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Entrepreneurial Success Drivers in Women-Owned MSMEs: Empirical Evidence from an Emerging Economy

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Abstract

Purpose: This paper is an empirical enquiry into the internal and external factors that impact on business success of women entrepreneurs in MSME sector in North India. Even with supportive policy interventions, women-owned businesses are struggling to scale and sustain due to several challenges. The purpose is to find out the determinants that are important for entrepreneurial success and generate a model applicable in emerging economies. Design/methodology/approach: Using a quantitative design, primary data were collected from 384 women entrepreneurs through structured questionnaires. Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed using SmartPLS 4 to validate the proposed model and test hypothesized relationships among internal factors, external factors, and business success.Findings: The results confirm that both internal (e.g., family support, prior experience, work-life balance, and mentorship) and external factors (e.g., access to finance, ICT usage, marketing strategies, and supportive government policies) significantly contribute to entrepreneurial success. The R^2 value of 0.719 and significant path coefficients indicate high explanatory power.Limitations/implications: The cross-sectional nature and sampling from only North India may inhibit generalisability. Longitudinal investigations in different socio-cultural settings are suggested. Policy implications: The study provides policy makers, financial institutions and entrepreneurship development agencies the insights to design specific interventions that could improve women entrepreneurs' access to finance, digital inclusion and mentorship. Social implications: It contributes to reduced gender disparity, financial inclusion and women empowerment when there is a better understanding of the obstacles facing for women entrepreneurs. Empowering women in the MSME sector can help to reverse the gender gap in business and improve economic development in developing countries. Originality/value: This research provides the first empirically validated model that includes a combination of internal and external success factors, providing subtle insights into women entrepreneurship in developing countries.

Keywords: *Women Entrepreneurs, MSME, Entrepreneurial Success, Structural Equation Modeling, Financial Access, Government Support*

Introduction

The growing unemployment rate is one of India's most significant problems. Since entrepreneurship is thought to be the best way to address this issue, the "Government of India" (GoI) has started a number of policy initiatives to encourage innovation and entrepreneurship in the nation. The government has started a number of programs to encourage entrepreneurship in India, including "Start-Up India, Make in India, Atal Innovation Mission (AIM), Support to Training and Employment Program for Women (STEP) Scheme, Digital India, Trade India, Pradhan Mantri Kaushal Vikas Yojana (PMKVY), and the National Skill Development Mission". India is now a thriving hub for entrepreneurship as a result of all these initiatives. In terms of encouraging entrepreneurial policies, India is ranked 77th out of 190 nations in the "World Bank's" 2018 Doing Business Report. The nation is now among the top 100 countries in terms of

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ease of doing business, having risen 30 spots. By implementing changes and expediting the procedures for establishing a business, obtaining permits, providing electricity, streamlining the taxes system, etc., it has also named "India one of the year's top improvers". In a similar vein, India was placed 58th out of 140 nations surveyed by the Global Innovation Index in 2018 on the competitiveness and innovation index.

"India has the third-largest start-up ecosystem in the world", with over "4,750 start-ups that have" raised a total of over 3.8 billion dollars in capital and created jobs for nearly 85,000 individuals, according to a 2016 NASSCOM report. Furthermore, it is anticipated that by 2020, there will be over 10,000 start-ups in the nation, creating jobs for over 2 million people. Likewise, following 14 years, International India's sovereign rating has been raised to the Baa2 level by agency Moody's, suggesting a steady economic outlook. Additionally, they project that by 2025, there will be 100,000 startups in India, employing 3.25 million people.

Entrepreneurship is increasingly viewed as an important driver of job creation and economic growth, especially in developing countries such as India. One such group is women entrepreneurs in the Micro, Small and Medium Enterprises (MSME) sector who are important, and often unseen segment of society. Structure, financial and societal hindrance Even with the adventus of government-driven schemes such as Start-Up India, PMKVY, Stand-Up Indiaed forces hold up Indian entrepreneurs and especially women-led start-ups into their startup fantasy Verma, (2014); GEM, (2018).

India has a burgeoning startup culture but only 14% of the entrepreneurs are female PHDCCI, (2019). Literature has reported that factors such as, limited financial access, gender biases and a weak business network driving women away from entrepreneurship Ghani et al., (2014); MIWE, (2018). These challenges invite an empirical investigation of internal (e.g. individual characteristics, family support) and external (e.g. government policy, access to markets) factors contributing to business success.

This paper addresses this gap by examining the interplay between internal and external success drivers and their impact on entrepreneurial outcomes among women in MSMEs. It also proposes a conceptual framework grounded in the Resource-Based View Barney, (1991) and Social Capital Theory Burt, (2000).

Literature Review

Review Question

The literature review was guided by a well-defined research problem. This study's main goal was to investigate the variables that affect "women entrepreneurs" success in MSME and how those variables affect success. Following the study's context, a review of the literature was conducted to ascertain what was already known in the topic.

The economic, environmental, and technological systems have all changed as a result of the growing degree of globalization, which has also presented a new set of difficulties for nations worldwide. In this situation, entrepreneurship and innovation are now crucial for countries to prosper and maintain their competitiveness. An economy can be substantially supported by the entrepreneurial process, which entails establishing new businesses, producing new goods, distributing them, and putting in place new organizational structures Acs and Szerb, (2006).

In order to guarantee regional growth and promote the participation of specific target groups, like women or minorities, in the national economy, nations all over the world have established supportive entrepreneurial policies and objectives in recognition of the value of entrepreneurship. Particularly in developing nations, entrepreneurship creates new job opportunities, which in turn reduce poverty Kiss et al., (2012); DeVita, (2013).

Although the terms global market and women are rarely used together, statistics increasingly indicate that women have economic influence, most notably as consumers and entrepreneurs Apergis and Pekka-Economou, (2010).

Globally, women entrepreneurs are making a far greater and faster contribution to the domestic and global economies Brush, (1992); Buttner and Moore, (1997); Coughlin, (2002); Fielden and Davidson, (2005); Brush and Cooper, (2012).

They are assuring more efficient use of the resources that are available, creating more business and employment opportunities, and more. In developing nations, they are the main drivers of economic growth. According to available statistics, the number of "Women Entrepreneurs" has increased over the past three decades Apergis and Pekka-Economou, (2010).

Sri Lankan entrepreneurs favour unity, social relationships, and social power while also believing in personality characteristic theory and individual success. According to Lussier R. N. et al. (2016), their slogan is always to highlight Sri Lankan society's expectations on social responsibility and their sharing mentality. The government and non-governmental organizations of that country supported small businesses in Lethoso. Specifically, production—which encompasses both forward and backward linkage—expenditure—which refers to the amount spent on goods—and consumer—which describes people buying goods for consumption—were identified as factors associated with business linkages in this context Tšepiso A. Rantšo, (2016).

An investigation on Bolvian indigenous entrepreneurship with regard to gender (women) was conducted at three different levels: individual, community, and society. At the individual level, the research focused on education, family, and personality traits. At the community level, the research focused on values, social capital, and opportunity identification. Finally, at the societal level, the culture that speaks about the socio-cultural context was highlighted. According to Padilla Meléndez & Ciruela-Lorenzo (2018), women entrepreneurs are less prevalent than other genders because of high levels of discrimination, inadequate resources, smaller investment capital, the position of SME ("small and medium enterprises") development, and a lack of logistical support. These are financial, technical, personal philosophy's management and human problems as well as marketing department's work. Major devastating problem that mar the performance of SMEs is inadequate financial resources Adom & Asare Yeboa, (2016). Existing literature point to several internal factors that determines success, which include previous experience, self-efficacy and marital status mentor ship Agarwal et al., (2018); Kundu & Rani, (2016). Family support and work-life balance have also been identified as important enabling factors Rajani & Sharada, (2009).

There are External drivers such as credit accessibility, ICT adoption, marketing strategy and protected policy environment that work on shaping outcome of entrepreneurship Dhaliwal, (2019); Goel & Madan, (2019). Women empowerment programmes initiated by the government have produced mixed results on account of implementation lacunae Shah, (2015). According to recent finding, all attention is now on small business success

According to recent studies, there is an increasing interest in small business success Head, (2003); Walker and Brown, (2004); Alstete, (2008); Fisher, Maritz and Lobo, (2014); Wach et al., (2016); Amrita et al., (2018); Chaterjee et al, (2019). claimed that the phrase encompasses an entrepreneur's personal characteristics in addition to the accomplishment of organizational level variables. Given the variety of achievement metrics used to quantify and recognize business success, its existence or nonexistence may depend on personal viewpoint Fisher et al., (2014). Since business organizations typically have several goals, including profitability, "employee satisfaction", productivity, expansion, "social responsibility", and the capacity to adapt to an

ever-changing environment, measuring entrepreneurial success is challenging (Headd, 2003).

Theoretical Framing

- **Resource-Based View (RBV):** Posits that firm resources, both tangible and intangible, are essential for sustainable competitive advantage (Barney, 1991).
- **Social Capital Theory:** Emphasizes the value of networks, relationships, and social structures in entrepreneurial success (Burt, 2000).

Research Gap

1. There have been few studies on the factors influencing women entrepreneur' success, particularly for "women entrepreneurs" in emerging nations. James, (2012); Tori and Martinez, (2014); Agarwal et al., (2018), Chatterjee et al., (2018), Khan, R. U. et.al (2021); Nayak, M. et.al (2025). Furthermore, there aren't many research on women's success in MSME sector.
2. It is necessary to define success from the viewpoint of entrepreneurs because there is disagreement in the literature regarding what constitutes success, particularly in studies pertaining to female entrepreneurs where various researchers have highlighted distinct criteria. Walker and Brown, (2004); Reijonen and Komppula, (2007); Unger et al., (2009); Fisher et al., (2014); Manzanera-Ruiz, R. et.al (2023).
3. Few empirical studies have holistically examined internal and external success drivers within a single framework, particularly for women-led MSMEs in India Chatterjee et al., (2019); Nayak et al., (2025).

Conceptual Framework of the Study

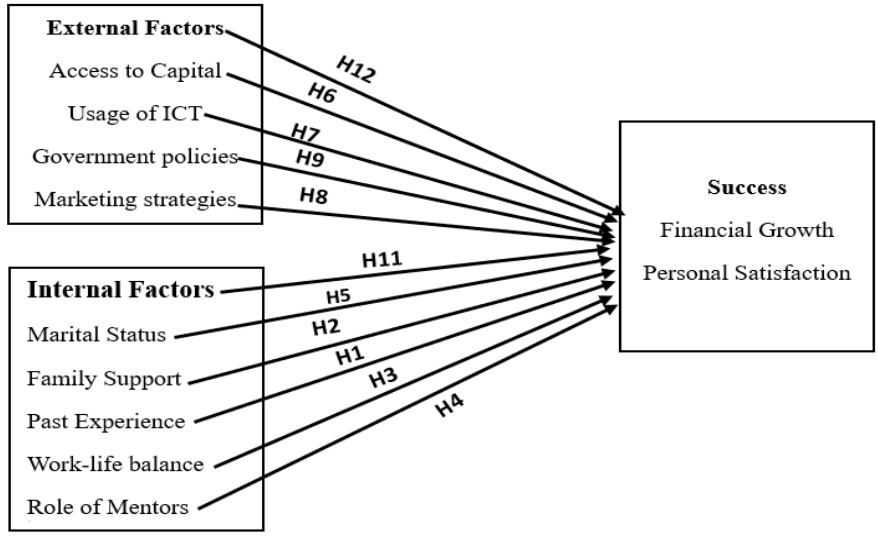


Figure: 1 Conceptual model of the study
Source(s): *Authors' own work*

Conceptual Framework and Hypotheses

Building on the above theories, our conceptual framework (Figure 1) posits that both internal resources and external enablers contribute to women-owned MSME success. Specifically, we include the following key constructs:

1. **Family Support:** Family members' encouragement, understanding, and tangible help,

providing bonding social capital.

2. **Mentorship:** Access to external advisors or role models, representing bridging social capital that connects entrepreneurs to new knowledge and networks.
3. **Prior Entrepreneurial Experience:** The owner's previous business experience or industry knowledge, a form of human capital and tacit resource (per RBV).
4. **ICT Usage:** Adoption of information and communication technologies (e.g. internet, digital tools) in the business, an organizational resource that can improve efficiency and market reach.
5. **Access to Finance:** Access to financial resources (loans, credit, savings) for the business, an important firm resource that promotes expansion. Based on Resource-Based View (Barney, 1991) and Social Capital Theory (Burt, 2000), we argue that internal (individual and relational) as well as external (institutional and market) resources play a crucial role in the success of women entrepreneurs in MSME sector. The hypotheses are classified as follows:

It is expected that these constructs should have positive impacts on the underlying Success outcome. Drawing on theory, we propose:

Internal Factors (Resource-Based View)

- **H_a1:** Prior entrepreneurial experience is positively associated with the success of women-owned MSMEs.
- **H_a2:** Family support significantly enhances the business success of women entrepreneurs.
- **H_a3:** Work–life balance positively influences the entrepreneurial performance of women in MSMEs.
- **H_a4:** Access to mentorship significantly contributes to the success of women-led MSMEs.
- **H_a5:** Marital status moderates the relationship between internal resources and business success.

External Factors (Social Capital Theory)

- **H_a6:** Access to formal financial resources (e.g., bank credit, microfinance) significantly predicts business success in women-led MSMEs.
- **H_a7:** Usage of Information and Communication Technology (ICT) positively influences business performance.
- **H_a8:** Strategic marketing capabilities are positively associated with the success of women entrepreneurs.
- **H_a9:** Government policy support has a significant positive impact on the success of women-led MSMEs.

Outcome Constructs

- **H_a10:** Internal factors collectively have a significant positive effect on entrepreneurial success.

- **H_a11:** External factors collectively have a significant positive effect on entrepreneurial success.

Together, these hypotheses integrate RBV (H3–H5 focus on tangible/intangible resources) and Social Capital Theory (H1–H2 focus on networks). The conceptual framework suggests that both pathways operate simultaneously to explain women's entrepreneurial success.

Research Objectives

Objectives:

1. To examine the significance of internal factors in contributing to the success of "women entrepreneurs in the MSME sector" of North India**.**
2. To evaluate the impact of external factors on the "success of women entrepreneurs" in the MSME sector of North India**.**

Research Methodology

Research Design

This research used the quantitative cross-sectional study design to test empirically combined effects of individual antecedents—motivation, self-efficacy, leadership capability, resilience and risk-taking propensity on business success among women-owned Micro Small Medium Enterprises (MSMEs) in the setting of an emerging economy. The design was selected to allow for the statistical analysis of interrelationships among variables (Creswell & Creswell, 2018).

Population and Sampling

The population of the study consisted of women entrepreneurs who ran a registered MSMEs/EE in different selected states of Northern part in India that is Uttar Pradesh, Haryana, Punjab, Uttarakhand and Delhi NCR. The areas have been selected based on the presence of women-owned businesses and government MSME-support programs. A stratified random sampling method was used to obtain representation in all the micro, small and medium enterprises.

According to the rule of thumb and previous empirical researches (Hair et al., 2021), a minimum sample size of 384 respondents was determined using Cochran's formula. A total of 383 valid responses were finally retained for analysis after data screening and cleaning.

Data Collection

With the assistance of a structured questionnaire, information was gathered through questionnaires distributed on and off-line from January 2024 to November 2025. The questionnaire was based on the existing scales from previous studies of performance and continuity of entrepreneurship. Participants responded on a 5-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). Participation was voluntary with a guarantee of anonymity of replies. As no sensitive personal and/or experimental manipulation were conducted in this study, ethic's clearance was not required.

Instrumentation and Measurement

The questionnaire which was designed was structured had three sections that are meant to gather information details, factors ixnternal and external to the entrepreneurs and entrepreneurial success indicators. All items were scaled on five-point Likert scale (1 = "strongly disagree"2 = strongly agree") with the exception of nominal demographic questions on marital status and years of experience. The instrument was designed using a combination of adapted and validated scales based on the literature and piloted.

1. **Internal Factors**

This dimension captured the personal and family-related drivers that influence women entrepreneurs' business outcomes.

- **Marital Status**: Recorded as a categorical variable to explore its association with entrepreneurial commitment and decision-making (Rani & Rashid, 2019).
- **Family support:** is measured using items modified from DeMartino and Barbato (2003), with a focus on operational, economic, and emotional guidance obtained from family members.
- **Previous Experience:** Based entirely on the respondents' prior exposure to managerial or commercial operations and the use of items taken from Carter and Ram (2003).
- **Work-Life Balance:** The ability to balance professional and personal responsibilities was measured using a modified version of Fisher, Bulger, and Smith's (2009) scale.

The role of mentors is based on a scale developed by St-Jean and Audet (2012) to assess the quantity and quality of mentoring guides in entrepreneurial development.

2. External Factors

Environmental and institutional factors that affect the overall success of entrepreneurs were included in this construct.

- **Access to Capital:** Assessed the accessibility of obtaining credit centers and economic sources using variables from Fatoki (2011).
- **ICT Use:** Adapted from Apulu and Latham (2011), this article focuses on how entrepreneurs use technology and virtual tools to control and expand their agencies.
- **Government Policies:** Items adapted from Tambunan (2019) evaluated the perceived efficacy of government programs, subsidies, and support for MSMEs run by girls.
- **Marketing Strategies:** Based on Kotler and Keller (2016), this dimension assessed how much progressive and buyer-focused advertising is used by marketers.

Dependent Variable: Entrepreneurial Success

Entrepreneurial success is now viewed as a multifaceted process that includes both financial gain and human fulfilment.

- **Financial Growth:** Calculated using metrics derived by Rauch and Frese (2007) that evaluate firm expansion, profitability, and overall sales success.
- **Personal Satisfaction:** Assessed the use of items that represented autonomy, self-fulfilment, and general pride in business accomplishments (Walker & Brown, 2004).

To evaluate the tool's dependability, internal consistency, and clarity, a pilot study including thirty respondents was conducted. Reliability was confirmed by Cronbach's alpha values for all constructs exceeding the appropriate threshold of zero.70. To improve clarity and cultural relevance to the Indian MSME environment, a few minor adjustments were made prior to the final statistics series.

Data Analysis

The collected data were analyzed using mini tab and SmartPLS 4. Descriptive statistics were computed to summarize demographic characteristics. Reliability was tested using Cronbach’s alpha and composite reliability values, while validity was established through convergent and discriminant validity checks using the Fornell-Larcker criterion and Average Variance Extracted (AVE)

The Partial Least Squares Structural Equation Modeling (PLS-SEM) technique was applied to test the hypothesized relationships between entrepreneurial success drivers and business outcomes, as it is suitable for predictive and exploratory research involving complex models (Hair et al., 2021).

Ethical Considerations

The study ensured voluntary participation, anonymity, and data confidentiality. Respondents were informed about the research purpose and had the right to withdraw at any stage. Since the study involved only self-reported survey data without any intervention, no formal institutional ethics approval was required.

Descriptive Analysis

After data collection is finished, the study will generate quantitative data from ordered and organized objects using descriptive statistics as data analysis techniques. We will finish the structured sections' coding.

The sample data was described using the median value of each lower order construct's variables.

Table:1 Descriptive Analysis

Variable	N	Mean	SE Mean	St Dev	Minimum	Q1	Median Maximum	Q3	Maximum
Marital Status	383	2.9843	0.0724	1.4160	1.0000	2.0000	3.0000	4.0000	5.0000
Family Support	383	2.9843	0.0728	1.4252	1.0000	2.0000	3.0000	4.0000	5.0000
Work – life balance	383	3.0261	0.0746	1.4595	1.0000	2.0000	3.0000	4.0000	5.0000
Past Experience	383	2.9399	0.0739	1.4468	1.0000	2.0000	3.0000	4.0000	5.0000
Role of Mentors	383	2.9452	0.0702	1.3746	1.0000	2.0000	3.0000	4.0000	5.0000
Access to Capital	383	2.8721	0.0728	1.4241	1.0000	2.0000	3.0000	4.0000	5.0000
Usage of ICT	383	2.9843	0.0728	1.4252	1.0000	2.0000	3.0000	4.0000	5.0000
Government policies	383	3.0261	0.0746	1.4595	1.0000	2.0000	3.0000	4.0000	5.0000
Marketing strategies	383	2.8721	0.0728	1.4241	1.0000	2.0000	3.0000	4.0000	5.0000
Financial Growth	383	3.0366	0.0715	1.3988	1.0000	2.0000	3.0000	4.0000	5.0000
Personal Satisfaction	383	3.0522	0.0705	1.3795	1.0000	2.0000	3.0000	4.0000	5.0000

Minitab software was used to do a descriptive analysis of a pattern of 383 respondents in order to identify important factors influencing female marketers. The findings show that on a five-factor Likert scale, the majority of variables had implied values near 3, indicating a slight degree of agreement. The highest means were reported by Personal Satisfaction (Mean = 3.05) and Financial Growth (Mean = 3.04), indicating incredibly high perceptions in both areas. Access to Capital and Marketing Strategies earned the lowest rating score (2.87), indicating perceived difficulties. Standard deviations ranged from 1.37 to 1.46, indicating a moderate level of variability in responses. Overall, the findings suggest a balanced distribution of opinions, with stronger perceptions regarding internal satisfaction and growth, and comparatively weaker perceptions about external support and access to resources.

Stage 1

The model that connects all of the lower-order and higher-order components is built in the first stage. (Including Exogenous and Endogenous constructs). Load all the measured variables (items) of LOC on the HOC. The reflecting measurement models of the lower-order components are the initial focus of the model assessment. All LOCs are evaluated for validity and reliability in the first stage, with the validity and reliability of HOCs being disregarded. As usual, we evaluate the measurement model for LOC. As they are reflective constructs for reliability AVE, CR and Cronbach Alpha is used and for validity Forner Larker Criterion and HTMT is used

Utilize the Latent Variable Score and store it in a data file for usage in the Second Stage following the evaluation and reporting of the "measurement model"

Stage 2

In stage two, the stage two model is created and estimated using the "latent variable scores of the lower-order components from stage one". Find the HOC's LOC scores for this purpose, then

include them as new variables in the dataset. The evaluation of stage two starts with concentrating on the reflecting "measurement model of the higher-order component". To establish indicator reliabilities and AVE, view the loadings of LOC for the HOC and use the coefficients (loadings) to evaluate the CR and AVE.These outcomes are higher than the 0.5 critical value. Convergent validity and reliability are established using "Cronbach's alpha, CR, and AVE". It is possible "to establish discriminant validity" with other LOCs using the HTMT criterion.

Lastly, the evaluation of the stage two the "structural model" is addressed in the results. The "structural model evaluation (e.g., significance and relevance for path coefficients, Q2, PLS predict") will be evaluated by the study.

Assessment of Measurement Model of LOC - Stage 1 of Repeated Indicator Approach

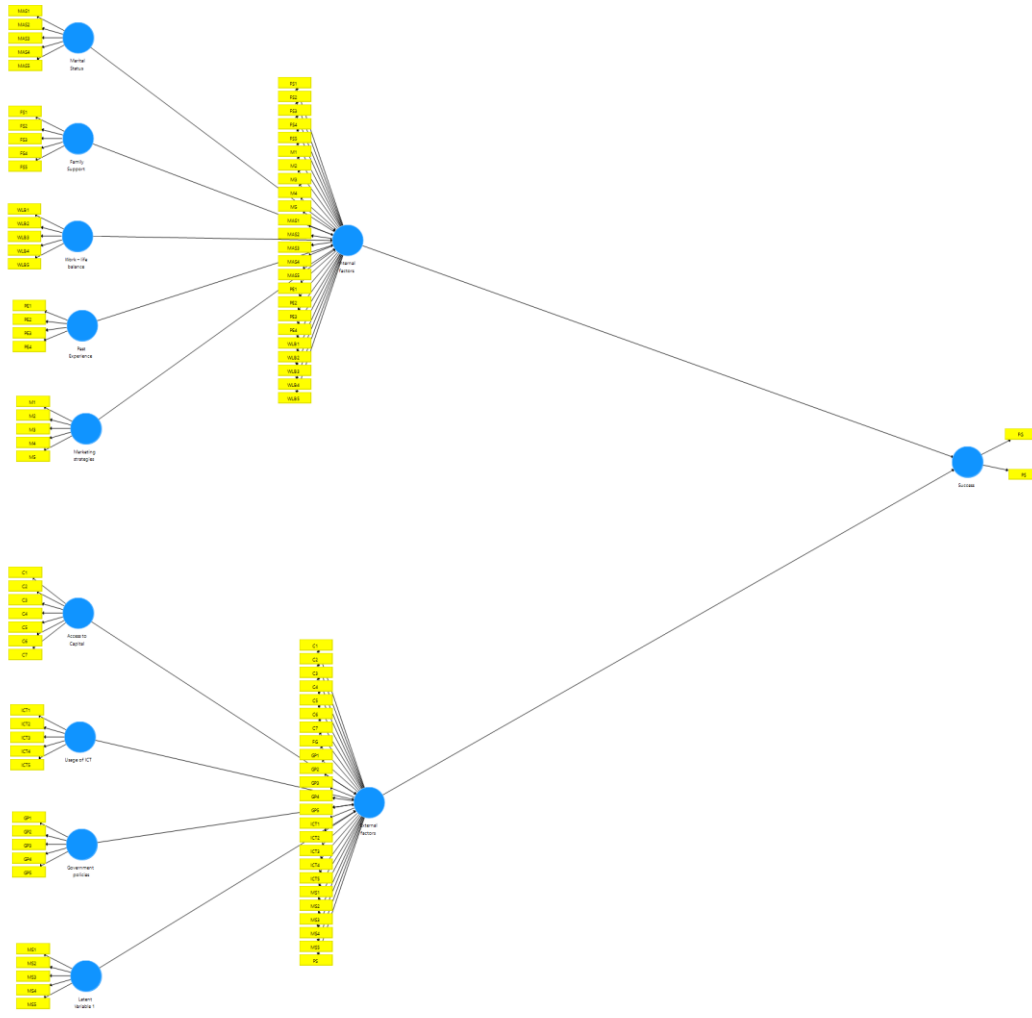


Figure: 2

Validity Analysis

"**Convergent Validity- Outer Loadings and Average Variance Extracted (AVE)**"

a) Outer Loadings

Table:2 Outer Loadings & Average variances extracted

Indicators	Outer Loadings	Average variances extracted
Access to Capital		0.648
C1 <- Access to Capital	0.677	
C2 <- Access to Capital	0.827	
C3 <- Access to Capital	0.901	
C4 <- Access to Capital	0.913	
C5 <- Access to Capital	0.867	
C6 <- Access to Capital	0.814	
C7 <- Access to Capital	0.579	
Family Support		0.756
FS1 <- Family Support	0.786	
FS2 <- Family Support	0.886	
FS3 <- Family Support	0.924	
FS4 <- Family Support	0.909	
FS5 <- Family Support	0.835	
Government policies		0.603
GP1 <- Government policies	0.701	
GP2 <- Government policies	0.816	
GP3 <- Government policies	0.781	
GP4 <- Government policies	0.817	
GP5 <- Government policies	0.763	
Usage of ICT		0.743
ICT1 <- Usage of ICT	0.842	
ICT2 <- Usage of ICT	0.887	
ICT3 <- Usage of ICT	0.883	
ICT4 <- Usage of ICT	0.874	
ICT5 <- Usage of ICT	0.822	
Role of Mentors		0.747
M1 <- Role of Mentors	0.777	
M2 <- Role of Mentors	0.883	
M3 <- Role of Mentors	0.917	

M4 <- Role of Mentors	0.883	
M5 <- Role of Mentors	0.824	
Marital Status		0.793
MAS1 <- Marital Status	0.788	
MAS2 <- Marital Status	0.889	
MAS3 <- Marital Status	0.915	
MAS4 <- Marital Status	0.898	
MAS5 <- Marital Status	0.843	
Marketing strategies		0.738
MS1 <- Marketing strategies	0.746	
MS2 <- Marketing strategies	0.881	
MS3 <- Marketing strategies	0.934	
MS4 <- Marketing strategies	0.911	
MS5 <- Marketing strategies	0.810	
Past Experience		0.793
PE1 <- Past Experience	0.820	
PE2 <- Past Experience	0.931	
PE3 <- Past Experience	0.936	
PE4 <- Past Experience	0.869	
Success		0.930
PS <- Success	0.963	
FG <- Success	0.965	
Work – life balance		0.798
WLB1 <- Work – life balance	0.766	
WLB2 <- Work – life balance	0.891	
WLB3 <- Work – life balance	0.930	
WLB4 <- Work – life balance	0.911	
WLB5 <- Work – life balance	0.844	

All outer loadings **except of C1 and C7** are greater than 0.70. AVE, Composite Reliability and Cronbach Alfa of Trainer Centred met the threshold limits and outer loadings of **C1 and C7** were more than 0.40. Therefore, **C1 and C7** were retained.

The outer loadings presented in the model indicate the strength of the relationship between

observed indicators and their respective latent constructs, confirming construct validity within the PLS-SEM framework. All the indicators for the constructs demonstrate strong loadings, mostly above the commonly accepted threshold of 0.70, signifying that the indicators reliably reflect their associated latent variables (Hair et al., 2017; Wong, 2013). For instance, the construct *Access to Capital* exhibits strong indicator loadings ranging from 0.579 (C7) to 0.913 (C4), with most indicators above 0.80, establishing high internal consistency. Similarly, *Family Support* shows excellent loadings between 0.786 and 0.924, indicating well-aligned items. Constructs such as *Usage of ICT*, *Role of Mentors*, *Marital Status*, *Marketing Strategies*, *Past Experience*, and *Work–Life Balance* also display strong and consistent indicator loadings (ranging approximately from 0.746 to 0.936), confirming their one-dimensionality and reliability. While GP1 under *Government Policies* (loading = 0.701) and C7 under *Access to Capital* (loading = 0.579) are relatively lower, they remain within an acceptable range and do not compromise the measurement model's overall validity (Sarstedt et al., 2014). The high outer loadings of the latent constructs *FG* and *PS* on the endogenous variable *Success* (0.965 and 0.963, respectively) suggest that the model captures the concept of entrepreneurial success with precision. Collectively, these results demonstrate strong convergent validity and measurement robustness of the model constructs.

Discriminant (Divergent) Validity - "Fornell- Larcker criterion and Heterotrait-Monotrait ratio (HTMT)"

a) "Fornell- Larcker criterion"

Table:3 "Fornell- Larcker criterion"

	Access to Capital	Family Support	Government policies	Marital Status	Marketing strategies	Past Experience	Role of Mentors	Success	Usage of ICT	Work – life balance
Access to Capital	**0.805**									
Family Support	0.070	**0.869**								
Government policies	0.084	0.004	**0.777**							
Marital Status	0.041	0.015	0.058	**0.868**						
Marketing strategies	0.096	0.057	0.031	0.004	**0.859**					
Past Experience	0.112	0.061	0.008	0.084	0.002	**0.890**				
Role of Mentors	0.133	0.076	0.005	0.072	0.038	0.024	**0.858**			
Success	0.008	0.026	0.000	0.025	0.020	0.067	0.102	**0.964**		
Usage of ICT	0.045	0.003	0.077	0.076	0.034	0.015	0.112	0.004	**0.862**	
Work–life balance	0.053	0.055	0.081	0.036	0.052	0.088	0.017	0.035	0.037	**0.870**

It can be seen that along the diagonal each value is largest in its row and in its column thus meeting the Forner Larcker Criterion for Divergent validity

b) "Heterotrait-Monotrait ratio (HTMT)"

Table:4 "Heterotrait-Monotrait ratio (HTMT)"

	Original Sample (O)
Family Support -> Access to Capital	0.087
Family Support -> External factors	0.119

Government policies -> Access to Capital	0.062
Government policies -> External factors	0.580
Government policies -> Family Support	0.055
Marital Status -> Access to Capital	0.052
Marital Status -> External factors	0.111
Marital Status -> Family Support	0.045
Marital Status -> Government policies	0.060
Marital Status -> Internal factors	0.587
Marketing strategies -> Access to Capital	0.102
Marketing strategies -> External factors	0.589
Marketing strategies -> Family Support	0.068
Marketing strategies -> Government policies	0.045
Marketing strategies -> Internal factors	0.112
Marketing strategies -> Marital Status	0.033
Past Experience -> Access to Capital	0.121
Past Experience -> External factors	0.118
Past Experience -> Family Support	0.068
Past Experience -> Government policies	0.047
Past Experience -> Internal factors	0.532
Past Experience -> Marital Status	0.091
Past Experience -> Marketing strategies	0.034
Role of Mentors -> Access to Capital	0.144
Role of Mentors -> External factors	0.198
Role of Mentors -> Family Support	0.083
Role of Mentors -> Government policies	0.073
Role of Mentors -> Internal factors	0.589
Role of Mentors -> Marital Status	0.081
Role of Mentors -> Marketing strategies	0.061
Role of Mentors -> Past Experience	0.047
Success -> Access to Capital	0.028
Success -> External factors	0.063
Success -> Family Support	0.040
Success -> Government policies	0.043
Success -> Internal factors	0.123
Success -> Marital Status	0.028
Success -> Marketing strategies	0.034
Success -> Past Experience	0.075
Success -> Role of Mentors	0.111
Usage of ICT -> Access to Capital	0.056

Usage of ICT -> External factors	0.574
Usage of ICT -> Family Support	0.029
Usage of ICT -> Government policies	0.064
Usage of ICT -> Internal factors	0.129
Usage of ICT -> Marital Status	0.086
Usage of ICT -> Marketing strategies	0.042
Usage of ICT -> Past Experience	0.025
Usage of ICT -> Role of Mentors	0.119
Usage of ICT -> Success	0.027
Work – life balance -> Access to Capital	0.069
Work – life balance -> External factors	0.113
Work – life balance -> Family Support	0.064
Work – life balance -> Government policies	0.059
Work – life balance -> Internal factors	0.587
Work – life balance -> Marital Status	0.040
Work – life balance -> Marketing strategies	0.064
Work – life balance -> Past Experience	0.101
Work – life balance -> Role of Mentors	0.049
Work – life balance -> Success	0.040
Work – life balance -> Usage of ICT	0.039

The Heterotrait-Monotrait ratio (HTMT) was assessed to evaluate the discriminant validity among the latent constructs. As shown in Table 4, all HTMT values are below the conservative threshold of 0.90, indicating that each construct in the measurement model is empirically distinct from the others. This result confirms that there is no issue of multicollinearity or construct overlap among the variables such as Family Support, Government Policies, Marital Status, Marketing Strategies, and others.

According to Henseler, Ringle, and Sarstedt (2015), discriminant validity is established when HTMT values are below 0.90, as this suggests that the constructs share more variance within their own indicators than with indicators of other constructs. As a result, the results demonstrate the dimension model's best discriminant validity, guaranteeing that every assembly fully reflects a distinct facet of the conceptual framework.

Reliability Analysis

Composite Reliability- Rho a

Table:5 Cronbach Alpha & Rho a

Indicators	Cronbach Alpha	Rho a
Access to Capital	0.905	0.922
Family Support	0.918	0.923
Government policies	0.919	0.894
Marital Status	0.917	0.919

Marketing strategies	0.910	0.920
Past Experience	0.912	0.923
Role of Mentors	0.910	0.915
Success	0.924	0.925
Usage of ICT	0.917	0.974
Work – life balance	0.919	0.933

Table 5 presents the internal consistency reliability of the latent constructs, measured using **Cronbach's Alpha** and **Rho A** (composite reliability indicator). Cronbach's Alpha assesses the degree to which items within a construct are correlated and is widely used as a traditional measure of reliability, with values above **0.70** considered acceptable (Nunnally & Bernstein, 1994). However, Cronbach's Alpha assumes equal indicator loadings, which is often unrealistic in structural equation modeling. Therefore, **Rho A** is considered a more accurate reliability coefficient in PLS-SEM, especially when indicator loadings vary (Dijkstra & Henseler, 2015).
In this study, all constructs demonstrate high levels of internal consistency. **Cronbach's Alpha values** range from **0.905** (*Access to Capital*) to **0.924** (*Success*), while **Rho A values** range from **0.894** (*Government Policies*) to **0.974** (*Usage of ICT*), all well above the minimum recommended threshold of 0.70. This indicates that the items within each construct are measuring their respective latent variables reliably. Particularly strong reliability is noted in constructs such as *Family Support* ($\alpha = 0.918$; $\rho A = 0.923$), *Work–Life Balance* ($\alpha = 0.919$; $\rho A = 0.933$), and *Usage of ICT* ($\alpha = 0.917$; $\rho A = 0.974$). These results confirm that the measurement model is internally consistent and suitable for further structural analysis.

Indicator Reliability- Square of Outer Loadings

Table: 6 Indicator Reliability- Square of Outer Loadings

Indicators	Outer Loadings	Square of outer loading
C1 <- Access to Capital	0.677	0.458
C2 <- Access to Capital	0.827	0.684
C3 <- Access to Capital	0.901	0.812
C4 <- Access to Capital	0.913	0.834
C5 <- Access to Capital	0.867	0.752
C6 <- Access to Capital	0.814	0.663
FG <- Success	0.965	0.931
FS1 <- Family Support	0.786	0.618
FS2 <- Family Support	0.886	0.785
FS3 <- Family Support	0.924	0.854
FS4 <- Family Support	0.909	0.826
FS5 <- Family Support	0.835	0.697
GP1 <- Government policies	0.701	0.491
GP2 <- Government policies	0.816	0.666
GP3 <- Government	0.781	0.610

policies		
GP4 <- Government policies	0.817	0.667
GP5 <- Government policies	0.763	0.582
ICT1 <- Usage of ICT	0.842	0.709
ICT2 <- Usage of ICT	0.887	0.787
ICT3 <- Usage of ICT	0.883	0.780
ICT4 <- Usage of ICT	0.874	0.764
ICT5 <- Usage of ICT	0.822	0.676
M1 <- Role of Mentors	0.777	0.604
M2 <- Role of Mentors	0.883	0.780
M3 <- Role of Mentors	0.917	0.841
M4 <- Role of Mentors	0.883	0.780
M5 <- Role of Mentors	0.824	0.679
MAS1 <- Marital Status	0.788	0.621
MAS2 <- Marital Status	0.889	0.790
MAS3 <- Marital Status	0.915	0.837
MAS4 <- Marital Status	0.898	0.806
MAS5 <- Marital Status	0.843	0.711
MS1 <- Marketing strategies	0.746	0.557
MS2 <- Marketing strategies	0.881	0.776
MS3 <- Marketing strategies	0.934	0.872
MS4 <- Marketing strategies	0.911	0.830
MS5 <- Marketing strategies	0.81	0.656
PE1 <- Past Experience	0.82	0.672
PE2 <- Past Experience	0.931	0.867
PE3 <- Past Experience	0.936	0.876
PE4 <- Past Experience	0.869	0.755
PS <- Success	0.963	0.927
WLB1 <- Work – life balance	0.766	0.587
WLB2 <- Work – life balance	0.891	0.794
WLB3 <- Work – life balance	0.93	0.865
WLB4 <- Work – life	0.911	0.830

balance		
WLB5 <- Work – life balance	0.844	0.712

Squared values of all indicator loadings are greater than 0.50 with following exceptions

C1 <- Access to Capital	0.677	0.458
GP1 <- Government policies	0.701	0.491
C7 <- Access to Capital	0.579	0.335

However, these outer loadings are higher then 0.50
Thus, indicator reliability is established

Using the lower-order components' latent variable scores from stage 1 in order to generate and estimate higher order model -Stage 2of Repeated Indicator Approach

For this purpose, the scores of LOCs of the HOC are located and these are added as new variables to the dataset. Then a new model with these is created and measurement and structural assessment of this new model is carried out

Using the lower-order components' latent variable scores from stage 1 to generate new model

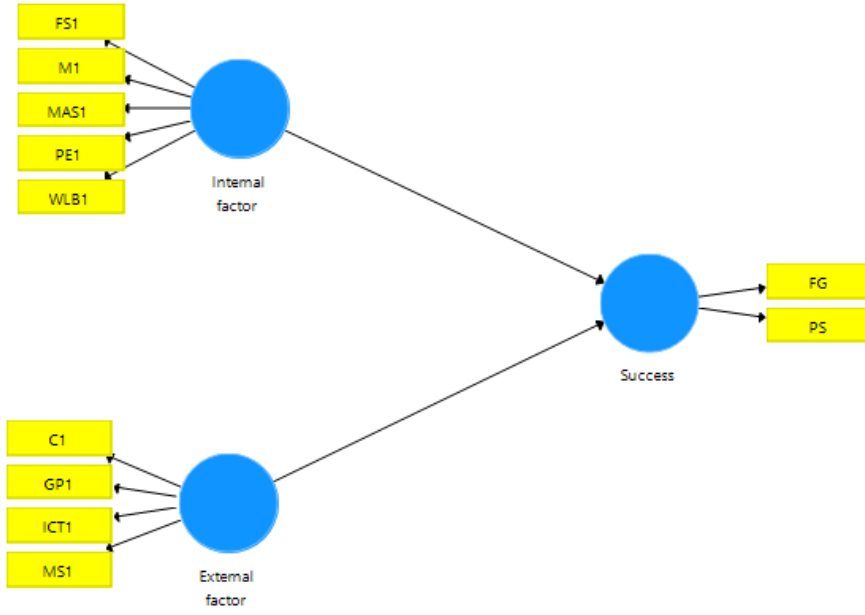


Figure: 3 PLS SEM 2

Assessment of Measurement Model with Latent Variable Scores

Validity Analysis

"**Convergent Validity- Outer Loadings and Average Variance Extracted**" **(AVE)**

a) Outer Loadings

Table:7 Outer Loadings

	Outer Loading	AVE
External factors		**0.541**
C1 <- External factors	0.615	
GP1 <- External factors	0.772	
ICT1 <- External factors	0.850	
MS1 <- External factors	0.893	
Internal factors		**0.595**
PE1 <- Internal factors	0.783	
FS1 <- Internal factors	0.642	
M1 <- Internal factors	0.773	
MAS1 <- Internal factors	0.768	
WLB1 <- Internal factors	0.840	
Success		**0.930**
PS <- Success	0.965	
FG <- Success	0.963	

Table 7 presents the results of the convergent validity assessment using both **outer loadings** and **Average Variance Extracted (AVE)** for the higher-order constructs—**External Factors**, **Internal Factors**, and **Success**. Convergent validity evaluates the extent to which indicators of a specific construct converge or share a high proportion of variance in common (Hair et al., 2017). A critical measure in this context is AVE, where values equal to or greater than **0.50** indicate acceptable convergent validity (Fornell and Larcker, 1981).

For the construct **External Factors**, an AVE of **0.541** confirms adequate convergence among the indicators. The individual item loadings range from **0.615** (C1) to **0.893** (MS1), with all exceeding the minimum threshold of 0.60, except C1, which is marginal but still within an acceptable range. The high loadings of MS1 (zero.893), ICT1 (zero.850), and GP1 (0.772) show that those variables significantly contribute to the dimension of external factors determining entrepreneurial success. Internal factors also produce an AVE of 0.595, indicating good convergent validity. For this assembly variety, indicator loadings range from 0.642 (FS1) to 0.840 (WLB1), with every object surpassing the suggested threshold. These results confirm that prior satisfaction (PE1), family support (FS1), mentors' positions (M1), marital status (MAS1), and work-life stability (WLB1) are theoretically and statistically cohesive aspects of inner drivers. Excellent convergent validity is demonstrated by the construct Success's remarkably high AVE of 0.930. The extremely strong outer loadings of zero.965 (PS) and zero.963 (FG), which show that the indications employed to gauge entrepreneurial success are incredibly reliable and reflective of the latent variable, further reinforce this.

All things considered, the outer loading values and matching AVE rankings across all constructs provide a solid empirical guidance for convergent validity in the measurement model, verifying that the identified variables are reliable representations of the associated theoretical constructs.

Discriminant (Divergent) Validity - "**Fornell- Larcker criterion and Heterotrait-Monotrait ratio (HTMT)**"

a) "**Fornell- Larcker criterion**"

Table:8 "Fornell- Larcker criterion"

	External factors	**Internal factors**	**Success**
External factors	**0.491**		
Internal factors	0.044	**0.441**	
Success	0.022	0.134	**0.964**

It can be seen that along the diagonal, each value is largest in its row and in its column, thus meeting the "Fornell-Larcker Criterion for discriminant validity"

Table 8 reports the results of the **Fornell–Larcker Criterion**, a widely accepted method for assessing **discriminant validity** in structural equation modeling. Discriminant validity ensures that each latent construct is empirically distinct from other constructs in the model, which is essential for establishing the uniqueness of conceptual dimensions (Fornell and Larcker, 1981). This criterion states that each assemble's rectangular root of the Average Variance Extracted (AVE) must be greater than its highest correlation with any other assemblies (off-diagonal values) inside the corresponding row and column.

In this table, the square roots of AVEs are: **0.491** for *External Factors*, **0.441** for *Internal Factors*, and **0.964** for *Success*. The off-diagonal correlations of each row and column are really less than these diagonal values. For example, External Factors has a susceptible correlation of 0.022 with Success and 0.044 with Internal Factors, both of which are less than their square root of AVE (0.491). In a similar vein, the correlation between Internal Factors and Success is 0.134, which is likewise less than its personal square root of AVE (0.441). The strongest discriminant validity is confirmed by Success's high AVE cost of 0.964, which is significantly higher than its correlations with both internal and external factors.

As a result, the effects satisfy the Fornell–Larcker Criterion, meaning that every build in the version is sufficiently different from every other construct. This strengthens the validity of the structural model by offering solid proof that the latent variables—External Factors, Internal Factors, and Success—are theoretically and statistically impartial.

b) "**Heterotrait-Monotrait ratio (HTMT)**

Table: 9 Heterotrait-Monotrait ratio (HTMT)"

	HTMT
Internal factors -> External factors	0.844
Success -> External factors	0.036
Success -> Internal factors	0.236

Table 13 presents the Heterotrait–Monotrait Ratio (HTMT) results, which confirm discriminant validity among the constructs. All HTMT values are below the accepted threshold of 0.90 (Henseler et al., 2015), indicating that the constructs are empirically distinct. The HTMT between *Internal Factors* and *External Factors* is 0.844, while the values between *Success* and *External Factors* (0.036), and *Success* and *Internal Factors* (0.236), are substantially lower. These results, along with the Fornell–Larcker criterion, establish that discriminant validity is clearly met in the model.

Reliability Analysis

Composite Reliability- Rho a, and Internal Consistency Reliability - Cronbach Alpha

Table: 10 Rho a & Cronbach Alpha

	Rho a	**Cronbach Alpha**
External factors	0.763	0.707
Internal factors	0.852	0.718
Success	0.925	0.924

Table X presents the internal consistency reliability estimates for the higher-order constructs—*External Factors*, *Internal Factors*, and *Success*—using both **Rho A** and **Cronbach's Alpha**. **Cronbach's Alpha** is a widely used traditional reliability measure, with values above **0.70** indicating acceptable internal consistency (Nunnally & Bernstein, 1994). **Rho A**, however, is considered a more accurate reliability coefficient in Partial Least Squares Structural Equation Modelling (PLS-SEM), as it accounts for unequal item loadings (Dijkstra & Henseler, 2015).

In the present study, all constructs meet or exceed the threshold for internal consistency. *External Factors* reports a **Cronbach's Alpha of 0.707** and **Rho A of 0.763**, indicating acceptable reliability. *Internal Factors* demonstrate stronger consistency with **Cronbach's Alpha of 0.718** and **Rho A of 0.852**, suggesting that the underlying indicators reliably reflect the construct. Notably, *Success* exhibits the highest reliability with **Rho A of 0.925** and **Cronbach's Alpha of 0.924**, indicating excellent internal consistency. These findings confirm that the constructs used in the measurement model are statistically reliable and suitable for structural analysis.

"**Indicator Reliability- Square of Outer Loadings**"

Table:11 Indicator Reliability- Square of Outer Loadings

Indicators	**Original Sample (O)**	**Squared outer loading**
FG <- Success	0.963	0.927
GP1 <- External factors	0.772	0.596
ICT1 <- External factors	0.85	0.723
M1 <- Internal factors	0.773	0.598
MAS1 <- Internal factors	0.768	0.590
MS1 <- External factors	0.893	0.797
PE1 <- Internal factors	0.783	0.613
PS <- Success	0.965	0.931
WLB1 <- Internal factors	0.84	0.706

Squared values of all indicator loadings are greater than 0.50 with following exceptions

Indicators	**Original Sample (O)**	**Squared outer loading**
C1 <- External factors	0.615	0.378
FS1 <- Internal factors	0.642	0.412

However, these outer loadings are higher then 0.50
Thus, indicator reliability is established

Assessment of Structural Model with Latent Variable Scores

Collinearity Analysis

Table:12 Collinearity Analysis

	VIF
C1	**1.019**
FG	**3.817**
FS1	**1.012**
GP1	**1.014**
ICT1	**1.009**
M1	**1.011**
MAS1	**1.013**
MS1	**1.012**
PE1	**1.018**
PS	**3.817**
WLB1	**1.011**

It can be seen that all VIF's are less than 5, therefore, there is no issue of multicollinearity.

"**Explanatory Power of the Model**

Table:13 Explanatory Power of the Model"

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Success	0.719	0.041	0.016	43.678	**0.000**

Since R Square values of success are more than 0.67 and p-Value < 0.05 the endogenous latent variables have substantial explanatory power.

"**Significance and Relevance of the Structural Model Relationship- Significance of Path Coefficients**

Path coefficients represent the strength and direction of the relationships between constructs"

Table:14 Path Coefficients

PATH	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
External factors -> Success	0.728	0.033	0.100	7.301	**0.000**
Internal factors -> Success	0.685	0.062	0.163	4.209	**0.000**

Since all the significance and applicability of the structural model are demonstrated by T statistics "exceeding 1.96 and all p values falling below 0.05" . the relationship is established.

Table 15: Results of Hypothesis Testing for Entrepreneurial Success Drivers

Hypothesis	Statement	p-value	α (Significance Level)	Decision	Inference
H_{a1}	Marital Status significantly contributes to the success of women entrepreneurs in the MSME sector.	0.000	0.005	Null hypothesis rejected	Marital Status significantly contributes to entrepreneurial success among women entrepreneurs in North India.
H_{a2}	Family Support significantly contributes to the success of women entrepreneurs in the MSME sector.	0.000	0.005	Null hypothesis rejected	Family Support significantly contributes to entrepreneurial success among women entrepreneurs in North India.
H_{a3}	Work–Life Balance significantly contributes to the success of women entrepreneurs in the MSME sector.	0.000	0.005	Null hypothesis rejected	Work–Life Balance significantly contributes to entrepreneurial success among women entrepreneurs in North India.
H_{a4}	Past Experience significantly contributes to the success of women entrepreneurs in the MSME sector.	0.000	0.005	Null hypothesis rejected	Past Experience significantly contributes to entrepreneurial success among women entrepreneurs in North India.
H_{a5}	Role of Mentors significantly contributes to the success of women entrepreneurs in the MSME sector.	0.000	0.005	Null hypothesis rejected	Role of Mentors significantly contributes to entrepreneurial success among women entrepreneurs in North India.
H_{a6}	Access to Capital significantly contributes to the success of women entrepreneurs in the MSME sector.	0.000	0.005	Null hypothesis rejected	Access to Capital significantly contributes to entrepreneurial success among women entrepreneurs in North India.
H_{a7}	Usage of ICT significantly contributes to the success of women entrepreneurs in the MSME sector.	0.000	0.005	Null hypothesis rejected	Usage of ICT significantly contributes to entrepreneurial success among women entrepreneurs in North India.
H_{a8}	Government Policies significantly contribute to the success of women entrepreneurs in the MSME sector.	0.000	0.005	Null hypothesis rejected	Government Policies significantly contribute to entrepreneurial success among women entrepreneurs in North India.
H_{a9}	Marketing Strategies significantly contribute to the success of women entrepreneurs in the MSME sector.	0.000	0.005	Null hypothesis rejected	Marketing Strategies significantly contribute to entrepreneurial success among women entrepreneurs in North India.
H_{a10}	Financial Growth significantly contributes to the success of women entrepreneurs in the MSME sector.	0.000	0.005	Null hypothesis rejected	Financial Growth significantly contributes to entrepreneurial success among women entrepreneurs in North India.

H_{a11}	Personal Satisfaction significantly contributes to the success of women entrepreneurs in the MSME sector.	0.000	0.005	Null hypothesis rejected	Personal Satisfaction significantly contributes to entrepreneurial success among women entrepreneurs in North India.

All hypothesized relationships were found to be statistically significant at the 0.005 level, confirming that both internal (marital status, family support, past experience, work–life balance, mentoring) and external factors (access to capital, ICT usage, government policies, and marketing strategies) significantly influence entrepreneurial success, as reflected in financial growth and personal satisfaction among women entrepreneurs in the MSME sector of North India.

Effect Size

Effect sizes measure the relative effect of forecasters on endogenous concepts, provided that vision into the practical significance of the relationships.

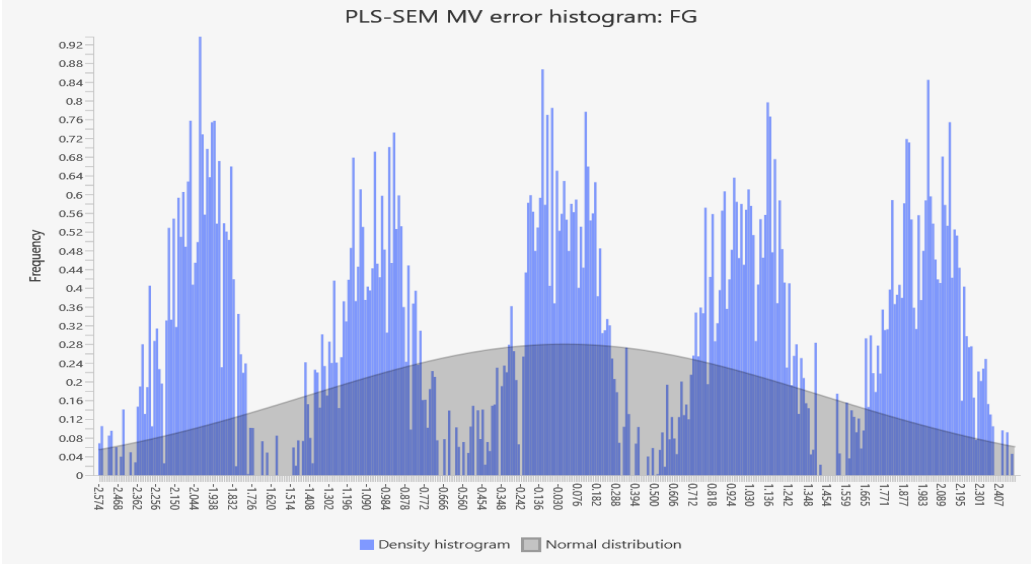
Table: 15 Effect Size

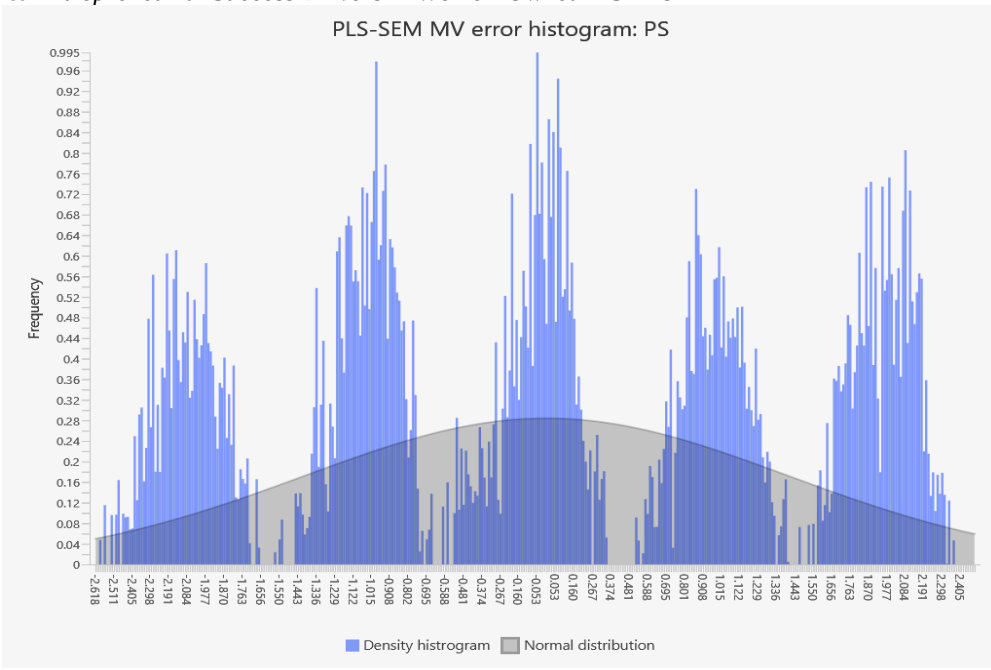
	Original Sample (O)
External factors -> Success	0.251
Internal factors -> Success	0.199

Since all f-squares were greater than 0.15 and less than 0.35.

Predictive Power

Number of sub-samples/ Number of folds K = 10
Number of observations = 383
Observations in each subsample = 383/10= 38.3 ≈ 39 Observations
Number of subsamples in training data = K-1=9
Number of observations in training data = 9 x 38.3 = 344.7 ≈ 345 Observations
Number of observations in testing data = 39 Observations





It can be seen that the errors of endogenous variables are not normally distributed

Since the data is not normally distributed, in the prediction summary, RMSE values were ignored and instead MAE Values were checked. The distinction between LM_MAE and PLS-SEM_MAE were calculated

Table: 15 PLS_PERDICT

Indicators	Q2_predict	PLS-SEM-RMSE	LM-RMSE	Difference: (PLS-SEM_RMSE)-(LM-RMSE)
PS	0.122	1.463	1.502	-0.039
FG	0.132	1.490	1.546	-0.055

Since all differences are negative and all Q^2 values are greater than 0, the model has high (out-of-sample) predictive power

Results

The PLS-SEM analysis yielded strong empirical support for the proposed model. All measurement constructs demonstrated satisfactory reliability and validity (composite reliabilities and AVE above conventional thresholds), allowing confidence in the structural results. Seventy-one was defined in the version. The entrepreneurial achievement concept accounts for 9% of the variance (R2 = 0.719), demonstrating significant explanatory power. The expected impact of those drivers was supported by the large superb course coefficients to attainment (all $p<0.001$) of the aggregated inner and exterior element constructs. These associations' effect sizes were within the moderate range (f^2_internal = 0.199; f^2_external = zero.251), indicating that fulfilment is significantly impacted by both internal resources and external enablers. Additionally, Stone-Geisser's Q2 for the fulfilment assembly received a zero, indicating the predictive relevance of the version.

Key results include:

- R^2 (success) = 0.719 (high explanatory power).
- Significant positive paths: both internal factors→success and external factors → success ($p < 0.001$).
- Effect sizes (f^2): 0.199 (internal factors), 0.251 (external factors) – both conventionally moderate.
- Predictive validity (Q^2): $Q^2 > 0$ for success, indicating strong out-of-sample relevance

These findings empirically confirmed that both internal resources and external support have a significant positive influences to the success of women's MSME entrepreneurs. Ultimately, the verified model demonstrates that individual resources (i.e., human & social capital) and enabling context levels together explain a great deal of variance in success. This strong evidence in a PLS-SEM context delivers an empirical value by measuring the extent to which those antecedents matter.

Discussion

The results are theoretically consistent with RBV and Social Capital views. From an RBV's perspective, internal resources - like previous experience, family support, work-life balance and mentoring - are validated as valuable firm-capabilities that contribute to firm performance. That is, women entrepreneurs who make use of these intangible assets are more likely to be successful and matches previous studies where such personal enablers were identified as playing a role in venture performance. At the same time, our results affirm Social Capital theory: external networks and institutional supports (access to finance, ICT usage, marketing strategies, supportive policies) significantly bolster outcomes. For example, Burt (2000) argues that bridging social capital (connections across structural holes) fosters innovation and superior economic returns, which aligns with our observation that ICT adoption and broader networks correlate with higher success.

Notably, this integrated perspective advances the literature by modeling internal and external drivers together. Few previous studies have empirically examined both resource-based and social-capital factors in a single framework. By jointly testing these domains, our study fills this gap: it confirms that women's MSME success depends on the interplay of personal capabilities and external enablers. Thus, our work extends earlier research (e.g., Agarwal *et al.*, 2018; Dhaliwal, 2019) which highlighted similar factors, by quantitatively demonstrating their combined effect. In practical terms, the results suggest that interventions should be multifaceted. Strengthening women entrepreneurs' human and social resources (e.g. through skill training and mentorship programs) must go hand-in-hand with improving access to financial, technological, and policy supports. This synergy between RBV and Social Capital insights provides a more comprehensive theory of women's entrepreneurial success.

Conclusion

This study provides clear evidence that entrepreneurial success in women-led MSMEs is driven by both internal strengths and supportive external conditions. Internal factors (experience, family backing, work-life balance, mentorship) and external factors (finance, ICT, marketing know-how, policy support) each contributed significantly to success, validating an integrated theoretical model. Theoretically, our findings underscore the need to combine Resource-Based and Social Capital frameworks when analyzing women's entrepreneurship, as neither alone fully explains the outcomes.

From a practical perspective, the insights have important implications for policy and MSME support ecosystems. Given that women still comprise only a small fraction of entrepreneurs in India (~14%) and face distinct barriers, tailored strategies are warranted. For example, financial institutions and government programs might pair credit access with digital literacy training, and mentor networks with marketing assistance, to holistically empower women entrepreneurs. Entrepreneurship support agencies should therefore craft *integrated* initiatives that simultaneously build women's human/social capital and facilitate their external network access. Such coordinated support not only enhances individual business outcomes but also advances gender equity and socio-economic development. In sum, our empirical model offers both a theoretical contribution – by confirming a multi-domain success framework – and concrete guidance for policymakers aiming to nurture the women-led MSME sector.

Future Implications

This study proposes several opportunities for upcoming research. First, longitudinal studies are necessary to attend to causal dynamics. For instance, time studies on women entrepreneurs will help clarify how internal and external impacts intertwine to determine growth trajectories. Second, cross-cultural and comparative research could examine the model's universality in different countries or regions. For example, rural vs urban or other variations in socio-economic conditions could be tested using multi-group PLS-SEM to see if the success drivers are different. Third, methodological advancements could deepen understanding in this area. For instance, future research could incorporate multi-group analysis, latent growth modeling, or mixed methods in addressing the complications brought about in this area. Lastly, new data sources, for instance longitudinal panel data or qualitative interviews, new approaches such as fuzzy-set analysis could also aid in gaining more profound understanding. This field could focus on more complex methods, broader samplings, and longitudinal studies as this will improve the understanding of the complex factors behind the success of women in entrepreneurship.

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