by women leaders in IT Sector in India.

## 2. Literature Review and Hypothesis

Kalaitzi et al., (2019) investigated leadership barriers perceived among women healthcare leaders in Greece. The results found that women leaders perceived stereotypes, lack of equal career advancement, work/life balance, and lack of confidence, gender gap and gender bias to be the barriers with the greatest relative importance in constraining opportunities for pursuing leading positions in Greek healthcare setting. Also the medium relative importance barriers include fifteen barriers both at personal and organizational level such as lack of family support, lack of leadership skills and glass ceiling, glass cliff, lack of mentoring and lack of flexible working environment. The study concluded that these barriers have direct effects in discouraging women to pursuit leading roles in medical practice, education, and medical organizations. Bhattacharya et al., (2018) explored the advancement of women to leadership positions in the IT and ITES Sector in Bengaluru, Mumbai, Delhi NCR, Chennai, Hyderabad and Pune. The study conducted with 20 women leaders in leadership positions in the IT and ITES Sector and purposive sampling method was used to collect the data through interview based exploratory case study method. The study identified that individual factors(risk-taking behaviour, emotional maturity, and self-confidence) is significant for career advancement of women and organizational factors (diversity and inclusion practices, leadership commitment to advance women, talent management systems and capability building initiatives) support women to develop their skills and knowledge to advance in their career path. These findings would help the human resource and diversity practitioners to create gender-balanced and inclusive leadership in the organizations that would lead to attracting, retaining and developing women talent for leadership roles. Rahman and Mizanur (2018) in their article focused on challenges and coping strategies among 23 women leaders in Bangladesh among 23 from administrative divisions. The study identified that the women leaders in Bangladesh usually face three major challenges towards ensuring their participation which include male domination, corruption and faulty legal provisions. The research suggested few coping strategies such as democratization and inclusivity of the Union Council structure which will enhance women leaders' participation in the overall governance of the Union Council. Mate et al., (2018) analyzed the contrasting experiences of barriers and enablers that affect women's career and leadership development among young- to mid-career female academicians in Australia and Vietnam. The study identified the main barriers faced by women are competitive demand work life, male dominated culture and work family life that affect women's career and leadership development in Australia whereas overt male-dominated organisational and societal cultures which limit their career and leadership development opportunities prevail in Vietnam. Main enablers in Australia are mentoring and building professional networks to support their careers; in Vietnam having a sponsor or person

with power in their respective organisation that would be willing to support their career advancement.

The study concluded that women from both cultures identified developmental relationships (e.g. mentoring and sponsorship) with peers and senior figures within their organisations as key to surmounting the barriers they face. Mentoring was frequently identified by the Australian women as a means to advance their careers. Burns et al., (2017) addressed women in leadership, bewildering glass ceiling and strategies among women leaders in healthcare (including pharmacy) and academia. The research demonstrated numerous beneficial outcomes associated with the inclusion of women in organizational leaderships, a variety of barriers inhibit the advancement and aspirations of potential women leaders in the pharmacy profession. Such barriers include cultural biases and stereotypes, challenges involving work–life balance, and a lack of mentors and sponsors. To overcome these barriers, strategies including involvements to reduce gender bias, leadership development programs, access to mentors and sponsors, and make changes to family-related policies. Smith et al., (2017) in their research article focused women in politics and overcoming their barriers in leadership positions among women leaders. The research provides information regarding experiences of women politicians in the Guelph community.

The findings show women are facing numerous cultural, psychological, institutional, and socioeconomic barriers. The study offered some solutions that are policy changes, systemic and cultural changes, as well as various programs and tools to encourage women to participate in leadership. To better understand the consequences of women leaders facing barriers in their leadership position, a framework is established which describes the relationship between the two types of barriers sociological barriers, psychological barriers and strategies. The model shows that there are various barriers faced by women leaders in their leadership position and strategies adopted to overcome these barriers. It shows the rational links among the variables. The following framework is established between sociological barriers, cultural barriers and strategies. On the basis of review literature, a proposed theoretical model (Figure 1) is given: To understand the relationship between socio-psychological barriers and strategies, the following hypothesis is proposed:

Figure 1
Effect of Sociological and Psychological Barriers on Strategies - Theoretical Framework
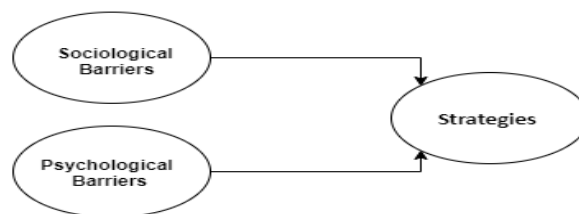
2.1 Women Leaders in International and National Scenario

During the previous century, the outline of women and the background of leadership have been primarily transformed. The Grant Thornton IBR (2019) report shows that at present there has been a growth in the women holding senior and leading positions around the world in comparison with previous years. The following is the brief narration about the International and National scenario and the socio-psychological barriers faced by women leaders and various strategies adopted by them to overcome these hurdles. In 2016, in the European Union 5% of the executive director or managing director positions were held by women (Rincon et al., 2017). India is a country with diversified culture and rituals. As per latest data from Prime Database 2019, India is still hostile to bring women to the top out of 1,814 chief executives and MDs of National Stock Exchange listed companies, only 67, or 3.69% are women as of March 4, 2019. Catalyst report (2018) reveals that nearly half of Indian women leave the workforce between junior and middle level management and women hold only 20% of all senior roles in India.

2.2 Socio –Psychological Barriers and Strategies

The concept of sociological and psychological barriers has been studied in literature, due to the fact that many researchers revealed that it affects women's career and their leadership roles. Many societies promote equal opportunities for women in the workforce, there are often societal values and deeply held cultural schemas that affect women's career and leadership development in organizations (Mate et al., 2018). Women experience assorted challenges, such as socio-cultural, organizational, economical and personal and barriers faced including difficulty in work life balance, family responsibility, gender stereotype, gender roles in the socio-cultural practices, bureaucracy and gender inequality (Alsubhi, 2018). Few studies list few strategies adopted to overcome these barriers and those studies revealed how these strategies is helpful to women leaders to achieve successful leadership position (Rahaman and Mizanur, 2018).

H_1: Sociological barriers positively relate with Strategies.

H_2: Psychological barriers positively relate with Strategies.

3. Methodology

The women employees in leadership role among the IT/ITeS Sector are the target population. In Indian context, the educated women employees are majorly employed in the IT/ITeS Sector and empowered as leaders. This study is executed at Bengaluru and Coimbatore in India. Bengaluru stands first among the Top Five - Information Technology (IT) destinations of India. Therefore, any research related to IT industry conducted at Bengaluru can reveal the real-time scenario. Similarly, Coimbatore stands first among the Tier-2 City based on its revenue generation in IT industry, India. Due to two independent destinations, probability-based stratified random sampling technique with equal sample proportion was applied. Stratified sampling technique is applied with equal sample proportion and each location is considered as separate strata. Hence,

197 samples required for each cluster based on the target population of the study. 500 Questionnaires targeted were sent by email (google form) and directly distributed among women leaders who are in executory level and operative level of Bengaluru and Coimbatore IT/ITeS industry. Only 444 respondents filled up the questionnaires, in which 8 were eliminated due to incomplete information. A total of 436 samples were collected from two destinations such as Bengaluru (203 samples) and Coimbatore (233 samples). In order to balance the sample proportion, 203 samples on each stratum are finally selected for analysis. Among the overall samples collected for this study, the response rate was 97%, which is complete and valid for analysis. The study was conducted using a structured questionnaire consisting of 83 constructs, which are based on the previous research studies. Structural Equation Modeling (SEM) is done by using the Partial Least Squares (PLS) approach for this study. Smart PLS is used for analysis where the relationships are complex with limited support from existing literature. Since the present study tries to explore an area which is relatively less researched in India, so it was decided to use Smart PLS SEM for testing theoretical framework. It is helps to find the sequential effect of the sociological barriers and psychological barriers with strategies adopted to overcome these barriers.

4. Analysis and Discussion

Data collected from respondents were entered in to SPSS for analysis and subjected to advanced statistical analysis in Smart PLS. Construct validation a measure how well the test or measure reflects the target construct (Cronbach and Meehl 1955) and is ensured through convergent validity (Fornell and Larcker 1981). According to Chau (1997) high inter –item correlation within each construct indicates convergent validity. The convergent validity for each construct is determined by checking the average variance extracted (AVE) values and their correlation coefficients. The AVE represents the proportion of the overall variance in the items of a latent construct that is explained by the latent construct itself. A latent construct is deemed to have acceptable convergent validity if it had an AVE greater than 0.5. Convergent validity is ensured using Partial Least Square Method a Structural Equation Modeling technique (Bagozzi and Fornell, 1982). Convergent validity is assessed by checking whether the AVE of each construct is greater than 50 percent and composite reliability greater than 70 percent (Fornell and Larcker 1981; Dlamantopoulos and Winklhofer 2001; Roesiter 2002).

Table 1
Reliability and Convergent validity results

Variable	Cronbach's α	Composite Reliability(CR)	Average Variance Extracted (AVE)	Redundancy
Sociological Barriers	0.8932	0.9329	0.8225	0.0000
Psychological Barriers	0.9408	0.9542	0.8066	0.0000
Strategies	0.9302	0.9427	0.7022	0.1106

From the above table, it is identified that the composite reliability (CR) of all variables ranges from .93 to .95. Moreover, both composite reliabilities and Cronbach's alpha values are above the threshold value of .70. Also, average variance extracted (AVE) of all variables is greater than .50. Hence, measurements have a strong convergent validity. All item loadings that were considered for the present study were measured to be above .50.

This suggests that all the item loadings are significant. The average variances extracted of all the variables are above 0.50. Moreover, square root of average variance extracted for a variable is greater than the correlation of the variable with all other variables. This proves the establishment of discriminant validity (Chin, 1998). All the constructs have their composite reliability and Cronbach alpha greater than 70 percent thereby revealing no problems of convergent validity.

4.1 Path Modeling
The hypotheses were tested using PLS a SEM technique. SEM enables a researcher to answer a set of interrelated research questions in a single, systematic and comprehensive analysis by modeling the relationship between multiple and dependent constructs simultaneously (Gerbing and Anderson, 1988).

4.2 Model Validation
Model estimation was carried out with the variables sociological barriers, psychological barriers and strategies. Boot strapping was done with all the cases and with 500 samples as resampling option. The model was estimated at 5 percent level of significance. Hence, T values greater than 1.96 indicate significant relationship between the variables. Figure 2 Smart PLS Model illustrates the impact of socio-psychological barriers faced by respondents in IT/ITeS Sector on the strategies adopted by them to overcome the barriers. The below table brings out the results of bootstrapping.

Table 2
Path coefficients, t-statistics and inferences drawn on hypotheses

| Sl. No. of Hypothesis	Paths	Path Coefficients (β)	t-statistics	Result
H_1	SB ⟶ Strategies	0.459^{**}	2.327	Accepted
H_2	PB ⟶ Strategies	0.437^{**}	2.180	Accepted

Note: ** denotes significant at p< .01 level; SB – Sociological Barriers, PB- Psychological Barriers.

The path coefficient between Sociological barriers (SB) and Strategies is found to be 0.459, which is indicates a positive relationship (β=0.459; t=2.327) and is significant, thus proving hypothesis H_1. The path coefficient between Psychological barriers (PB) and Strategies is found

to be 0.437, which is indicates a positive relationship (β=0.437; t=2.180) which is significant, thus proving hypothesis H_2. The strength of each path of the structural model and the variance (R-squared coefficients) of dependent variables should be greater than .1 (Falk and Miller, 1992). Figure 2 show that the R-squared coefficient of strategy is .233. The t-statistics of significant paths were above 2.327 as mentioned in table 58. Any value for t-statistics above 2.57 is considered to be significant being above .01 level (Esposito Vinzi et.al, 2010) and 1.96 is considered significant being above 0.05 level (Hair et al., 2014). Hence, the structural model is validated at 5 % level of significance. The proposed hypothetical model is prepared in a recursive manner to avoid any kind of problems associated with statistical identification (Hair et al., 2006). Figure 7 shows the results of Structural Equation Modeling. In this figure, full arrows represent statistically significant effects paths.

The β coefficients for each link are shown near the arrows, and they represent the standardized regression path coefficients associated with statistically significant effects.

Figure 2
Effect of Socio-Psychological Barriers on Strategies Smart PLS Model
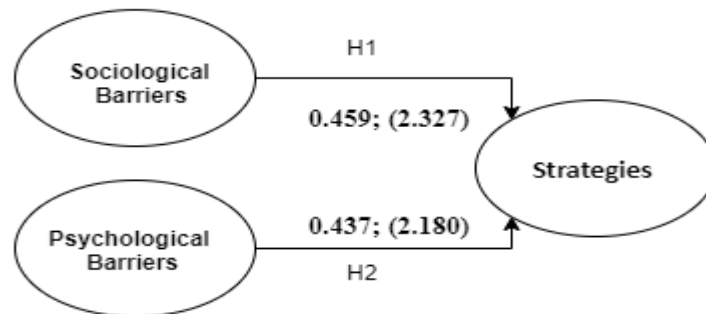
4.3 Testing of Hypothesis

Hypothesis 1 anticipated a positive relationship between sociological barriers and strategies. This was tested while testing the structural model. It can be seen from table 58 that sociological barriers has a significant positive impact on strategies (β = .459**, p < .01) with t-statistic value 2.327. Hence, hypothesis 1 is confirmed and sociological barriers have a significant positive impact on strategies. Hypothesis 2 anticipated a positive relationship between psychological barriers and strategies. This was tested while testing the structural model. It can be seen from table 58 that psychological barriers has a significant positive impact on various strategies (β = .437**, p < .01) with t-statistic value 2.180. Hence, hypothesis 2 is confirmed and psychological barriers have a significant positive impact on strategies.

5. Conclusion

In India more womenfolk are entering the portals of IT industry. This is the need of the hour when empowerment of women is appreciated and given due honours. At the same time one should not fail to observe the multifarious issues confronted by women. These hurdles, chiefly of the social and psychological domains curtail the growth of women in workforce. The present research is first of its kind to examine the impact of sociological barriers, psychological barriers faced by women leaders and strategies. The result of the effect of socio-psychological barriers on strategies infers that sociological barriers and psychological barriers has positively related with strategies. It proves statistically significant effects paths with socio-psychological barriers and the strategies. The present study explored socio-psychological barriers faced by women leaders and strategies adopted to overcome these barriers only in the IT/ITeS Sector. Future studies should include other Sectors.

The study focused only on women leaders, who are in the executory (mid-level) level and operative (junior level) level. To verify the findings in this study, it would be suitable to undertake another study, which will focus on the administrative (top) level. The present study considers only Bengaluru and Coimbatore IT/ITeS Sector. Future studies should include wider areas in further generalising the findings of the study.

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