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Revisiting the financial challenges faced by women-led microenterprises: some evidence from the Indian manufacturing sector

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Abstract

Purpose – This primary purpose of this research is to explore the rank order of funding challenges among the other challenges faced by women entrepreneurs (WEs) in an urban setting. For this purpose, the study uses a sample of women microentrepreneurs engaged in (the relatively capital-intensive) manufacturing activities. The study further explores the perception of WEs toward borrowing as a source of funds and the challenges they face while accessing institutional finance. Lastly, the study explores whether the financial challenges faced by them are, in part, influenced by the deficiencies in their own skill set, as the human capital theory suggests.

Design/methodology/approach – For the purpose of analysis, this research uses summary statistics, namely the mean, mode and standard deviation for the purpose of preliminary analysis. The Friedman two-way analysis of variance by rank test and the associated chi-square value are used to statistically validate the hypothesis. Furthermore, the Wilcoxon signed-rank test is used to check for the robustness of our results.

Findings – Our findings suggest that the growth of the financial services sector in urban India has not had a significant impact on the funding challenges that WEs faced. A closer look at the evidence suggests that even for educated urban women, the funding challenges faced are no different from what has widely been reported in the context of other emerging nations. Highlighting the inadequacies in high school and college education in so far as financial skills training is concerned, the study recommends a multipronged approach to address the observed voluntary abstinence from borrowing as well as the institutional hurdles WEs faced.

Originality/value – Unlike previous research where WEs are treated as a monolithic whole, this study focuses on WEs engaged in manufacturing activities in an urban setting.

Keywords Women entrepreneurs, Urban India, Emerging country, Skill gap, Financing challenge, Non-parametric tests

Paper type Research paper

Introduction and objective

Participation of women in economic activities has been remarkably low in India (Mulla, 2023). When it comes to entrepreneurial pursuits, the statistics are more dismal. Data from the 6th Economic Census of India (CSO, INDIA – Sixth Economic Census 2013–14, 2018, p. 5) reported that only 15.4% of business firms operating in the country were owned by women. Similarly, only 5.9% of startups had (only) female founders (RBI, 2019). This has given rise to

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gender disparities in wealth distribution and economic empowerment and has impeded societal progress by excluding a vast pool of employable resources from the ambit of economic activity (ILO, 2014; Dixon, 2018). Numerous research studies have focused their attention on this issue (Agarwal and Lenka, 2018; Shastri *et al.*, 2019), and common across their findings is the preeminence of financial resource constraint as a major challenge that women entrepreneurs (WEs) faced. While this is largely in line with evidence from other emerging nations (Lubna and Parvin, 2017; Rudhumbu *et al.*, 2020; Cho *et al.*, 2021), what appears disconcerting in the Indian context is that even after five decades of concerted government initiatives (Agarwal and Lenka, 2018), institutional support has not been able to ease the financial constraints of Indian WEs (Panda, 2018).

Given this context, this research explores the challenges faced by urban WEs engaged in manufacturing activities. Are their challenges similar to what has widely been reported in literature? Recent evidence suggested that societal attitude toward women's aspiration in urban India is changing (Chaturvedi and Sahai, 2019; Rastogi *et al.*, 2022). Moreover, the findings of Lenka and Barik (2018) suggested that, consequent to the rapid expansion of digital infrastructure, there has been a remarkable growth in the nature and variety of financial products and services in India's urban centers. Additionally, urban areas offer greater access to networks and support services, wider range of market opportunities and are hubs of entrepreneurial activities. Lastly, urban areas are often home to concerted policy activities by local governments and non-governmental organizations implementing initiatives to support entrepreneurship and gender equality. Are WEs impacted by these developments? Has better access to finance in India's urban centers altered the challenges faced by them? Has the spread of digital infrastructure and growth of financial services network in urban India resulted in easier access to credit for WEs? This research explores these unaddressed issues by using a sample of urban WEs engaged in manufacturing microenterprises.

Specifically, the aim of this research is to examine the rank order of funding challenges among the other challenges faced by urban WEs. Second, while the disadvantages faced by women-led small businesses in the credit market (Chaudhuri *et al.*, 2020) are widely recognized, this study analyzes the perception of WEs toward borrowing as a source of fund and the challenges they face while accessing institutional finance. Lastly, the study explores whether the financial challenges faced by WEs are, in part, influenced by the insufficiencies in their own skill repertoire. While some of these issues identified above have been explored in the context of Indian WEs, the uniqueness of this study lies in its scope (urban setting) and focus (on manufacturing microenterprises).

This study is organized as follows. The next section documents a brief review of evidence on the challenges faced by WEs. This is followed by the methodology adopted before presenting the findings and analysis of data in the next section. The study concludes with a set of recommendations and sets forth the possible directions of future research.

Review of literature

Access to financial resources is an important hurdle for small business in general (Rao *et al.*, 2017) and for women-led enterprises in particular (Ramadani *et al.*, 2015; Al Kwifi *et al.*, 2020) across emerging nations. Existing literature exploring the interplay between gender and access to financial resources suggested that WEs were more likely to face challenges while accessing institutional finance in countries where they had low participation in the labor force, laws and norms discriminated against women and state-owned banks had a dominant share in the banking system (Morsy, 2020). Empirical evidence from Dutta and Mallick (2023) suggested that women-led firms negotiated harder for raising financial resources; they faced stereotypical and gendered notions about their abilities in their interaction with funding organizations. In the following paragraph, a review of available evidence on the funding challenges faced by WEs is presented.

In the African context, Mandipaka (2014), Chinomona and Maziriri (2015) and Ojong *et al.* (2021) observed that South African WEs faced great difficulty in obtaining funds from commercial lending institutions; they were regarded as high-risk groups, and loan officers had negative perceptions about the abilities of women business owners, leading to discrimination in access to finance. In a related study, Kapinga and Montero (2017) found that while Tanzanian financial institutions were forthcoming in granting loans to WEs, the latter often had to pledge both immovable as well as movable property, including cattle in order to access institutional finance. In the case of Egypt, available evidence suggested that while one-third of all business ventures were owned by women, they had access to only 10% of commercial bank credit (Khairy, 2019). Isaga (2019) observed that collateral requirements for bank loans and the absence of required credit history was were important barriers faced by WEs in Kenya in their attempt to raise institutional finance. Khayal (2021) observed that in spite of having gender neutral policies and regulations, WEs in Egypt faced innumerable obstacles accessing institutional finance. Recent evidence from Nigeria suggested that WEs often refrained from applying for loan funds from financial institutions in spite of being credit constrained. In addition to a lack of collateral, Ogundana *et al.* (2021) noted that the fear of default was the other major factor that contributed to WEs abstinence from seeking institutional funding support. On the policy front, Nziku and Henry (2020) observed that the problems faced by WEs were further compounded by the sector neutrality of government policies; its failure to appreciate the challenges of socially disadvantaged groups and the context rendered prevalent policies ineffective in addressing the financial challenges of WEs.

Evidence from Asian nations echo African evidence. Belwal *et al.* (2014) observed that for the majority of WEs in Oman, limited access to institutional finance as well as the inadequacy of funds made available has reduced their dependence on institutional support; their own resources and family support were the only sources of finance for starting a new venture. For rural WEs from Oman, Ghouse *et al.* (2017) observed that financial resource scarcity compromised both growth and innovation in women-led enterprises. Lubna and Parvin (2017), Shoma (2019) and Banu and Khanam (2020) observed that for WEs from Bangladesh, it was not only the high-interest costs but also the need for guarantors that made access to institutional finance a difficult proposition. Furthermore, lending institutions often insisted on identifying male support in the business as an additional safeguard for approving loans. Rahman *et al.* (2022) further observed that the challenges of obtaining bank financing were not limited to first-generation WEs. The findings of this study suggested that rural WEs faced very similar challenges in continuing their family businesses. Empirical evidences from China and Vietnam (Zhu *et al.*, 2019; Nguyen *et al.*, 2020) also identified financial challenge as a major hurdle faced by WEs in continuing their business operations. Nasir *et al.* (2019) further documented how WEs had to fall back on family savings for starting their businesses and were dependent on male family members for arranging financial resources. The South Korean evidence is an exception among Asian nations; evidence cited in Cho *et al.* (2021) suggested that on an average, only one out of four WEs faced problems garnering funds at initiation, and only one in five highlighted it as a challenge in continuing operations.

In the Indian context, the findings of Kungwansupaphan and Leihaothabam (2016) highlighted access to funds as a critical factor impeding the engagement of WEs in entrepreneurial activities. Raghuvanshi *et al.* (2017) provided supporting evidence by depicting how financial challenges were a critical barrier impeding the functioning of WEs. The magnitude of the challenge faced by WEs may be gauged from the 6th Economic Census data; almost 80% of women-owned enterprises in India were self-financed, 1.1% had borrowings from financial institutions and government support was limited to only 3.4% of them (Samantroy and Tomar, 2018). More recent findings from Chakraborty and Chatterjee (2021) reiterated the above findings. Specifically, the study observed that most women-owned enterprises were self-financed, without any hired workers and operated from within the household premises.

Empirical evidence from Ukraine and Russia cited in Iakovleva *et al.* (2013) suggested that WEs in these countries had a low level of awareness on financial support schemes offered by national governments, and even those who were aware of the same refrained from availing those schemes because they were too complex and demanding. Ramadani *et al.* (2015) explored the case of WEs from Albania, Macedonia and Kosovo. Much like other emerging nations, the study observed that financial challenges (initial small capital base and access to capital) were among the top three barriers that WEs encountered. Furthermore, almost half of the respondents ranked themselves as too weak or bad in terms of financial management skills. The study further observed that both banks and investors were often reluctant to finance women-led enterprises owing to higher perceived risk. For **science, technology, engineering and mathematics (**STEM)-educated WEs from Turkey and Latvia, Ármane *et al.* (2021) noted that financial challenges were one important obstacle to overcome. The study noted that gender insensitive legislation and high tax rates were other challenges that WEs had to deal with.

In summary, the review of evidence suggests that the financial resource constraints faced by WEs originated from (1) the discrimination they faced while accessing institutional finance, (2) their inability to furnish relevant information as borrowers, (3) a lack of appropriate collateral that may be pledged against borrowings, (4) a lack of awareness and (5) complexities associated with the process of raising finances and policy insensitivity. Other notable factors contributing to the resource scarcity had its source in WEs themselves in the form of self-doubt and the fear of failure or default.

Literature on WEs is replete with evidence concerning the other hurdles that WEs faced. These are related to balancing responsibilities at home and work (Agarwal and Lenka, 2016; Pareek and Bagreecha, 2017; Banihani, 2020; Abuhussein and Koburtay, 2021; Agarwal *et al.*, 2022), gender-based discrimination (Agarwal and Lenka, 2016; Panda, 2018; Malmström *et al.*, 2018; Isaga, 2019; Banihani, 2020), limited knowledge (Ghouse *et al.*, 2021), unfavorable business environment (Noor and Isa, 2020; Ármane *et al.*, 2021; Welsh *et al.*, 2021; Ogundana *et al.*, 2021; Cho *et al.*, 2021; Rakib, 2023), inadequate support system (Nkwabi and Mboya, 2019; Al-Shami *et al.*, 2020; Banu and Khanam, 2020; Beriso, 2021; Osei and Zhuang, 2020) and personality-based constraints (Naguib and Jamali, 2015; Ghouse *et al.*, 2017; Banu and Khanam, 2020; Gimenez-Jimenez *et al.*, 2022). The interplay and self-reinforcing characteristics of these traits, Panda (2018) argued, often constrained WEs from achieving their potential. Chakraborty and Chatterjee (2021) observed that, largely as a consequence of the above, women-led enterprises were significantly smaller, less productive and growth constrained compared to businesses run by their male counterparts. These challenges, the study observed, often forced WEs to focus their entrepreneurial ambitions in services and trade-related sectors where capital intensity (and hence requirement of outside capital) was considerably low (Prashar *et al.*, 2018; Pinkovetskaia *et al.*, 2019).

How important is the financial challenge compared to the other challenges mentioned above for WEs in urban India? What is the exact nature of the financial challenge? Is there any connection between the financial challenges faced by WEs and their own skill sets?

Among numerous theories of women entrepreneurship, the feminist theory and the theories that evolved from it hold special relevance in so far as the development of skill sets in WEs is concerned. The feminist theory acknowledged the subordination, inequality and oppression that women faced and suggested that contrary to men who adopted more business-focused strategies, the strategies adopted by women to succeed often included collaboration, work-life and diversity strategies (Kropf and Burnette, 2003) largely aimed at helping them manage societal expectations and their personal career aspirations. The deprivation theory (which evolved from the feminist theories) suggested that societal views deprived women of numerous opportunities in education, vocational training, networking relationships and access to capital (Sospeter *et al.*, 2014; Hussain *et al.*, 2024). A lack of skills and resources in turn impacted the progress that women could make in their career pursuits in general and the outcome of entrepreneurial endeavors of women in particular. The deprivation theory evolved to the human capital theory (Becker, 1962; Rosen, 1976), which proposed that individuals and societies benefitted through investments in the development of human capital such as education, skill development and health of its people. This resulted in higher efficiency and productivity, leading to individual prosperity and robust economic performance.

Existing literature analyzing the skill sets of WEs suggested that they were weaker in financial skills compared to men (Welsh *et al.*, 2014; Manwari *et al.*, 2017), an outcome in line with what the deprivation theory suggested. The findings of Suparno and Saptono (2018) and Llados-Masllorens and Ruiz-Dotras (2021) further highlighted the impact of this deficiency in promoting an entrepreneurial culture in society. Consequently, as the human capital theory suggested, the popular prescription from research studies has been the introduction of government support in skills training for WEs in general and financial skills in particular (Ghouse *et al.*, 2017; Rudhumbu *et al.*, 2020). How do the Indian WEs fare in terms of their skill sets? Are they similarly disadvantaged when it comes to financial skills? This research aims to explore these challenges using a sample of women microentrepreneurs located in India's urban centers.

In order to seek answers to these questions, this research set forth the following research questions (R1, R2, R3 and R4):

R1. How important is the financing challenge *vis-à-vis* the other challenges that urban WEs engaged in manufacturing sector face?

R2. What is the exact nature of the financial challenge? Is it an outcome of preference (aversion) or a challenge from the supply side?

R3. What (is) are the major deficiencies in the skill set of urban WEs?

R4. Is there a link between the deficiencies in their skill sets and the challenges they faced?

In exploring research question 1, this study focuses on the following challenges faced by WEs as documented in Panda (2018) and Malmström *et al.* (2018), Banihani (2020), Osei and Zhuang (2020) and Abuhussein and Koburtay (2021). These included limited funding, balancing responsibilities, gender inequality, limited knowledge, unfavorable business environment and inadequate support system.

For research question 1, following is our null hypothesis

H01. There is no significant difference in the ranking of financial challenge *vis-à-vis* other challenges faced by WEs engaged in manufacturing activities.

In exploring the funding challenge faced by WEs, this research explores the issues involved through a quantitative analysis of responses obtained from WEs with regard to their source(s) of funding at inception, and the challenges they faced while accessing institutional finance in the post inception phase.

For research question 3, this research identifies the deficiencies in the skill sets of WEs as has been observed in Manwari *et al.* (2017), Ghouse *et al.* (2017) and Rudhumbu *et al.* (2020). The hypothesis to be tested is as follows:

H02. There are no significant differences in the skill sets of WEs.

The findings of research question 2 and 3 form the basis of inferences drawn for research question 4.

The methodology adopted in carrying out the sampling, collection of data and the statistical tools used in testing the null hypotheses H01 and H02 are detailed in the next section.

Methodology

The data required for the study were obtained through a survey of WEs. For this purpose, a survey questionnaire was administered to the target sample. The first set of questions gathered information on the geographical location of the business, its size (in terms of revenue and investments in plant and machinery), the demographic profile of respondents (including age and marital status), the respondents' educational qualification and an option to specify if she was a first-generation entrepreneur or inherited a family business. The next question included the challenges faced by WEs, and respondents were required to rank them on a scale of 1–6, where 1 represented most important and 6 represented least important. Question 3 of the instrument required respondents to rank their perceived skill in performing alternative responsibilities in their businesses. The options in this case included human resource-related responsibilities, marketing, operations and finance-related responsibilities and technology-related responsibilities. Respondents were required to rank them on a scale of 1–5; 1 being "most-skilled" and 5 being "least skilled." Question four in the instrument sought details of funding source(s) at inception. Following this, the instrument explored if the respondent ever approached a bank and/or financial institution in the post-inception period for raising finances in question number five. This close-ended question sought responses in the form of "yes" or "no". In case the respondent's answer was "no," she was required to explain the reasons behind the same in question number six. In case the respondent answered in the affirmative, question seven required the respondent to specify if it was for short-term or long-term funds or both and accordingly explain her experience as a borrower, and the outcome of this process in question eight. The last question included in the instrument sought inputs from respondents on the single and most important step that the government may initiate to enable WEs overcome the funding challenge.

In order to test for clarity and adequacy of the instrument, it was initially shared with a sample of three WEs from the manufacturing microenterprise. The selection of respondents at this stage was based on convenience sampling. Based on suggestions received from the respondents at this stage, questions six and eight were made closed-ended. The options included in both questions six and eight were in line with the challenges WEs faced while accessing institutional finances as cited in Mandipaka (2014), Chinomona and Maziriri (2015), Lubna and Parvin (2017), Panda (2018), Banu and Khanam (2020) and Khayal (2021).

This research used purposive sampling; responses were collected using the structured questionnaire, and the professional networking site LinkedIn was used for this purpose. At the outset, a list of 654 WEs were identified using the search option "people" and with the search term "women business owner." The following filters were employed to identify the appropriate sample – location: India and industry of engagement: manufacturing. This group of prospective respondents was further refined to remove women co-owners and women-owned startups. The resulting sample of 621 WEs was approached through LinkedIn inmails or emails soliciting their participation. The inmail and/or emails shared with respondents included a link to the questionnaire and detailed the objective of the study, the purpose of the survey and the expected profile of the respondents. The communication also contained a declaration, indicating that the purpose of collecting responses was purely academic and that none of questions required the respondents to reveal their identify or particular details about their business.

Responses were accepted from the period October 16 to December 20, 2022. During this period, a total of 112 responses were obtained, resulting in a response rate of 18%. These responses were examined to remove: (1) respondents who did not qualify the definition of a micro-entrepreneur as laid down by the Ministry of Micro, Small and Medium Enterprises, Government of India [1]; (2) responses that lacked the required details necessary for classification and (3) those that had inconsistent and/or incomplete ranking of challenges. Eventually, the total number of useable responses available for further analysis stood at 98.

For the purpose of analysis, this research uses summary statistics, namely the mean, mode and standard deviation for the purpose of preliminary analysis. Given the nature of responses obtained for our research hypothesis (is ordinal in nature), the Kandall's tau-b correlation matrix is employed for identifying strongly correlated challenges, if any. In order to test the hypothesis used in this research, the Friedman two-way analysis of variance by ranks test and the associated chi-square values are used to statistically validate the hypotheses (H01 and H02). The Wilcoxon signed-rank test is used to check for the robustness of our results.

Analysis of data and findings

Table 1 below shares the details of the sample used in this study. In terms of age, the highest number of WEs (23) belongs to the category 20–25 years, followed by 16 respondents from the age group 41–45 years and 15 respondents from the age class 36–40 years In total, 49% of the sampled WEs are married, and 51% respondents have postgraduate qualification. It is important to note that our sampled respondents included no school or high school dropout; in fact, a 96.9% of our respondents have at least a graduate degree. Furthermore, 16.32% of the sampled respondents inherited family businesses; they are at least second-generation entrepreneurs.

Table 2 details the location of the sampled respondents' business unit. Tamil Nadu has the largest share of respondents followed by Maharashtra and Delhi. Together, these three states constitute more than 63% of respondents. In terms of geographical scope, the sample used in this research covers 13 of the 28 states of India and 1 out of 8 union territories.

Age (years)	Marital status		Qualification						Total	Sec. gen. ent
	Married	Unmarried	Graduate	PG	PGP	PhD	Engineers	Others		
20–25	3	20	14		1		8		23	
26–30	2	12	5	6	3				14	11
31–35	4	10		3	10	1			14	4
36–40	8	7	2		3		10		15	
41–45	15	1	1	2	9	4			16	
46–50	9	0		3	6				9	
51–55	6	0		3				3	6	
>56	1	0		1					1	1
Total	48	50	22	18	32	5	18	3	98	16

Note(s): Graduate (bachelor degree holders in science, commerce or arts)
PG: Postgraduate (master degree holders in science, commerce or arts)
PGP: Postgraduate professional degree (including CA, CS, MBA, PGDM and MA (LLB))
Ph.D. (doctorate degree holders)
Engineers: includes graduate and postgraduate engineers and ITI diploma holders
Others (professionally trained in a specific skill from private institutes)
Sec. Gen. Ent: Second-generation entrepreneurs
Source(s): Compiled by authors

Table 1. Profile of respondents ($n = 98$)

State (city)	Respondents
Andhra Pradesh (Proddatur)	1
Delhi	13
Gujarat (Ahmedabad)	2
Haryana (Gurugram, Panipat and Hissar)	4
Karnataka (Mangalore and Bengaluru)	3
Kerala (Kochi)	3
Madhya Pradesh (Indore)	2
Maharashtra (Navi Mumbai, Pune and Nagpur)	20
Rajasthan (Jaipur)	6
Tamil Nadu (Chennai, Hosur, Pudukottai and Tuticorin)	29
Telangana (Hyderabad and Khammam)	6
Uttar Pradesh (Noida)	3
Uttarakhand (Rudrapur)	3
West Bengal (Kolkata and Howrah)	3
Total	98

Source(s): Compiled by authors

Table 2. Location details of business establishment

The rank order of challenges

Table 3 summarizes the responses received on the rank order of challenges.

A preliminary analysis of the data obtained from responses of 98 WEs on the challenges they face reveals the following information.

(1) The modal value of rankings for challenges relating to limited funding is 1. Balancing responsibilities has a modal ranking of 2, while gender inequality and limited knowledge has a modal ranking of 3.

(2) The modal ranking of unfavorable business environment (rank 4) and inadequate support system (rank 5) is reflective of the relatively well-developed support system and general business environment for WEs in urban India.

(3) In terms of percentage share, 55.10% of respondents ranked limited funding as the most important challenge, and 80.6% respondents ranked it as the two most important problem.

Table 4 presents the Kendall's tau-b correlations between the challenges included in the research. The coefficients, while statistically significant in a few cases, are consistently weak between all the variables.

Table 5 presents the summary statistics of responses (n = 98), along with the mean rank from the Friedman test results. The original ranking scores obtained from respondents have been reversed for reporting purposes; this ensured that higher scores get associated with

Challenges	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6
Limited funding	54	25	15	1	2	1
Balancing responsibilities	13	42	14	17	10	2
Inadequate support system	10	8	16	14	35	15
Gender inequality	12	15	31	18	12	10
Unfavorable business environment	8	6	8	40	24	12
Limited knowledge	14	14	27	20	19	4

Source(s): Compiled by authors

Table 3. Details of responses received on the ranking of challenges

	Limited funding	Balancing responsibilities	Inadequate support system	Gender inequality	Unfavorable business Env	Limited knowledge
Limited funding	1.000	−0.081	−0.181*	−0.133	0.146	−0.128
Balancing responsibilities		1.000	−0.229**	−0.228**	0.032	0.184*
Inadequate support system			1.000	0.021	−0.078	−0.174*
Gender inequality				1.000	−0.034	−0.126
Unfavorable business env.					1.000	−0.145
Limited knowledge						1.000

Note(s): *Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)
Source(s): Compiled by authors

Table 4. Kendall's tau-b correlation coefficients between challenges included in the research

Major challenges	Summary statistics: mean (st. dev)	Friedman test mean rank
Limited funding	5.28 (1.01)	5.12
Balancing responsibilities	4.25 (1.29)	4.01
Inadequate support system	2.97 (1.54)	2.57
Gender inequality	3.66 (1.46)	3.36
Unfavorable business environment	2.96 (1.35)	2.58
Limited knowledge	3.71 (1.41)	3.37
Sample size		98
Kendall's W[a]		0.27
Chi-square		131.89
Df		5
Asymp. sig.		0.000

Note(s): [a]Kendall's coefficient of concordance
Source(s): Compiled by authors

Table 5. Summary statistics and Friedman's two-way analysis of variance by ranks test of challenges faced by women entrepreneurs

higher importance. Summary statistics reveals that limited funding has the highest mean score (5.28) followed by balancing responsibilities (4.25) and limited knowledge (mean score of 3.71). Of all the challenges considered in this research, limited funding has the lowest standard deviation (1.01), indicating a high level of consistency in ranking this challenge by respondents. Inadequate support system, on the other hand, has the highest standard deviation of 1.54, indicating that there is considerable variation in the way this challenge affected respondents.

The Friedman test results in Table 5 similarly indicate that limited funding is the most important challenge faced by WEs, followed by balancing responsibilities. Limited knowledge and gender inequality are ranked close together at the third spot. The Kendall's W statistic of 0.27 indicated a moderate level of conformity among respondents. This is in expected lines given that there is considerable heterogeneity in terms of the line of business even within the manufacturing sector. The significant chi-square value (of 131.89) clearly specifies that there are significant differences in the ranking of challenges faced by WEs. Consequently, our null hypothesis H01 cannot be accepted.

The Wilcoxon signed-rank test result (for the null hypothesis that the median difference between limited funding and balancing responsibilities is zero) is shown in panel A of Table 6. Our results indicate that the null hypothesis cannot be accepted; there is a significant difference in the ranking of the two challenges. Panel B of Table 6 repeats the test for balancing responsibilities (mean rank 4.01) and limited knowledge (mean rank of 3.37). Here again, the results indicate that there is significant difference in the ranking of these two challenges.

In summary, our findings suggest that for WEs engaged in manufacturing micro-enterprises, limited funding is the most important challenge they face in their entrepreneurial journey. While this finding is in line with the funding constraint reported in numerous studies on WEs, it is evident that the developments in urban India (including the rapid spread of digital infrastructure and financial services network) has not enabled WEs to address the financing challenge. The funding challenge is followed by balancing responsibilities in second place, and limited knowledge and gender inequality are tied at third place (Table 7 below suggests that there is no significant difference in the ranking of these two challenges). Our findings further suggest that inadequate support system and an unfavorable business environment are least important challenges for WEs, which is indicative of the relatively well-developed support system and conducive business environment in India's urban centers.

Nature of the financing challenge

The sources of funding at inception for sampled WEs are mentioned in Table 8. Of the total 98 WEs, an overwhelming majority of 77.6% of respondents depended on their own sources and family and friends for initiating their business, 10% used bank finance and 12.2% benefited from government schemes for WEs at inception.

The lack of institutional financial support for WEs at initiation stage has been observed in the context of other emerging nations as cited in Iakovleva *et al.* (2013), Belwal *et al.* (2014),

		N	Mean rank	Sum of ranks
Panel A: Limited funding – Balancing responsibilities	Negative ranks	23[a]	42.54	978.50
	Positive ranks	75[b]	51.63	3872.50
	Ties	0[c]		
	Total	98		
	Z		−5.271	
	Asymp. Sig. (2-tailed)		0.000	
Panel B: Balancing responsibilities – Limited knowledge	Negative ranks	30[d]	49.80	1494.00
	Positive ranks	66[e]	47.91	3162.00
	Ties	2[f]		
	Total	98		
	Z		−3.129	
	Asymp. Sig. (2-tailed)		0.002	

Note(s): [a]Limited funding < Balancing responsibilities
[b]Limited funding > Balancing responsibilities
[c]Limited funding = Balancing responsibilities
[d]Balancing responsibilities < Limited knowledge
[e]Balancing responsibilities > Limited knowledge
[f]Balancing responsibilities = Limited knowledge
Source(s): Compiled by authors

Table 6.
Wilcoxon signed-ranks test results between (a) limited funding and balancing responsibilities and (b) balancing responsibilities and limited knowledge

Zhu *et al.* (2019), Nasir *et al.* (2019) and Khayal (2021). Hence, the evidence cited here largely conforms to findings from other emerging nations.

Responses from the 98 WEs on accessing institutional finance at the post-initiation stage reveal that 62 of them (63.2%) never approached a financial institution for financial support, 27 (27.6%) respondents approached financial institutions for short-term (working capital) loans and 9 (9.2%) WEs applied for long-term financial assistance. None of the respondents checked for both long-term and short-term options.

Findings on WEs who never approached financial institutions (n = 62)

Table 9 below enumerates the reasons mentioned by the 62 respondents who never approached a financial institution. For 9 (15%) respondents, their business did not require external funding, while 7 (11%) respondents preferred to save and reinvest rather than borrow, and 10 (16%) respondents found the process of raising finance challenging and hence abstained from borrowing. By far the most important challenge originated from the lack of collateral and/or high-interest rates for sampled WEs; 34% of them refrained from approaching financial institutions owing to these two challenges. Lastly, responses also revealed that for one in four respondents, cash flow uncertainty is a major reason why they shy away from borrowing funds.

Findings on WEs who approached financial institutions for short-term loans (n = 27)

Responses obtained from 27 WEs who approached financial institutions for working capital loans revealed the following:

(1) 11 (40.7%) WEs did not qualify the Credit Information Bureau (India) Limited (CIBIL) score requirements, and hence, their applications were rejected.

		N	Mean rank	Sum of ranks
Limited knowledge – Gender inequality	Negative ranks	43[a]	49.78	2140.50
	Positive ranks	51[b]	45.58	2324.50
	Ties	4[c]		
	Total	98		
	Z		−0.352	
	Asymp. Sig. (2-tailed)		0.725	

Note(s): [a]Limited knowledge < Gender inequality
[b]Limited knowledge > Gender inequality
[c]Limited knowledge = Gender inequality
Source(s): Compiled by authors

Table 7. Wilcoxon signed-ranks test results between limited knowledge and gender inequality

Source of fund	Number	(%)
Own savings	33	33.67
Own savings, family and friends	29	29.59
Family and friends	14	14.29
Own savings, family and friends and bank	10	10.20
Your own savings, family and friends, government scheme for women entrepreneurs	12	12.24
Total	98	100.00

Source(s): Compiled by authors

Table 8. Sources of funding at inception for women entrepreneurs engaged in manufacturing

Table 9. Reasons behind not accessing institutional finance (n = 62)

Reason mentioned	Frequency	Relative frequency (%)
The nature of business is such that external funding is not required	9	15
In order to avoid default and associated legal problems, the preference is to accumulate funds and invest	7	11
The process of raising institutional finance has too many hassles	10	16
Lack of appropriate collateral to pledge against borrowing	5	8
The interest rates charged by banks are beyond reach	6	10
Lack of appropriate collateral to pledge against borrowing and high-interest rates	10	16
Cashflows too uncertain to meet periodic interest payments and principal repayment	15	24
Total	62	100

Source(s): Compiled by authors

(2) Eight (29.6%) WEs had their applications rejected on the grounds of low business turnover *vis-à-vis* what is mandated by the financial institution.

(3) Eight (29.6%) WEs were successful in obtaining the short-term loans they needed. An interesting finding in this section is that five of the eight WEs who were successful in raising short-term finances were second-generation businesses.

Findings on WEs who approached financial institutions for long-term loans (n = 9)

Responses obtained from the nine WEs who approached financial institutions for long-term loans revealed a still lower acceptance rate; only two of the nine WEs were successful in raising long-term finances. Of the WEs whose applications were rejected, three of them mentioned that the interest rate charged by the financial institution was far higher than their repayment capacity, while the remaining four respondents mentioned that the repayment period stipulated was too short for them to honor.

In summary, findings of this section suggest that the funding challenge faced by WEs stems from a multiplicity of reasons including voluntary abstinence, risk aversion, cashflow uncertainty and their incapacity to meet the criteria laid down by lending institutions in terms of collateral requirement, interest rate and/or repayment period. While it is a matter of conjecture as to whether those WEs who failed to garner institutional support are truly too risky to lend or they are an outcome of conservative bank lending, the fact that only 10 urban WEs (approximately 10% of sampled WEs) succeeded in obtaining the finances they needed speaks volumes about the funding challenge that WEs faced. A comparison of these findings with evidence from other emerging nations suggested strong similarities with the observation of Welsh *et al.* (2014), Ramadani *et al.* (2015), Manwari *et al.* (2017), Lubna and Parvin (2017), Banu and Khanam (2020) and Khayal (2021).

Deficiencies in the skillsets of WEs

The analysis of data on the perceived skills of WEs in performing alternative roles in their respective business enterprises is mentioned in Table 10. Like the previous case, here as well we reversed the original scores to associate higher scores with higher perceived skills. Summary statistics of rankings indicated that WEs engaged in manufacturing are most comfortable in operation-related roles (mean score of 4.11) and least comfortable in finance-related roles (mean score of 2.11). The rankings on finance-related roles also had the smallest standard deviation (1.07), indicating a high level of unanimity among respondents. The

Alternative roles	Descriptive statistics Mean	Std. dev	Friedman test Mean rank
Operations related	4.11	1.07	4.12 (Rank 1)
Marketing related	3.24	1.52	3.23
Human resource related	2.92	1.13	2.89
Information technology related	2.65	1.23	2.65
Finance related	2.11	1.24	2.11 (Rank 5)
Sample size			98
Kendall's W[a]			0.22
Chi-square			87.22
Df			4
Asymp. sig.			0.00

Note(s): [a]Kendall's coefficient of concordance
Source(s): Compiled by authors

Table 10. Women entrepreneurs' level of confidence in performing alternative roles

Friedman test results indicated significant differences in the perceived skills WEs have in performing alternative responsibilities (Chi-square value of 87.22, asymptotic significance = 0.00). Hence, our null hypothesis of no significant difference in perceived skill set of WEs could not be accepted.

Our findings on the low perceived skills WEs possess in finance-related roles is akin to the findings of Mitchelmore and Rowley (2013), Welsh *et al.* (2014) and Manwari *et al.* (2017) and reiterates the need for financial skills training of WEs as suggested by Ramadani *et al.* (2015), Ghouse *et al.* (2017) and Rudhumbu *et al.* (2020) in the context of other emerging nations.

Our results showing limited knowledge as one of the first three challenges (Table 5) for our sampled WEs (which included 96.9% respondents with at least a graduate degree) along with our findings in Table 10 indicated the inadequacy of our education system in meeting the financial skill requirements needed for running a small business. Skills are an intrinsic part of human capital that contribute to production and/or productivity (Goode, 1959), and their absence may result in an inability to complete a task effectively. To the extent that low perceived skill in financial issues is an outcome of limited domain knowledge, the funding challenges that WEs faced may not entirely be a supply-side problem. Limited knowledge and understanding of financial concepts like financial analysis, credit risk and cash flow management not only impairs an entrepreneur's ability to perform managerial roles but also impairs their understanding of lending norms or criterion adopted by lending institutions. This possibly explains why so many WEs abstained from borrowing or the disqualifications they faced in raising institutional finance.

Supporting evidence is observable in the responses obtained for the last question on corrective and/or redressal measures (direct or indirect) that the government may adopt to address the funding challenge that WE faced. Table 11 presents the findings in this regard. Of the 95 responses obtained, the highest number of 16 WEs suggested enhancing financial literacy and training in financial management skills as the most important corrective measure that the government can initiate in order to ease the funding challenge they faced.

Other corrective measures suggested by WEs included:

(1) Improving access and enhancing awareness of special schemes for WEs launched by the government (13.7% WEs suggested this as the most important measure);

(2) Providing flexible repayment period loans, with easier terms and conditions (35.8% WEs suggested this as the most important measure);

Table 11. Corrective/redressal measures suggested by women entrepreneurs for easing their funding challenge

Sl. No	Measure suggested	Freq	%
1	Collating all funding related schemes for WEs at one place	2	
2	Enhancing awareness about funding schemes meant for WEs through special drives	6	13.7
3	Enhancing access to funds meant for WEs through better service delivery	5	
4	Collateral-free loans for WEs	11	
5	Subsidized interest rates	15	35.8
6	Longer/flexible repayment period	8	
7	Streamlining the process of loan sanctioning for WEs	13	13.7
8	Special purpose funds with flexible repayment facilities for initial capital investments	7	7.4
9	Special programs on financial literacy and training in financial management skills	16	16.8
10	Others	12	12.6
	Total	95	100.0

Note(s): Others: This category included proposals to consider educational qualification as proxies for collateral, waiver of credit cover requirements, access to strategic investors and special schemes for single women enterprises
Source(s): Compiled by authors

(3) Streamlining the process of service delivery (suggested as the most important measure by 13.7% WEs) and

(4) Flexible repayment facility for loans extended for initial capital investment (suggested by 7.4% WEs as the most important measure).

Putting together the evidence generated in the survey study on the primacy of the funding challenge faced by WEs, their low perceived skills in finance-related responsibilities and their felt need for financial skills training, it seems fair to conclude that the challenge they faced is, at least partially, an outcome of deficiencies in their own skill sets, as the human capital theory predicted. Hence, the answer to our fourth research question.

Conclusion

This study aimed to identify the challenges faced by WEs located in urban India and engaged in manufacturing microenterprises. Using primary data obtained through a survey study conducted on a sample of 98 WEs, it is observed that limited funding is the primary problem faced by them in their entrepreneurial pursuits. Our evidence does not indicate any significant impact of the growth of the financial services sector in urban India on the funding challenges that WEs faced. A closer look at the funding challenges suggests that a large percentage of WEs abstained from accessing institutional financial support for reasons including cash flow uncertainty, high-interest charges and/or collateral requirement or because of pure aversion towards borrowing. Evidence on WEs who approached financial institutions for resources suggested high loan application rejection rates by banks and/or financial institutions (FIs) on grounds of credit history or cash flow size. The study then explored the skill sets of WEs and sought remedial measures from respondents to understand if inherent gaps in skill sets of WEs were in part responsible for the observed funding challenge they faced. Findings suggested that WEs were least comfortable performing finance-related roles, and to address this challenge, WEs sought intervention measures that enhanced financial literacy and their financial management skills. Based on the evidence generated, the study concludes that the adverse impact of the funding challenge may be mitigated to some extent through appropriate skills training and competency building measures.

Implications of the study

This study has implications for multiple stakeholders, including policymakers, bankers and, of course, WEs.

Findings on the funding constraints faced by WEs indicates that many years of policy-backed intervention measures aimed at promoting WEs, dating back to the Fifth Five Year Plan (1974 onwards) has not generated the desired results. Hence, there is an urgent need to have a re-look at both the policies formulated as well as the process of executing those policies, especially in the context of financial intermediation. Remedial measures need to be initiated at two levels. For those willing borrowers who are unable to raise funds because of high-interest rates and/or collateral requirement or are rejected on the basis of low CIBIL scores, there is a need for specialized financial institutions that shall evaluate these businesses, extend performance linked financing plan (for instance, diminishing interest charges for timely payment) and allow for flexible (cashflow-linked) repayment of debt and debt service charges. Such institutions may operate at the smallest administrative level to ensure that monitoring, evaluation and timely support can be extended to these microenterprises. While the need for appropriate legal framework protecting the rights of the lenders can never be understated, it is equally important to ensure that such protection does not lead these microenterprises into a vicious cycle of remaining eternally small.

For women microentrepreneurs who voluntarily abstain from borrowing, there is similarly a need for devising schemes that may draw them into the ambit of institutional lending. In addition to appropriate sensitization measures and awareness programs, schemes like zero (or subsidized)-interest loans against deposits or savings, collateral-free loans for established and profitable microenterprises may be introduced. Attempts may also be directed toward enhancing their investible surplus of these profitable units through subsidized power or tax exemptions in order to help them scale-up faster than they would otherwise do. Such schemes may be launched as a pilot project in select urban centers before being appropriately modified and rolled out on a national scale.

At a macro level, the government may also consider the establishment of specialized institutions that may help women-led enterprises in gaining access to know-how – which are otherwise beyond their reach, given their creation of institutions that may help women-led enterprises in gaining access to managerial support services. For instance, institutions equipped to help these microenterprises in management of credit flow, technology upgradation, marketing and financial management support services, intellectual property rights and trademarks may prove to be an important component in the support infrastructure. In the same vein, simplification and harmonization of regulatory processes and procedures for microenterprises, sensitization of administrative staff dealing with WEs on gender issues and a legal system responsive and capable of protecting women at workplace can be another major thrust area for promoting women-led enterprises.

In order to engage commercial banks in lending to these microenterprises, it is important to revisit lending norms and asset classification provisions for loans and advances made to microenterprises. A liberal credit guarantee scheme from a government-promoted fund may go a long way in helping these enterprises get access to much-needed credit.

While there will be financial implications associated with implementing these schemes, the long-term direct and indirect dividends from the growth of these microenterprises may far outweigh the short-term costs.

Limitations and direction of future research

This research study has its own limitations. First, the sample used in this research is small. Even for educated women microentrepreneurs from urban India, a larger sample size covering each state and union territory in India is expected to yield more robust results. Second, this research analyzed WEs engaged in manufacturing as a monolithic whole. Further disaggregation in terms of product category and capital intensity is expected to help generate more granular information that may enable policymakers design more effective intervention measures. Similarly, WEs engaged in running small and medium-sized enterprises may be included in the sample to make the analysis even more robust and generalizable. Third, the sample of second generation surveyed in this study is too small for any comparative study between the two categories of WEs. To what extent are the challenges faced by both these two categories similar or different? Future research in this direction may incorporate these additional factors in analyzing the issues impeding the growth of WEs in India.

Notes

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