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WOMEN ENTREPRENEURS IN INDIA- CHALLENGES AND OPPORTUNITIES

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Abstract

Purpose: This study highlights the concept and need of Women Entrepreneurship and explores the impact of Challenges and Opportunities on the overall "success of women entrepreneurs in India". The independent variables encompass "the challenges faced by women entrepreneurs", including Gender bias, funding limitations and limited networking as well as the Opportunities available such as Government support, digital platforms and growing industries. The study's focus is streamlined into a single dependent variable "Overall Success of Women Entrepreneurs", which captures a comprehensive measure of business growth, financial viability, empowerment, and societal influence

Methodology:A structured questionnaire was administered to 243 women business owners, and "the data was examined by using "Partial Least Squares Structural Equation Modelling" ("PLS-SEM") technique. Statistical analysis was performed using "SPSS version 27" and "Smart PLS 4". For this study targeting Women Entrepreneurs in the Delhi NCR region, "a purposive sampling technique was employed".

Findings: By examining the relationships between challenges, opportunities, and overall success this paper offers insights into the dynamic interplay shaping the trajectory of "women entrepreneurs in India". The findings contribute to understanding the factors that drive and hinder women's entrepreneurial endeavour, even within the limited time frame.

Implications: This study provides significant contributions to theory, literature, and practical applications. Firstly, it introduces a conceptualization of women's empowerment variables and assigns measures to them, utilizing the adaptable nature of these factors, which encompass opportunities, challenges, and the environments affecting women.

1. INTRODUCTION

Empowerment has garnered attention across various fields, including education, psychology, and planning/development studies, with its potential to address social injustice. Empowerment is at the forefront of a transition towards an alternative development paradigm focused on people and their environment rather than merely production and profits, according to "Friedmann (1992, p. 31)". "A woman entrepreneur can be defined as a woman who takes the initiative to create and manage a business venture, all while being prepared to face risks and uncertainties, as outlined by Manerkar (2015)". Women's entrepreneurship faces distinctive and formidable challenges in developing countries, primarily due to a combination of limited opportunities, resource constraints, and unique societal issues. Numerous studies, including those by Panda and Dash (2014) and Verheul et al. (2006), have shed light on these challenges. "Chaudhry and Paquibut (2021)" described the features of women entrepreneurs in Oman, their economic contributions, plans, and challenges, including "limited market access", "domestic responsibilities", limiting their online presence, and a "lack of expertise" in "social media marketing". "Structural equation modelling (SEM), or path analysis, is a multivariate method used to test hypotheses regarding the influences among interacting variables". (Statistical Parameter Mapping, Academic press 2007). There are "two types of SEM estimators": "covariance-based" and "variance-based" estimators. "Covariance-based SEM" is often used when researchers have a well-defined set of observed variables and want to examine how they interrelate to test specific hypotheses. Variance-based SEM, on the other hand, is commonly employed when researchers are interested in exploring latent constructs that may not have directly observable indicators. "Partial least squares path modeling" ("PLS-PM") is a commonly used "variance-based estimator" (Bollen, K.A. 1989). The complex theoretical models developed using SEM are typically validated using collected data, known as model-data fit. This study aims to employ both "CB-SEM" and "PLS-SEM" to assess the impact of Opportunities and Challenges on Women Entrepreneurs.

"Conceptual framework and research hypotheses of the study":

Using the arguments presented above, we may strengthen the hypothesis for the Impact of Opportunities and Challenges empowerment of women's entrepreneurs:

"Hypothesis 1 (H1)". The perceived empowerment of "Women Entrepreneurs" is "positively related" to the perceived opportunities available to them

"Hypothesis 2 (H2)". The perceived empowerment of "Women Entrepreneurs" is "positively related" to the perceived challenges faced by them

The research theoretical model (Figure 1) presents a synthesis of the research hypotheses.

2. "MATERIALS & METHODS"

This study employs a "quantitative research approach", primarily focusing on an exploratory research design. The primary objectives involve evaluating the proposed model's predictive capabilities. To achieve these goals, "the study utilizes the Partial Least Squares Structural Equation Modeling" ("PLS-SEM) approach". Furthermore, the study intends to conduct a "confirmatory factor analysis" using CB-SEM to ensure the model's adequacy before proceeding with "PLS-SEM techniques" to assess measurement and structural models and conduct other specified tests mentioned earlier. The variables used in the study were drawn from established scales related to empowerment and entrepreneurship that were identified in the literature review. The scale was modified to fit the study context. The three constructs in the study, viz. Opportunities, Challenges, and Perceived Impact on Women empowerment have fives items each. "Using a five-point Likert scale", participants were asked to assess the level of agreement on each variable "1 = strongly disagree"; "5 = strongly agree". For this study targeting Women Entrepreneurs in the Delhi NCR region, a "purposive sampling technique" was employed. The empirical "data for the study was online collected via a self-administered questionnaire".

"G*Power software" was used to determine the "sample size" required for our model. The input included "F-Tests", "Linear multiple regression", "fixed model", and "R^2 increase". The alpha value was taken as 0.05, statistical power, 95 % and number of predictors

as 2. “A total of 300 questionnaires were distributed for this study, and 270 were returned with a 90% recovery rate”. The collected data were first examined for “unengaged response bias”. Twenty-five respondents were removed after they were found to be using “straight-lining” method in their responses and hence were “unengaged”. The confidentiality and anonymity of all the women's responses was guaranteed (Salancik and Pfeffer 1977).

On 71 samples, the questionnaire underwent a pilot test. To make sure it was clear, it was assessed by five business professionals and five academics. To investigate “common method variance (CMV)”, “Harman's single-factor technique was” examined using “SPSS version 27”. “Exploratory factor analysis (EFA) was used to disclose all research variables”, and the extracted decision of each factor was set to 1 without rotation. A single dimension thus accounts for 37.1% of the variation. All of these methods concur that “CMV is not an issue in this research”. The results of the pilot study also indicated a good reliability (Cronbach alpha = 0.874) and Validity (Three factors extracted with an eigen value more than 1.0 and explaining more than 66 percent of variances in the items). The results indicated slight deviation from the normal distribution – both Kolmogorov and Simonov and Sharpio Wilks tests having values less than 0.05). However, considering the fact that the deviations from normality were small and sample size is large (more than 200) no changes were done in the questionnaire or research design. Given the intricacy of the constructed framework, “CFA” and “SEM” in “Smart PLS version 4.0.9.5” were used to analyze its structural characteristics.

3. RESULTS

3.1 Descriptive statistics –

Survey responses were collected from 300 women entrepreneurs of which 243 were acceptable data quality with an effective rate of 81%. Among them, 66.3 % of the “respondents” were married, 67.1% of the “respondents were in the 25–45 years range”, 37.4% “of the respondents” in the income are in the range of 40000 – 60000, while 30.5 % were in the 20,000 – 40,000 income groups., and 73.3% of respondents were graduates. Moreover, the experience of respondents ranged from 28.8% in 0-2 years, 35 % in 2 to 4 and 30% in 4–6-year groups.

3.2 “Measurement Model assessment”

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Exploratory factor analysis (EFA)					
	"Loading's Original sample (O)"	**"Loading's Sample mean (M)"**	**"Standard deviation (STDEV)"**	**"T statistics (|O/STDEV|)"**	**"P values"**
CH1 <- CH	0.587	0.585	0.057	10.268	0.000
CH2 <- CH	0.792	0.793	0.044	17.969	0.000
CH3 <- CH	0.837	0.837	0.032	26.426	0.000
CH4 <- CH	0.81	0.809	0.036	22.697	0.000
CH5 <- CH	0.786	0.783	0.042	18.694	0.000
OP1 <- OP	0.631	0.627	0.051	12.417	0.000
OP2 <- OP	0.689	0.684	0.052	13.241	0.000
OP3 <- OP	0.776	0.773	0.05	15.485	0.000
OP4 <- OP	0.827	0.831	0.035	23.905	0.000
OP5 <- OP	0.664	0.666	0.058	11.494	0.000
WE1 <- WE	0.667	0.659	0.064	10.392	0.000
WE2 <- WE	0.756	0.751	0.052	14.521	0.000
WE3 <- WE	0.76	0.758	0.059	12.904	0.000
WE4 <- WE	0.782	0.782	0.042	18.439	0.000
WE5 <- WE	0.709	0.71	0.059	11.992	0.000

The measurement model analysis as given in table 1 indicates a good measurement model with high and

significant factor loading of the items with corresponding constructs, and t-values greater than 1.96.

Model fit - The study's measurement model was assessed for its validity and reliability using a first-order Confirmatory Factor Analysis (CFA) conducted with Smart PLS 4.0 CBSEM Module. "The results, as shown in "Table 2", indicate that the model offers a "satisfactory explanation" of the data.

Table No.2

Model Fit

Model fit (CFA)				
Fit Indices	**Estimated model**	**Null model**	***Acceptance Criteria**	**Reference**
Chi-square	206.27	1874.574		
Number of model parameters	33	15		
Number of observations	243	n/a		
Degrees of freedom	87	105		
p - value	0.000	0.000	>0.05	Hooper et al.,
Chi-Square /df	2.371	17.853	<3	Hooper et al.,
RMSEA	0.075	n/a	<0.08	Browne and Cudeck
GFI	0.904	n/a	>0.90	Jöreskog, Sörbom
AGFI	0.868	n/a	>0.90	Jöreskog, Sörbom
PGFI	0.655	n/a	>0.50	Hooper et al.,
SRMR	0.047	n/a	<0.05	Browne and Cude

				ck
NFI	0.89	n/a	>0.90	Bentler, Bonnet,
TLI	0.919	n/a	>0.90	Hooper et al.,
CFI	0.933	n/a	>0.90	Hair et al.,
AIC	272.27	n/a	Small	
BIC	387.541	0	Small	

Construct reliability and validity

All the constructs were found to have high values of Cronbach alpha, Rho_a and Rho_c (>0.80) indicating good internal consistency and reliability. "The AVE values greater than 0.50 indicates good construct validity", as given in the "table 3 below":

Table No. 3

"Construct Reliability and Validity" –

	"Cronbach's alpha" (standardized)	**"Cronbach's alpha" (unstandardized)**	**"Composite reliability (rho_c)"**	**"Average variance extracted (AVE)"**
CH	0.873	0.872	0.874	0.589
OP	0.841	0.839	0.84	0.52
WE	0.854	0.854	0.855	

Discriminant Validity

Table No. 4

Fornell and Larker Criteria			
	CH	**OP**	**WE**
CH	**0.767**		
OP	0.658	**0.721**	
WE	0.353	0.479	**0.736**
HTMT Ratio			
	CH	**OP**	**WE**
CH	-	-	-
OP	0.659		-
WE	0.364	0.496	-

Two methods were employed "to assess discriminant validity". First, "the square root of the "AVE" for each dimension should be greater than" the correlations shared in both the "rows and columns" ("Fornell and Larcker 1981"). Second, following "Hair et al. (2014)", in order

to establish "discriminant validity, the HTMT Ratio" for each dimension should not exceed 0.85.

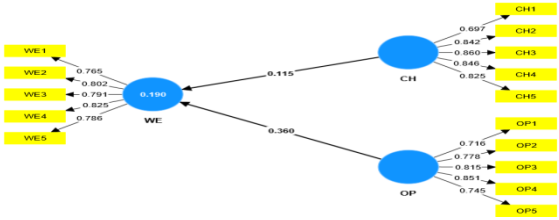
The results in tables 4, given below indicate good discriminate validity for the model.

3.3 Structural Model assessment

The same data set is used to build the conceptual model that was previously mentioned in "Smart PLS" (See Figure 1). The model includes item loading on constructs and relationships between these constructs. The simple PLS algorithm was applied first, and then bootstrapping method was employed for significance testing. Then structural links between latent variables based on existing theories, is established, the model's validity and fit are assessed, and subsequently all structural relationships using various statistical methods are tested, particularly regression and path coefficients. Lastly, the empirical data is used to validate the theories underlying the model.

3.3.1 Loading's of the variables

To begin with, the examination of item loading with respect to the indicators was conducted (refer to Figure 2 above). All of the items exhibited loading exceeding the widely accepted benchmark of 0.6, as established by prior research ("Hair et al., 2010"; "Malhotra et al., 2006"). This study demonstrated that, typically, "item loading are higher in "PLS-SEM" than in "CB-SEM". Additionally, it was observed that the range of loading (the difference between the "highest and lowest loading" within a single construct) was narrower in "PLS-SEM" when compared to "CB-SEM". Consequently, it can be inferred that the "PLS method" yields more consistent item loading, which in turn enhances "the reliability and validity" of the factors.



3.3.2 Model Fit indices

In comparison to CB (covariance-based) modelling, PLS (partial least squares) modelling provides a more restricted range of model fit indices. PLS offers a few approximate measures such as "SRMR (Standardized Root Mean Square Residual)", "NFI (Normed Fit Index)", and "Chi2 (Chi-squared)", along with "exact measures like d_ULS" ("squared Euclidean distance") and "d_G" ("geodesic distance"), as

proposed "by Dijkstra and Henseler" in "2015a" and "2015b".

Model Fit		
	"Saturated model"	"Estimated model"
"SRMR"	0.066	0.066
"d_ULS"	0.519	0.519
"d_G"	0.203	0.203
"Chi-square"	291.163	291.163
"NFI"	0.844	0.844

The results indicate that "SRMR value is 0.066", which is "lower than the threshold value of 0.08". Further, the values for both d_LS (0.519) and d_G (0.203), the difference between the "estimated and saturated models" is nil. The model can be considered a saturated one with zero free paths. The NFI value is 0.844, falling below the recommended acceptance values of "0.9 (Byrne, 1994) or "0.95" ("Lomax and Schumacker, 2012"). It's worth noting that while an ideal NFI score is 1 (Moss, 2009), the range for this "fit index" typically varies from "0 to 1". However, according to general guidelines, models with an "NFI lower than 0.9" can usually benefit from significant improvements ("Bentler and Bonett, 1980").

3.3.3 "Construct reliability and Validity"

Table No. 6

	"Cronbach's alpha"	"Composite reliability (rho_a)"	"Composite reliability (rho_c)"	"Average variance extracted (AVE)"
CH	0.873	0.877	0.908	0.666
OP	0.841	0.845	0.887	0.612
WE	0.854	0.856	0.895	0.631

In this study, "average variance extracted (AVE)" values varied from "0.612 to 0.666", while "Cronbach's Alpha" values ranged from "0.841 to 0.873". "Composite reliability" (rho_a) for all constructs was strong and ranged from "0.845 to 0.877".

3.3.4 Discriminant Validity

HTMT ratio

According to "Garson (2016)", a well-fitting model should include hetero trait correlations that are less significant than mono trait correlations, which implies that "the HTMT ratio" should be "lower than 1.0". However, "Henseler et al. (2015)" advised a cut off of "0.9", and

Kline (2015) adopted an even tighter cut off of 0.85. Every "HTMT ratio" is below "0.85".

Fornell and Larker criteria

The diagonal values ("Square root of AVE") were found to be larger than the values in the corresponding row or column (Correlations) indicating discriminant validity.

3.3.5 Absence of Cross loading and Multicollinearity (VIF)

As the VIF values for both inner and outer models were found to be less than 3.0, it can indicate absence of multicollinearity in the proposed model.

3.3.6 Quality Criteria

R ^{2} and adjusted R

Table No. 7

	R-square	R-square adjusted
WE	0.19	0.183

Effect Size – f ^{2}

Table No. 8

	f-square
CH -> WE	0.011
OP -> WE	0.109

The model (independent variables – Opportunities and Challenges - together) explains 19 % of the total variance in the target variable (Impact on Women empowerment).

The effect of Opportunities on Women empowerment is small (0.109); while that of Challenges is negligible (0.011)

3.3.7 Relationship among constructs and Hypotheses testing Path coefficients, t-statistics, p values etc.

Table No. 9

"Path Coefficients"					
	"Original sample (O)"	'Sample mean (M)"	"Standard deviation (STDEV)"	"T statistics (|O/STDEV|)"	"P values"
CH -> WE	0.115	0.12	0.084	1.367	0.172
OP -> WE	0.36	0.367	0.091	3.938	0

The results shown above indicate that the path OP > WE are substantial (mean = 0.36) while the path Ch > WE is not significant and small (mean = 0.115).

Hypotheses testing

"Hypothesis 1 (H1)". The perceived empowerment of "Women Entrepreneurs is positively related" to the perceived opportunities available

to them is not rejected at 95 % confidence level.

"Hypothesis 2 (H2)". The perceived empowerment of "Women Entrepreneurs is positively related" to the perceived challenges faced by them is rejected at 95 % confidence level.

4. DISCUSSION & CONCLUSION

In this study we evaluated "the model's goodness of fit (GoF)" and tested "the research hypotheses" using various measures, including "coefficient determination (R-Square, R^2)", "standardized root means square residual (SRMR)", "path coefficients", "model effect size (f^2)". The results from the final model indicate that hypothesis (H1) received support, while hypothesis (H2) did not find support.

4.1 Theoretical Implications

This study provides significant contributions to theory, literature, and practical applications. Firstly, it introduces a conceptualization of women's empowerment variables and assigns measures to them, utilizing the adaptable nature of these factors, which encompass opportunities, challenges, and the environments affecting women. Most notably, the study contributes to theory by employing "confirmatory factor analysis (CFA)", allowing "researchers to examine the hypothesis that a connection exists between observable variables and their underlying latent constructs". This is in line with the study's objective of predicting and elucidating the relationships between "exogenous and endogenous constructs" (as discussed by "Hair et al. in 2017"). Another noteworthy contribution lies in the utilization of both "covariance-based structural equation modelling" ("CB-SEM") and "partial least squares structural equation modelling" ("PLS-SEM)" to evaluate model fit" and subsequently conduct structural analysis.

4.2 Practical Implications

The study on the "Impact of Opportunities and Challenges on Women Entrepreneurs Empowerment in India" offers practical implications for policies and initiatives supporting women entrepreneurs. It suggests tailoring business support programs, facilitating access to finance, providing market access and networking opportunities, and focusing on capacity building. Legal and regulatory reforms, technology adoption, work-life balance, and promoting women in non-traditional

sectors are also recommended. The study provides evidence-based guidance for fostering an enabling environment for women entrepreneurs in India.

4.3 Managerial Implications

The study on the "Impact of Opportunities and Challenges on Women Entrepreneurs Empowerment in India" offers several managerial implications for organizations and institutions. These include implementing diversity and inclusion policies, customized training programs, and supplier diversity initiatives. Providing access to funding, mentor ship, and networking opportunities, “as well as promoting work-life balance and recognizing women entrepreneur’s” achievements, are also recommended. Additionally, advocating for supportive policies and fostering partnerships, encouraging technology adoption, and targeting markets effectively can contribute to creating an inclusive environment for women entrepreneurs.

4.4 Limitations & Future Research

The study on the "Impact of Opportunities and Challenges on Women Entrepreneurs Empowerment in India" may have limitations such as a potentially limited geographical scope, sample size, and data collection methods. Future research could address these limitations by considering larger and more diverse samples, employing diverse data collection methods, and conducting longitudinal studies. Additionally, future research could explore in-depth case studies, assess the impact of supportive policies, conduct cross-cultural comparisons, and examine the intersectionality of gender with other factors. Technological adoption, global market access, and long-term trajectories of women entrepreneurs are also promising areas for future investigation. By addressing these aspects, research can provide a more comprehensive understanding of women's entrepreneurship and empowerment in India.

4.5 Conclusion

In this study, we have demonstrated the use of "PLS-SEM path analysis" to integrate “both CB-SEM and PLS-SEM” in assessing the impact of opportunities and challenges on Women's Empowerment. The results of the model, with an R-squared value of 0.19 and an "effect size (f2) of 0.110," suggest that opportunities and challenges together explain 19% of the overall variance in Women's

Empowerment. However, it's worth noting that only the path connecting "Opportunities to Women's Empowerment" was found to be statistically significant.

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