A Study on the Impact of Problems and Challenges on Motivation, Behaviour, and Failure Factors of Women-Led Startups in India Using Smart PLS – SEM

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Abstract

Women have been recognized as a change agent and innovator, playing a critical role in the society. Indian women now-a-days are emerging as digital women because of their increased knowledge and higher education. But, due to poor status and mentality of the society, their entrepreneurial skills and talent are underutilized. However, despite several roadblocks in their path such as burden of family obligations, complexities in arranging finance, neck-to-neck competition from male-startups etc., women are capable enough to reflect their potential and power in the startup scenario. This study aims to analyse present status and contribution of women start-ups in India, assess their awareness towards government policy initiatives for start-ups in India, and identify the challenges they are facing, in running their startups smoothly. The analysis of data collected from secondary sources and survey of sampled respondents conducted through SPSS-v30, and SMART-PLS4 indicate that the level of awareness and perceived challenges have significant impact on performance of women led startup in India. Findings indicate that despite challenges, women startups have registered considerable growth, indicating potential for growth with additional support, and suggest targeted interventions that can improve awareness and address challenges of women-led startups.

Keywords: Startup India, women led startups, Women entrepreneurship, Government policy & initiatives, Startup Scenario.

GEL Codes: M13, L26, L78.

1.0   Background

Startups have been drivers of innovation and economic growth, a trend that is becoming increasingly prevalent in developing countries. Over the last decade, Indian economy has experienced growth characterized by 'start-up culture'. In January 2016, the Government launched the 'Startup India' program with a stated objective to build a strong ecosystem for nurturing innovation and startups aiming to drive sustainable economic growth and generate large scale employment opportunities in the country. As per the economic census, there have been a number of startups in India, majority of them are male-led startups. But, in present startup scenario escorted with the growth of technology and favourable business environment, women are moving ahead and becoming major economic force. They are contributing a lot in the growth of the society with their innovative and creative ideas

for successful startups and achieving their dreams and aspirations in a male dominated world. Patil & Deshpande (2018) discovered that women are more self-assured and actively seek out underutilized opportunities.

Women entrepreneurship is a growing global phenomenon, attracting considerable research attention during the last few decades. Babu (2015) viewed that India's startup scene is encouraging and attracting more women entrepreneurs which have increasingly caused global investors to start raising funds for new women startups. Henry & Ahl, (2016) mentioned that Indian women entrepreneurs have gained global recognition for their achievements. According to the MasterCard Index of Women Entrepreneurs 2020, India ranked 57 out of 65 countries in terms of women's ability to thrive as entrepreneurs (MasterCard, March 2022). This indicates the potential for further growth and support for women entrepreneurs in India. As per report of DPIIT, India is leading as the 3rd largest ecosystem for startups, holding around 99,000 startups across 670 districts as on 31st March 2023, and Indian start-ups are proven to have a lot of potential and skill, which has led international investors to work with them.

Government of Indian has described the concept of women entrepreneurship as an enterprise headed by women, owning at least 51% of the enterprise and providing at least 51% of the enterprise's employment opportunities to women. Over 50,000 of the start-ups are led by women, who make up 45% of the total, according to government recognition. The country witnessed the most women-led start-ups turning into unicorns in 2021. Major start-ups run by women are BYJU'S, NYKAA, MOBIKWIK, ZOLO etc. As per International Monetary Fund, by giving equal opportunities in every field of development, India could generate nearly $780 billion additionally, which is expected to be more than 20 percent to its GDP by 2025. Presently, 20.37% of MSME owners are women, making up 23.3% of the labour force, in comparison to the global average of 45%; women contribute close to 19% of the GDP of the nation.

The Indian government has taken proactive steps to promote and support female entrepreneurs and startups in India. These measures include providing government loans and small business loans, as well as introducing a range of programs and policies aimed at empowering women in the business sector. This has created a positive environment for women-owned businesses in India to thrive. Initiatives like Stand-Up India, MUDRA Yojana, Annapurna Scheme, and Atal Innovation Mission provide financial assistance, collateral collateral-free loans, skill development training, and mentoring support to women entrepreneurs (Ministry of MSME, 2021; Department of Financial Services, 2021).

Government of India supports the entrepreneurial spirit by assisting, supporting, and mentoring entrepreneurs through the Startup India Initiative. According to NITI Aayog (2020), governments and private organizations have set up incubation centres and skill-development programs specifically for women entrepreneurs. These centres provide access to infrastructure, networking opportunities, training programs, and mentoring to assist women in developing their entrepreneurial skills and scaling their businesses. As such, it offers a valuable focus for concerted scholarly research. The government initiatives for women startups are compiled in table – 1 (see appendix).

2.0   Literature Review

Jayanthi D. (2019) and Anitha K. (2017) viewed that "Startup India" project is a positive step towards assisting Indian youth. They mentioned that this program not only encourages and motivates aspiring business owners to enter industries that drive entrepreneurship growth, but also boosts the nation's economy. Although women share half of the total population of the country, still their participation is very limited (Tiwari, 2017). In India, rural women entrepreneurs face numerous challenges, such as a lack of education and awareness, family conflict, managerial issues, mobility issues, socio-cultural barriers, and difficulties in obtaining finance and raw materials; they also offered some solutions to improve their situation (Singh and Seema, 2017). Das

(2012) viewed that Indian women entrepreneurs experience less work-family conflict, and it differs from their counterparts in western countries in terms of reasons for starting and succeeding in business.

Numerous studies highlighted the barriers and opportunities for women entrepreneurs. Vikram (2015) highlighted the need for startups to adopt effective human resource strategies, while Prasad (2017) noted India's potential to lead the global startup ecosystem. Wang (2019) and Roomi & Henry (2018) identified family roles and work responsibilities as key challenges, while Kumar & Singh (2021) noted lower numbers of female-led start-ups due to finance, networks, and family constraints. Patil and Deshpande (2018) pointed out unfavourable conditions and gender biases whereas Kalyani & G.S (2016) emphasized diverse motivations for women starting businesses. Darrene et al. (2008) found that self-employed women tend to achieve higher educational attainment than their peers in other sectors. Ayogu and Agu (2015) emphasized the importance of understanding market dynamics and challenges for women entrepreneurs. However, Kar et al. (2016) discovered that women often have less knowledge about market sources compared to men, who are more confident in distinguishing themselves from competitors. Rathna et al. (2016) pointed out that inadequate market conditions and stringent regulations are significant hurdles, while Kumbhar (2011) identified limited access to technology, management skills, and lack of confidence as key challenges. Tambunan (2009) further revealed that many women entrepreneurs operate under constraints such as low education levels, insufficient funding, and cultural or religious barriers, with many being "forced entrepreneurs" seeking better family incomes through small and medium enterprises (SMEs). Sajjad et al. (2020) addressed the insufficient recognition of female entrepreneurs globally, despite their enormous contribution to economic growth. Smith et al. (2015) state that women represent a small fraction of academic entrepreneurs and are generally less innovative than men. Additionally, Sapna & Dubey (2017) and Bulsara et al. (2014) discussed the concentration of women-led ventures in metro cities and the need for awareness programs. Meanwhile, technology and e-commerce have been pivotal for women entrepreneurs, as noted by Babu (2015) and Parnami et al. (2016). Sarkar (2016) emphasized India's potential for job creation despite labour market shortages, suggesting that the "Startup India" initiative can boost entrepreneurialism and job growth. Sinu (2017) praised "Startup India" but called for more government support to further enhance startups and job opportunities. Bindal et al. (2018) echoed the need for stronger government actions, and Narkhede et al. (2014) found that technical, business, and human skills are key to startup success. Nalintippayawong (2018) added that business models and support partners directly influence startup success. Dana (1996) found that self-motivated individuals with high success, creativity, and risk-taking capacity are more likely to pursue entrepreneurship. Walker and Brown (2004) emphasized that women entrepreneurs are driven by both financial (wealth building) and non-financial factors (independence, flexibility). Sunanda and Naik (2017) highlighted that women attracted to challenges and the startup culture are inspired to become business owners. Agarwal & Lenka (2015) and Rehman & Roomi (2012) found that entrepreneurship education helps women balance personal and professional responsibilities. Cromie (1985) identified autonomy and financial gain as key motivators, while Ramswamy (2010) noted that socio-cultural factors influence handloom entrepreneurs in Mizoram.

Various studies highlight the progress and challenges of women entrepreneurs. Vinze (1987) noted that female entrepreneurs had bright futures, while Mohiuddin (1983) emphasized the psychological and financial motivations behind women starting businesses. Mishra & Kiran (2014) discussed how rural women are becoming socially and economically empowered through entrepreneurship. Sextan and Kent (1982) observed that women entrepreneurs tend to prioritize their careers over family, and Dhameja (2002) highlighted their success in decision-making roles in India. Social perception significantly supports women's entrepreneurial efforts, and Tasaminova (2012) emphasized that government support, both material and intangible, is crucial, especially in Indonesia, to encourage women to engage in the economy. Despite the significant contribution of women entrepreneurs in India, still, it faces numerous barriers and challenges, which can hinder them from entrepreneur's success.

Several studies have explored the causes of startup failures, with funding issues consistently emerging as a key factor. Bednar & Tariskova (2017) found that 34% of failures were due to a shortage of funds, while CB Insights (2021) similarly reported lack of financing as the leading cause (38%), followed by lack of market demand (35%) and competition (20%). Lee (2019) highlighted poor business plans, competition, and lack of product-market fit as significant issues. Dento (2020) emphasized funding problems, incompetent management, and poor planning, while Chineam et al. (2020) pointed to enterprise incompetence and poor regulations in Nigeria. Wong et al. (2005) noted the need for market visibility, and earlier studies by Zacharakis et al. (1999) and Teal & Hofer (2003) stressed internal factors and market structure as crucial to startup success. Singh V. (2021) examined Startup Action Plan of the Government of India, which demonstrates the beneficial effect on the quantity of companies and appears to indicate that the startup ecosystem has reached the early traction stage; thus, there is an imperative need to concentrate on cultivating an entrepreneurial culture.

The existing literature highlights multiple factors contributing to startup failures, such as funding shortages, weak business plans, competition, and management incompetence. However, a research gap exists in exploring how the interconnectedness of these factors varies across different industries and regions, as well as in-depth analysis on the effectiveness of specific interventions to mitigate these causes.

3.0   Research motivation

Innovations, motivational factors, and challenges faced by women entrepreneurs have been a prominent topic of research in last two decades. Although, several researchers carried out empirical studies to examine the impact and performance of women startups in selected states and countries, but the problems that women entrepreneurs face have received insufficient attention. Some studies mentioned that government interventions have impact women entrepreneurship, there seems need to investigate the awareness and role of government policy initiatives on women led start-up culture in Delhi NCR region of India. Present study aims to examine present status of women led startups in India, assess awareness level of women entrepreneurs about government policy initiatives, and analyse the impact of problems and challenges faced by women entrepreneurs on their motivation, behaviour and reasons for failure. The hypotheses of the study are:

1.   There is no significant impact of problems and challenges faced by women entrepreneurs on their motivation and inspiration.
2.   There is no significant impact of problems and challenges faced by women entrepreneurs on their behaviour and attitude.
3.   There is no significant impact of problems and challenges faced by women entrepreneurs on failure of women led startups.

4.0   Material and Methods

This study is based on both primary and secondary information. Secondary information pertains to theoretical foundation, present status, and government policy initiatives concerned with women led start-ups, while primary information concerned with motivation, inspiration, awareness, behaviour and attitude of women entrepreneurs is collected through self-structured questionnaire executed to more than 250 respondents of Delhi NCR and Agra (Uttar Pradesh, a province of India). The analysis is based on responses of 180 respondents that could be collected after regular persuasion. The data is analysed using basic descriptives and structural equation modelling (SEM) methodology, is a comprehensive, linear, cross-sectional statistical technique (Kumar et al., 2016). SEM allows a researchers examine the relationships between observed and latent variables and provides insights into how various factors affect

the on dependent variable.
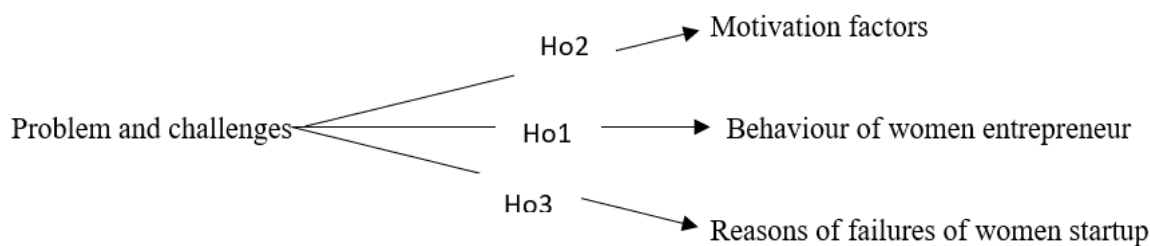
Conceptual Model.

5.0 Results and discussion

Women led start-ups in India: Present Status

A start-up is a company in its early stages that is working to innovate, develop or improve products or services through a scalable business model, and whose turnover for any fiscal year since registration/ incorporation has not exceeded 100 crores (DPIIT). The Indian start-up system is witnessing aggressive growth, and some credit goes to our women too. Women entrepreneurs are writing their own stories and changing the narrative in Indian start-up culture. According to DPIIT, 46 percent of total recognized start-ups in 2021 had at least one-woman director. It increased to more than 46 percent by December 31st, 2022, in more than 86713 start-ups across over 660 districts of India.

McKinsey Global Institute (2015) in its report mentioned that women are currently under-represented in India's economy compared with their potential. India has a lower share of women's contribution to GDP than the global average of 37 percent, and the lowest among all regions in the world. It further mentioned that if women will participate in the economy identically to men, it will add up to $28 trillion, or 26 percent to annual global GDP and $2.9 trillion or 60 percent of India's annual GDP in 2025. The EdelGive Foundation in its report mentioned that businesses owned by women entrepreneurs in India are likely to witness a 90 per cent growth in the coming five years (The Times of India, April 16, 2021).

The start-up scene in India has advanced significantly with the development of information technology. The entry of accelerators and incubators has been instrumental in determining the course of these start-ups. Almost 51 percent of entry and mid-level jobs in India's IT and BPO industries are served by women, and 30 percent of India's tech workforce is women. To encourage the flow of both equity and debt to women enterprises, SIDBI has set aside 10 percent of its $1 billion fund for women-led start-ups. All this indicates that by enabling women to be equal partners in society and in India's workforce would not only be inclusive, but also give a substantial boost to Indian economy.

To assess the awareness level of women entrepreneurs about government policy initiatives and analyse the impact of problems and challenges faced by women entrepreneurs on their motivation, behaviour and reasons for failure, the required information was gathered from 180 respondents of sampled area. The respondents, profile (age, marital status, educational qualification, family status, and job experience) is presented in table 1.

Table 1: Respondents' Profile

Group	Category	No.	%
Age	21 - 35 years	50	27.8
	35 -50 years	122	67.8
	More than 50 years	8	4.4
Marital status	Married	94	52.2
	Unmarried	86	47.8
Educational qualification	Secondary	13	7.2

	Senior Secondary	12	6.7
	Graduation	61	33.9
	Post-graduation/ Professional	94	52.2
Family status	Joint	68	37.8
	Nuclear	112	62.2
Job experience	Nil	65	36.1
	1-5 years	77	42.8
	5- 10 years	18	10.0
	10 - 15 years	15	8.3
	More than 15 years	5	2.8

Source: Own compilation

Table 1 indicates that majority of respondents (67.8%) belong to 35 – 50 years age-group, 27.8% belong to 21 - 35 years age group, and only 4.4% are of more than 50 years age. Of these, 52.2% are married and the remaining are unmarried. In terms of educational qualification, about 52.2% possess PG degree or professional degrees, 33.9% are graduates, and the remaining have passed Senior Secondary or less educational qualification. 62.2% of respondents who belong to nuclear families and remaining (37.8%) are living in joint families. Of the total respondents, 42.8% have work experience of 1 – 5 years, 36.1% respondents are inexperienced, and a few (2.8%) have more than 15 years of work experience. The business profile of respondents is shown in table 2.

Table 2: Business Profile

Group	Category	No.	%
Type of your business (Ownership/ legal status)	Sole Proprietorship	108	60
	Partnership	23	12.8
	Private Ltd.	40	22.2
	Others	9	5
Legal Status – Registered	Yes	110	61.1
	No	70	38.9
Sector	IT Service	8	4.4
	Education	23	12.8
	Health and Beauty care	26	14.4
	Food & Beverages	27	15
	Textile and clothing	28	15.6
	Handicraft and Home decoration	16	8.9
	Tech & Manufacturing	6	3.3
	HR services	4	2.2
	Waste Management	2	1.1
	Others	40	22.3
Mode	Physical	129	72.5
	Online	49	27.5
Duration of the Business	Less than 3 years	101	56.1
	3-5 years	36	20
	More than 5 years	43	23.9
Business Stage	Infant stage	82	45.6
	Growth stage	37	20.6
	Maturity stage	61	33.9
Business Motive	Self-Recognition	33	18.3
	Passion and Interest	44	24.4
	Skill and Talent Utilization	15	8.3

	Empowerment / Social Impact	28	15.6
	Financial Independence & Flexibility	27	15
	Innovation and Creativity	11	6.1
	Generate income and add to family income	22	12.2
Sources of finance	Own Funds	129	71.7
	Institutional / Non-institutional Borrowings	13	7.2
	Both	38	21.1

Source: Own compilation

Table 2 shows the business profiles of the respondents based on business ownership structure, legal status, the sector startups belong to, mode of business, age of establishment, stage of business, motive behind setting up their business, and sources of finance. Of the total 180 respondents, 60% are running their business in individual (sole proprietor) capacity, 12.8% are in partnership, 22.2% are private ltd. firms, and remaining have other business type startups. Of these, about 61.1% are registered business units. The sampled respondents belong to a variety of other fields with majority in textile and clothing (15.6%), apparel business, food & beverages (15.0%), health and beauty care (14.4%), education (12.8%), and handicraft and home decoration (8.9%). Some of them are in IT services, tech and manufacturing, HR services, sewing, trading, girls' PG, jewelry rental, pearl manufacturing, car driving schools, travel agencies, pharmacies, and waste management business.

72.5% of the women entrepreneurs are running their startups in physical mode. 23.9% of sampled startups are more than 5 years old, 20% are 3 to 5 years old, and 56.1% of the startups are less than 3 years old. Majority of sampled startups (45.6%) are in the infant stage, 20.6% in growth stage, and 33.9% are in maturity stage. Their business motive is passion and interest (24.4%), self-recognition (18.3%), empowerment and social impact (15.6%), financial independence and flexibility (15.0%), addition to family income (12.2%), talent utilization (8.3%), and innovation and creativity (6.1%). About 71.7% women have utilized their own funds for establishing their business units, while 21.1% used both own and borrowed funds.

The respondents were asked to give their opinion on various statements (appendix – 1) concerned with awareness about government policy initiatives to support women entrepreneurs, motivation factors, behavior, problems and challenges they faced/ are facing, and reasons for business failure on 5-point Likert scale. The scale for examining awareness level was not at all aware (1), unaware (2), neither aware nor unaware (3), aware (4), and highly aware (5) and to analyse the impact of problems and challenges faced by women entrepreneurs on their motivation, behaviour and reasons for failure (1) strongly agree (2) agree (3) Neutral (4) strongly disagree (5) disagree.

To examine awareness regarding government schemes, we have employed the weighted mean test. The weighted mean method provides a more representative measure by considering varying response levels, effectively highlighting disparities in awareness across different schemes. This helps in identifying areas where targeted awareness campaigns are needed. In the table -3 weighted mean values suggest that while women entrepreneurs are somewhat aware of key government initiatives, awareness levels vary significantly across schemes. The Annapurna Scheme (3.51), which offers financial assistance in the food sector, has the highest awareness, reflecting its importance in supporting a key livelihood area. Similarly, the Stand-Up India Scheme (3.50), which aims to empower women and SC/ST entrepreneurs with loans, ranks high, emphasizing its crucial role in promoting financial inclusion and entrepreneurial growth.

Table-3 Awareness about Government Initiatives and Schemes

S. No.	Schemes	N	Std. Dev.	Weighted Mean
1.	Skill upgradation and Mahila Coir Yojana	180	1.20128	3.32
2.	Stand-Up India Scheme	180	1.07485	3.50
3.	Annapurna Scheme	180	1.11614	3.51
4.	Mudra Yojana Scheme	180	1.15442	3.38
5.	Trade related entrepreneurship assistance and development (TREAD) Scheme	180	1.13697	3.09
6.	Multiplier Grants Scheme (MGS)	180	1.15223	3.04
7.	Streeshakti Scheme	180	1.17764	3.26

Source: Own calculations

The Mudra Yojana Scheme (3.38) and Skill Upgradation and Mahila Coir Yojana (3.32) indicate moderate awareness, suggesting that while these schemes are recognized, further promotion is required to increase their visibility and reach. The Streeshakti Scheme (3.26) has slightly lower awareness, whereas the Trade-Related Entrepreneurship Assistance and Development (TREAD) Scheme (3.09) and the Multiplier Grants Scheme (3.04) have the lowest awareness scores, indicating limited recognition.

Despite their significance in fostering advanced entrepreneurial activities, awareness of the TREAD Scheme (3.09), which provides trade-related support, and the Multiplier Grants Scheme (3.04), which focuses on R&D and innovation, remains low. This suggests the need for improved outreach and communication strategies to emphasize their benefits. Overall, women entrepreneurs tend to be more aware of schemes offering direct financial aid or skill-based assistance, while those focusing on innovation and trade require enhanced promotional efforts to ensure broader recognition and utilization.

Data analysis and findings

Composite reliability and measurement loadings

The data has been examined using Smart PLS version 4.0, which employs the PLS-SEM technique. PLS-SEM is preferred over CB-SEM for this study due to several factors and to verify that the acquired data is suitable for further analysis, two main aspects are checked. There are two issues to consider when applying Partial Least Squares Structural Equation Modeling (PLS-SEM): missing values and normalcy. Shahzad et al. (2022) stated that Composite reliability measures the scale's internal coherence. Also, composite reliability indicates the level at which valid results can be evaluated without risk of invalidity. Average variance extracted (AVE), Cronbach's alpha, and composite reliability have all been measured for this purpose. Cronbach's alpha values indicate the internal consistency of the data, reflecting how consistently the data measures the intended constructs within the dataset. In this case, the Cronbach's alpha values are above 0.7, demonstrating excellent consistency and reliability. Hair et al. (2011) used a composite reliability test to evaluate construct variable reliability using outer loading. A composite reliability value of 0.7 or higher for each item indicates significant construct reliability. Fornell and Larcker (1994) suggest that the average extracted value (AVE) should be more than 0.5, indicating construct reliability. VIF quantifies how much the variance of a

regression coefficient is inflated due to collinearity with other predictors. Furthermore, in a multiple linear regression model, VIF also identifies the association between two or more independent constructs when multicollinearity arises. It can also be used to estimate the future relationship among variables and evaluate the strengths of the relationship between variables. Less than ± 5 is the permitted range for VIF Hair et al., (2014). according to O'Brien (2017) a VIF of 10 or higher is typically seen as problematic.

The outer loading model measures the reliability of each item. Outer loading determines an item's complete engagement in its assigned construct. Outer loading values reflect the relationship between the reflective measurement model.

Table 4 indicating that the indicators' outer loadings (standardized factor loading) ranged between 0.71 and 0.806. The reliability values of Cronbach's alpha for all scales were acceptable, each exceeding 0.734, indicating strong convergent validity for the scales. The AVE runs from 0.51 to 0.521 on each scale. The CR values above the threshold of 0.70, ranging from 0.85 to 0.0.879 on each scale.

Table 4: Convergent validity and reliability

Construct	FL	α	CR	AVE	VIF
Problem and Challenges		0.812	0.856	0.535	
PCW1	0.761				1.549
PCW2	0.777				1.379
PCW3	0.723				1.702
PCW4	0.752				1.395
PCW5	O.778				1.337
PCW6	0.725				1.946
PCW7	0.764				2.087
PCW8	0.806				2.072
Motivation & Inspiration		0.839	0.879	0.51	
MI1	0.759				1.804
MI2	0.779				1.755
MI3	0.783				1.433
MI4	0.706				1.617
MI5	0.751				1.976
MI6	0.783				1.699
MI7	0.723				2.012
Behavior of women Entrepreneurs		0.734	0.772	0.572	
BWE1	0.71				1.153
BWE2	0.781				1.47
BWE3	0.705				1.5
BWE4	0.744				1.135
Reasons of failures of women startups		0.801	0.85	0.551	
RF1	0.753				1.689
RF2	0.789				1.581

RF3	0.761				1.576
RF4	0.72				1.639
RF5	0.737				1.525
RF6	0.725				1.787
RF7	0.73				1.714
Note: FL: factor loadings; α: Cronbach's alpha coefficient; CR: composite reliability; AVE: average variance extracted; VIF: variance inflation factor					

Source: Own calculations (Smart Pls 4)

The discriminant validity results are demonstrated in Table 5. Similar to discrimination that can be observed in variables and the degree to which these variables' attributes differ from one another, discriminant validity. The self-construct's outer loading needs to be both high and below in order to attain discriminant validity (Irvin et al. 1954, Chin & Wang 2010). The values of discriminant validity are shown as problem and challenges (0.66) motivations and inspiration (0.714) behaviour of women start up Entrepreneur (0.687) Reasons of failures of women startups (0.672). Each of these values is greater than their respective inter-construct correlations, confirming that the studied scales meet the reliability and convergent validity criteria. Furthermore, the correlation values between constructs are below the threshold of 0.85, reinforcing the presence of discriminant validity.

Table 5: Discriminant validity (Fornell-Larcker criterion)

	BWE	MI	PCW	RF
BWE	**0.687**			
MI	0.299	**0.714**		
PCW	0.224	0.564	**0.660**	
RF	0.329	0.298	0.514	0.**672**
Note: Bold values are the square root of relevant AVE				

Note: Bold values are the square root of relevant AVE.

Source: Own calculations (Smart Pls 4)

Model estimation

In this model estimation Fig. 1 demonstrate varying levels of explanatory power, as indicated by their R-squared (R^2) and adjusted R-squared values. R-squared measures how well independent variables explain the dependent variable's variance, while adjusted R-squared adjusts for the number of predictors, preventing overfitting. In multiple regression models, adjusted R-squared is preferred because it provides a more reliable measure of model fit. This picture shows that the R-square value of 0.55 reflects a substantial explanatory power of the behavioural aspects of women entrepreneurs on the performance and development of women-led startups. This indicates that initiatives aimed at improving these behavioural traits can have a meaningful impact on enhancing the overall success and sustainability of women startups. Researchers and policymakers should therefore focus on interventions that bolster the confidence, personality development, and social influence of women entrepreneurs to maximize their entrepreneurial potential and success. also, R-square value for motivation and inspiration (MI) is 0.431, indicating a moderate level of explanatory power, meaning the model explains 43.1% of the variance in MI. analysis and observation of researcher indicate that problems and challenges positively impact motivation and inspiration, driving women entrepreneurs to

expand their businesses. Existing women entrepreneurs serve as role models, inspiring others to launch creative startups and contribute to the economy. This highlights the significant, though not exhaustive, influence of challenges on enhancing the motivational and inspirational aspects of women entrepreneurs.

The R-square value for reasons of failure of women startups is 0.42, indicating that 42% of the variance in the failure of women startups can be explained by the model. This suggests that a significant portion of the failure rate is influenced by identifiable problems and challenges. Specifically, this includes marketing and sales issues, financial and operational challenges, regulatory and legal hurdles, as well as personal reasons such as a lack of patience or clear purpose. These factors collectively contribute to the difficulties faced by women entrepreneurs, highlighting key areas where support and intervention can help mitigate the risk of startup failure.

Table 6: Direct hypotheses testing

Path	β value	T- statistics	P value	Result
PCW -> BWE	0.224	3.134	0.002	Rejected
PCW -> RF	0.514	6.937	0.000	Rejected
PCW -> MI	0.564	7.044	0.000	Rejected

Note: Hypotheses are tested at 5% level of significance.　　　　　　**Source**: Own calculations

In the proposed hypothesis testing, the path coefficients measure the correlation among all variables. A p-value of ≥ 0.05 indicates that the path coefficient is valid and significant Hair et al., (2014). The table displays the values of the direct effect of paths, including the β-value, t-statistics, and p-values. The regression also includes the path coefficient and standardized β coefficient. For every unit variation in the independent constructs, the β values indicated a dependent construct. The analysis of the model yielded several significant results. The path from PCW to BWE exhibited a statistically significant positive relationship, with a T-statistic of 3.134 and a corresponding P-value of 0.002, indicating that this effect is highly unlikely to be due to random chance. Similarly, the path from PCW to RSW showed an even stronger relationship, with a T-statistic of 6.937 and a P-value of 0.000, suggesting an extremely robust association. The path from PCW to MI also demonstrated a significant positive effect, with a T-statistic of 7.044 and a P-value of 0.000, reinforcing the strength and reliability of the relationship observed. These results collectively underscore the importance of PCW in influencing B, RF, and MI, supporting the proposed hypotheses and contributing to a deeper understanding of the model dynamics.
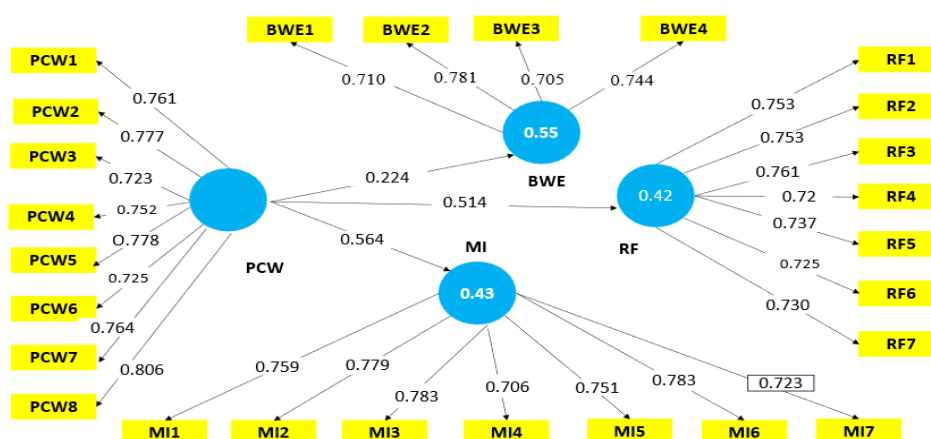

Fig. 1: Estimation model (partial least squares (PLS-SEM) algorithm)

Conclusion

The study of women-led startups reveals that despite facing challenges, these enterprises are growing and contributing significantly to the economy. The research, using a mixed-methods approach, highlights that behavioural traits (PCW) play a crucial role, explaining 55% of the variance in their performance and development. Women entrepreneurs are somewhat aware of government initiatives like Digital India and Make in India, but awareness of schemes like Stree Shakti and TREAD remains low. Key challenges include funding, sales, and marketing, which hinder success. Increasing awareness of support schemes and providing more financial and physical assistance can help bridge the gender gap and boost women-led startups' success. On the basis of above discussion researchers suggest that government schemes and policies should focus on effectively promoting women-led startups by offering professional training, intermediary centres, and workshops to support those unaware of the process. Ensuring access to financing from various sources and government agencies is crucial, especially for illiterate or semiliterate women from rural and urban areas. Additionally, addressing the lack of market share and providing qualified business advisors, mentoring, and marketing assistance are key to startup success. With the growing digital ecosystem in India, the government should also facilitate access to technology courses through user-friendly, free online platforms to boost women entrepreneurs' technical skills and support economic progress.

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