

Financial Literacy, Welfare Scheme Utilization, and Economic sustainability among Leather Industry Workers in Uttar Pradesh, India

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Abstract: Leather industry workers constitute an important segment of Uttar Pradesh's informal labour force, yet many remain economically vulnerable due to low incomes, unstable employment, limited financial capability, and uneven access to welfare support. The study addresses the problem of how financial literacy and welfare scheme utilization influence the economic sustainability of leather workers. The objectives were to assess financial literacy, examine welfare awareness, registration, and benefit receipt, and analyze their relationship with economic sustainability. The study used a quantitative, descriptive, and analytical design based on primary survey data collected from 100 leather workers. Data were analyzed using descriptive statistics, a Financial Literacy Index, welfare participation counts, Spearman correlation, and regression analysis in SPSS. The findings show that financial literacy significantly improves welfare registration and, to some extent, benefit access. However, financial literacy alone does not strongly predict economic sustainability in simple models. Income emerged as the strongest determinant of economic sustainability, while welfare utilization did not show a clear positive effect on resilience. The study concludes that financial literacy is necessary for institutional access but insufficient without stable earnings and effective welfare delivery. Policy should therefore combine financial literacy interventions with stronger labour protection, income support, and improved implementation of welfare schemes for workers.

Keywords: Economic sustainability; leather; Micro and small enterprise; socio-economic; wage; employment

1. Introduction

The leather industry is one such significant labour-intensive industry in India, which has traditionally been the source of employment, manufacturing, and export revenues. The state of Uttar Pradesh is in a central location in this industry, especially the leather clusters of Kanpur, Agra, and Unnao, where tanning, footwear manufacturing, stitching, finishing, and similar tasks are performed by large populations of workers (Goel, 2014). Although it is important economically, the sector is characterised by a high level of informal labour, which consists of contract workers, casual labourers and daily wage workers who frequently work with low bargaining power and employment security. Such workers are usually characterised by low and unpredictable wages, sporadic employment, non-written contracts, and limited access to formal social security sectors. These conditions expose them to economic difficulties, health crises, and disruptions of a livelihood, and undermine the overall economic sustainability (International Labour Organisation, 2022; Razavi, 2022).

Financial literacy is defined as the knowledge, skills, attitudes, and behaviours needed to make sound financial decisions and manage financial resources. It is a critical factor in facilitating people to access bank accounts, be familiar with savings products, formal credit, insurance adoption, and plan to respond to income difficulties or crises



(Reserve Bank of India, 2021). Financial literacy is particularly relevant to workers as their lives are sometimes vulnerable to instability, and their survival is not backed by stable institutional measures. Nonetheless, the leather workers are often structurally disadvantaged in terms of financial ability, such as low rates of formal schooling, low contact with banking services, poor digital skills, and reliance on informal loans or employer-provided loans. The wider financial inclusion initiatives in India have enhanced access to basic banking services, but in reality, inclusion can be achieved not only through account ownership but also through meaningful and sustainable use (Datwani, 2017).

The Government of India has introduced several welfare and financial inclusion programs in recent years to enhance the security and resilience of the vulnerable groups. Plans like Pradhan Mantri Jan Dhan Yojana have increased bank account access, and Pradhan Mantri Mudra Yojana has facilitated micro-credit to self-employment and development of small enterprises (Datwani, 2017; NITI Aayog, 2023). On the same note, social protection programs like insurance, pension support programs and worker registration programs aim at enhancing the safety net to workers. An example is the e- Shram Portal, which is a national database and entry point of unorganised workers and is intended to enhance welfare delivery and policy targeting (Ministry of Labour and Employment, 2025). Nevertheless, the presence of schemes does not necessarily precondition their efficient use. Lack of awareness, enrolment, documentation, online access, and outreach by the institutions can result in leather workers not receiving the intended benefits, and thus the role of the schemes in enhancing economic sustainability will be limited (International Labour Organisation, 2022; Razavi, 2022).

Though the previous studies refer to the concepts of financial inclusion, labour vulnerability and welfare protection, few studies have been conducted to understand the relationship between financial literacy, welfare scheme use and economic sustainability of leather industry workers in Uttar Pradesh. The research fills that gap by determining the financial literacy of workers and their awareness of and utilisation of welfare schemes and evaluating the impacts on economic sustainability. It poses the question of whether financially literate workers are more inclined to use welfare schemes and whether their use increases their financial and social risk management capacity.

Research Objectives

1. To assess the level of financial literacy among leather industry workers in Uttar Pradesh
2. To evaluate the awareness and utilization of government welfare schemes among leather industry workers
3. To examine the relationship between financial literacy, welfare scheme utilization, and economic sustainability among leather industry workers

2. Literature review

The recent research has put growing focus on the role of financial literacy, financial inclusion, social protection and resilience in determining the welfare of vulnerable employees in developing economies. This literature is particularly applicable in the Indian context, where most of the workers in the leather industry are found in the labour-intensive regions of the country, like Kanpur, and are involved in insecure and informal types of work. Financial literacy research in India indicates that the distribution of financial knowledge is still unequally distributed among social and occupational groups. The studies on micro and small enterprises show that education, exposure to formal financial institutions, and socio-economic origin are the factors which affect financial literacy in such a way that workers, who have fewer institutional connections, are more prone to stay economically vulnerable (Singla & Mallik, 2021). This is of particular concern to the low-income population, where the financial literacy programs are often considered as the required tool to enhance inclusion, informed decision-making, and responsible use of financial products (Bhandare and Guha, 2024). On the same note, the broader literature on rural households points out that financial behaviour is also highly dependent on the availability of services and that awareness, trust, and the potential to engage with financial systems meaningfully are also determinants of financial behaviour, which in turn makes literacy a precondition (Dash & Mohanta, 2024). In South Asia and Sub-Saharan Africa, there also exists evidence that the more financially and digitally endowed individuals are, the better they can cope with the shock, through formal financial service use and livelihoods during a crisis (Kass-Hanna et al., 2022). Therefore, other developmental impacts

associated with financial inclusion include increased savings, credit availability, reduced vulnerability, and economic participation (Mishra et al., 2024).

According to one of the recent studies of informal worker social protection schemes, the policy intention is often compromised by the delivery system, low awareness, administrative obstacles, and inaccessibility to target groups (Mohapatra & Sahoo, 2025). This observation is quite applicable to employees in the informal sectors where there is a lack of registration, documentation and continuity of work. Studies of informal economy resiliency to the COVID-19 crisis further demonstrate that workers in precarious industries are dependent on personal coping mechanisms, community, and government intervention, but many are structurally vulnerable because institutional protection is weak (Aditya and Amri, 2023).

In particular, when it comes to the leather industry, the literature on the subject remains scarce but important. The recent case study of the leather cluster in Kanpur shows that the well-being of the workers is highly influenced by insecure employment, insufficient social security, and occupational vulnerability, which prompts the necessity to strengthen the institutional and financial support systems within the industry (Shukla et al., 2025). The studies of the poorer areas of India demonstrate that even in areas where banking services are formally available, financial inclusion continues to be limited by regional inequality, low institutional penetration, and socio-economic disadvantage (Kumar, 2024). Similarly, in rural West Bengal, it has been shown that mobile banking adoption has the potential to intensify inclusion considerably, yet its success relies on the confidence, knowledge, and capacity of users to navigate digital platforms (Khobragade et al., 2025). Therefore, the considered literature indicates that more financially educated employees are more willing to interact with formal institutions, and the effective use of welfare and financial resources can help them to better manage economic difficulties.

3. Research Methodology

3.1 Research Design

The present study adopted a quantitative research design and followed a descriptive as well as analytical approach. The relationship between financial literacy, the use of welfare schemes and economic sustainability among the workers in the leather industry was investigated using a structured survey approach. The descriptive aspect was employed to generalise the socio-economic background of respondents, financial inclusion levels, level of awareness and use of welfare schemes and economic sustainability patterns. The analytical element was employed to test the relationships between the key variables in correlation and regression-based methods. This was a cross-sectional study in the sense that the data were gathered among the respondents at one point in time.

3.2 Sampling

The study target population involved workers in the leather industry who worked in various sections of the leather production chain. The purposive sampling method was employed to select workers actively involved in leather work and capable of providing the pertinent information on the income, financial practices, welfare participation, and resilience. It was a suitable method since the research was conducted on a particular occupational group and not on the general population. The concluded sample had 100 respondents, and all valid cases were used to analyse statistically. The sample consisted of workers who were differentiated in gender, age, education, type of employment, type of work, experience and category of income, which allowed comparing differences between socio-economic groups.

3.3 Data Sources

Primary data was used in the study, with the major source being a structured questionnaire survey that was used to conduct a survey on the workers in the leather industry. The questionnaire was created to obtain data about the socio-demographic factors, the employment status, access to banking services, the usage of digital payments, savings behaviour, awareness about the existence of savings and insurance, awareness about welfare schemes and their registration, receipt of benefits, and the signs of economic sustainability. The survey tool produced coded information

that was subsequently entered and analysed using SPSS. Besides the primary data, secondary data, including governmental reports, labour-related reports, policy documents, etc., were used to put the whole situation into the context of welfare provision, labour vulnerability and the inclusion of informal workers into financial inclusion. Nevertheless, the statistical analysis of this paper is conducted on the basis of the primary survey data. The application of the primary and contextual secondary sources facilitated the improvement of the applicability and meanings of the findings.

3.4 Data Analysis Tools

The analysis of data was performed in SPSS 31 Base Edition. The initial phase was the descriptive statistics, frequencies, percentages, means, standard deviations, and checks on distributions to profile respondents and summarize the key study variables. Five recoded indicators, including bank account ownership, digital payment use, regular saving behaviour, savings awareness, and insurance awareness, were put together to create a Financial Literacy Index. After reverse coding the item of loan-dependence and discarding one weak item on community support after reliability testing, an economic sustainability Score was constructed on the basis of a set of resilience items. Welfare awareness, registration and benefit variables were transformed into count and grouped measures to be further analyzed. Bivariate analysis was done using the Spearman rank correlation since some of the variables were not normally distributed. Lastly, the use of linear regression and ordinal regression was used to determine whether financial literacy could predict welfare uptake and whether financial literacy and welfare utilisation correlated with economic sustainability.

3.5 Variable Construction and Measurement

The key concepts of the study were transformed into measurable variables so that they could be analysed. The financial literacy was measured using a composite Financial Literacy Index, which was made up of five recoded items: ownership of a bank account, use of digital payments, frequent saving behaviour, knowledge of savings schemes and knowledge of insurance schemes. These measures were recoded such that the higher the value, the higher the level of financial literacy and financial inclusion, and these were added together in a summary index. The use of welfare schemes was quantified in three measures, which were awareness count, registration count, and benefit count across the identified government schemes. Moreover, ordinal analysis was done through grouped categories of welfare. Likert-type statements on economic sustainability in terms of emergency coping, adequacy in savings, dependence on loans, income stability, and survival capacity during income disruption were used to measure economic sustainability. The loan-dependence item was negatively worded, and it was reverse-coded and then indexed. The final resilience scale was developed based on reliability analysis, and one weak item was deleted to enhance internal consistency.

4. Results

4.1 Socio-Demographic and Work Profile

The research was premised on 100 valid respondents. Regarding gender, 61 % were males and 39 % were females. The age distribution showed that the sample was concentrated among young and middle-aged workers, with 35% in the 18-25 years group, 23% in the 26-35 years group, and 24% in the 36-45 years group. The distribution of educational attainment indicates that respondents were concentrated in the middle levels of education. In terms of employment, 55% of the respondents were permanent employees, 34% were contractual workers, 4% were casual/daily wage workers, and 7% were apprentices/trainees. The highest proportions in work type were in tannery work (36%) and footwear manufacturing (29%). Income levels were concentrated in the lower and middle ranges, with the largest group earning in the ₹10,000–15,000 category (32%), followed by ₹7,500–10,000 (26%) and ₹15,000–20,000 (19%). Table 1 shows the socio-demographic and occupational characteristics of the 100 workers in the leather industry who were part of the study.

Table 1. Socio-demographic profile of respondents (N = 100)

Variable	Category	Frequency	Percentage
Gender	Male	61	61.0
	Female	39	39.0
Age	Under 18	2	2.0
	18–25 years	35	35.0
	26–35 years	23	23.0
	36–45 years	24	24.0
	46–55 years	10	10.0
	Above 55 years	6	6.0
Education	Primary (Class 1–5)	8	8.0
	Upper Primary (Class 6–8)	24	24.0
	Secondary (Class 9–10)	20	20.0
	Higher Secondary (Class 11–12)	18	18.0
	Diploma / ITI	9	9.0
	Graduate or above	21	21.0

Work-related Profile of Respondents



Figure 1. Work-related profile of respondents

Figure 1 shows that most respondents were permanent workers and had 4-7 years of experience. Tannery work and footwear manufacturing were the most common occupations, while monthly income was concentrated mainly in the ₹7,500-15,000 range.

4.2 Financial Literacy and Financial Behaviour

Financial behaviour profile reveals that there is moderate and uneven financial inclination among the respondents. A vast majority, 83%, said they had a bank account, which indicates that the formal access to banking was not that rare. Digital financial engagement was weaker, however: based on the recoded indicator, only 39% fell into the active digital payment category, and the rest of the respondents indicated infrequent or no use of digital payments. The saving behaviour was reported to be regular by 52%, indicating that there was a near even division in saving practices. In the recoded awareness variables, 63% were aware of the schemes related to savings, and 62 % were aware of the insurance scheme. These five items were put together to form the Financial Literacy Index that had a range of 0 to 5, a mean of 2.99 and a standard deviation of 1.13, which showed a moderate overall level of financial literacy and inclusion, as shown in Table 2. While Table 3 indicates that the distribution of the index was considerably non-normal (Shapiro-Wilk =.927, $p < .001$).

Table 2. Components of the Financial Literacy Index

Financial literacy component	Meaning of 1	n with value = 1	%
Bank account ownership	Has a bank account	83	83.0
Active digital payment use	Uses digital payments actively	39	39.0
Regular saving behaviour	Saves regularly	52	52.0
Awareness of savings schemes	Aware of savings schemes	63	63.0
Awareness of insurance schemes	Aware of insurance schemes	62	62.0

Table 3. Normality Test for Financial Literacy Index

Variable	Min	Max	Mean	SD	Shapiro–Wilk	p
Financial Literacy Index	0	5	2.99	1.13	.927	< .001

4.3 Welfare Awareness, Registration, and Benefit Receipt

The outcomes of the welfare indicate that there is a clear gradient between the awareness, registration and actual receipt of the benefits as indicated in Figure 2. In the case of the key scheme variables, 78% of the respondents knew about the scheme, 70% were registered, and said that they had received benefits. The mean of the welfare awareness count at the aggregate level was 2.27, indicating that the respondents were aware of two or three schemes on average. The average number of welfare registrations was 1.69, which implies registration in one or two schemes. When asked in a grouped format, 14% of the respondents were not enrolled in any scheme, 31% enrolled in one scheme, and 55% enrolled in two or more schemes. In comparison, the number of benefits was only 0.90 on average. In categorised terms, 35% did not receive any benefits, 44% received benefits under one scheme, and only 21% received benefits under two or more schemes. This indicates that there is an observable gap between registration and actual benefits.

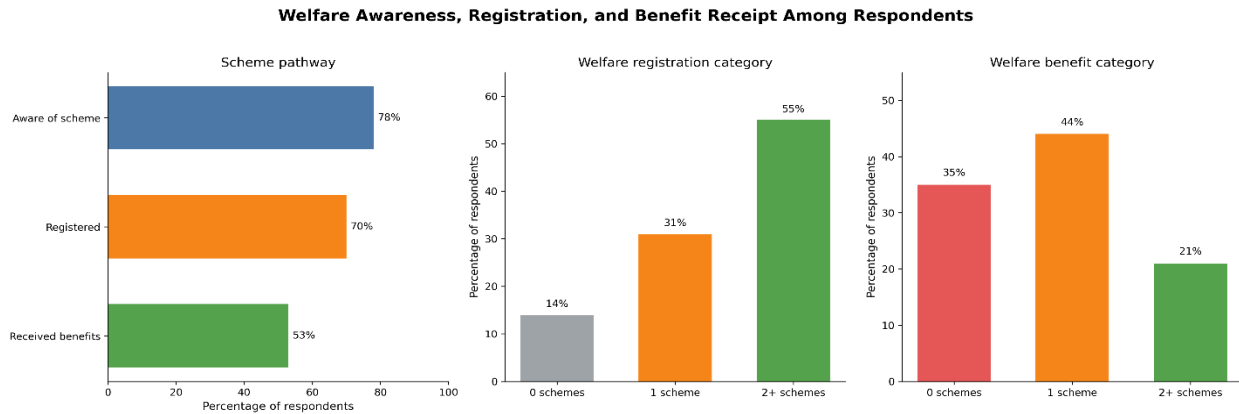


Figure 2. Welfare awareness, registration, and benefit receipt among respondents

Note. Panel A shows the percentage of respondents who were aware of the scheme, registered, and reported benefit receipt. Panels B and C show the grouped distribution of welfare registration and welfare benefit receipt, respectively.

4.4 Economic sustainability Profile and Scale Construction

The outcomes of the item-level resilience indicate respondents with relatively low economic coping capacity. Some 74% strongly disagreed or disagreed with the statement regarding managing medical emergencies on a financial basis. When they had sufficient savings to cover any loss of unexpected income, 84% said no or strongly no. Dependence on loans was also high, with 73% saying that they rely on loans or strongly agreeing that they rely on loans in times of financial hardship. In the same way, 56% of them did not agree that their job is a source of stable income, and 76% strongly disagreed that they can live without income for three months. The social support was more than the other dimensions of resilience, and 52 % of respondents agreed or strongly agreed that they could access family or community support. The six-item block analysis yielded a Cronbach's alpha of .839. The community-support item, however, did not fit the scale, and hence the final Resilience Score relied on five items. The composite score had a mean of 9.93 (SD = 4.04) and was non-normal (Shapiro–Wilk = .882, $p < .001$). This is shown in Table 4.

Table 4. Reliability and summary statistics of the Economic sustainability Scale

Statistic	Value
Cronbach's alpha (6 items)	.839
Weakest item-total correlation	Community support item = .168
Alpha if the weakest item is deleted	.902
Final composite used	Handle medical emergencies financially; enough savings to handle unexpected income loss; loan dependence during financial difficulties (reverse-coded); job provides stable income; ability to survive without income for three months.
Final Resilience Score mean	9.93
SD	4.04
Minimum	5
Maximum	23
Skewness	1.277
Kurtosis	1.550

Shapiro–Wilk	.882
p	< .001

4.5 Bivariate Relationships among Key Variables

Spearman developed the rank correlation, which was used since the variables formed were not normally distributed. The findings show that there was a positive and significant ($\rho = .385$, $p < .001$) correlation between welfare registration and financial literacy, i.e. there were respondents who were highly financially literate and were more likely to be registered in more welfare schemes. Financial literacy and welfare benefits ($\rho = .253$, $p = .011$) also had a positive but weaker relationship. On the other hand, there was no significant relationship between welfare registration and economic sustainability ($\rho = -.132$, $p = .192$). In the same way, there was a weak positive but insignificant relationship between financial literacy and financial resilience ($\rho = .152$, $p = .132$). The reliability of welfare benefits receipts and resilience was also not significant and weak ($\rho = .101$, $p = .316$). The results of the correlation in Table 5 show that there is a positive correlation between welfare uptake and financial literacy, and no substantial direct bivariate relationship between welfare participation and financial literacy and resilience.

Table 5. Spearman correlations among key variables

Variable pair	Spearman's rho	p-value
Financial Literacy Index ↔ Welfare Registration Count	.385	< .001
Welfare Registration Count ↔ Resilience Score	-.132	.192
Financial Literacy Index ↔ Resilience Score	.152	.132
Welfare Benefit Count ↔ Resilience Score	.101	.316
Financial Literacy Index ↔ Welfare Benefit Count	.253	.011

4.6 Regression Results

(A) Model 1: Financial Literacy as a Predictor of Welfare Registration

The first regression model examined whether financial literacy predicts welfare registration among leather industry workers. The simple linear regression model was specified as:

$$WRC_i = \beta_0 + \beta_1 FLI_i + \varepsilon_i$$

where WRC_i is the welfare registration count of the respondent i , FLI_i is the Financial Literacy Index, and ε_i is the error term.

The findings indicate that financial literacy was positively and statistically significant on welfare registration. The B was unstandardized and = 0.320, and the model was significant at $p < .001$. The model accounted 10.7 % of the difference in welfare registration ($R^2 = .107$). It should be noted that a unit change in the Financial Literacy Index was related to a 0.32 average increase in welfare registration. Respondents who had stronger access to banking, savings behaviour, savings awareness, digital payment use and insurance awareness in substantive terms were more likely to be enrolled in more welfare schemes. Accordingly, the model presents a clear indication that financial literacy increases welfare uptake during the registration stage.

To test whether this relationship remains after accounting for respondent background, an adjusted model was estimated:

$$WRC_i = \beta_0 + \beta_1 FLI_i + \beta_2 Age_i + \beta_3 Gender_i + \beta_4 Education_i + \beta_5 Income_i + \varepsilon_i$$

Financial literacy continued to be positive and significant ($B = 0.267$, $p = .020$) in this model, but age, gender, education, and income were not found to be significant. The complete model was important ($F = 2.914$, $p = .017$) and it accounted 13.4% of the change in welfare registration ($R^2 = .134$). This demonstrates that despite the fact that the demographic and socio-economic factors have been controlled, financial literacy remains the most significant predictor of welfare registration in the sample. That is, the availability of welfare among workers seems not to depend on their background traits, but rather on financial awareness and inclusion levels.

(B) Model 2: Financial Literacy as a Predictor of Economic sustainability

The second set of models examined whether financial literacy directly predicts economic sustainability. The simple regression model was:

$$RS_i = \beta_0 + \beta_1 FLI_i + \varepsilon_i$$

where RS_i represents the composite Economic sustainability Score.

The simple model revealed that financial literacy had a positive but non-significant coefficient ($B = 0.440$, $p = .221$). This model accounted for a significant variance of 1.5% of resilience ($R^2 = 0.015$), meaning that financial literacy on its own could not significantly predict resilience. The direction of the association was positive, but the effect was low and was not at the traditional level of significance. This indicates that financially literate workers might seem a little more robust but not strong enough in the simple model to arrive at the conclusion about financial literacy as the sole determinant of resilience.

A controlled model was then estimated:

$$RS_i = \beta_0 + \beta_1 FLI_i + \beta_2 Age_i + \beta_3 Gender_i + \beta_4 Education_i + \beta_5 Income_i + \varepsilon_i$$

With the introduction of the controls, the total model became very important ($F = 40.040$, $p < .001$, $R^2 = .680$). But the importance of financial literacy was not that great ($B = 0.475$, $p = .061$), whereas income turned out to be the key factor predicting resilience ($B = 2.402$, $p < .001$). Age was nearly significant ($p = .064$), but not gender or education. This interpretation is significant: the economic status of workers in the leather industry, particularly the income, influences resilience in leather workers more than financial literacy does. Thus, income security seems to be the primary focus of resilience, whereas financial literacy plays an insignificant independent role in this adjusted model.

(C) Model 3: Combined Models of Financial Literacy, Welfare Utilisation, and Economic sustainability

To examine whether welfare utilisation helps explain the relationship between Financial literacy and resilience a combined model with welfare registration was estimated: $RS_i = \beta_0 + \beta_1 FLI_i + \beta_2 WRC_i + \beta_3 Age_i + \beta_4 Gender_i + \beta_5 Education_i + \beta_6 Income_i + \varepsilon_i$

This model was significant in general ($F = 35.874$, $p < 0.001$) and accounted for 69.8 per cent of the variation in resilience ($R^2 = .698$). Financial literacy in this specification became significant and positive ($B = 0.615$, $p = .017$), whereas welfare registration became significant and negative ($B = -0.523$, $p = .021$). Income was again the best predictor ($B = 2.387$, $p < .001$). The beneficial outcome of financial literacy implies that the higher the financial ability,

the more resilient a person is when other variables are taken into account at the same time. But the negative correlation between welfare registration and worker resilience suggests that more resilient workers may not have been more inclined to be registered; instead, less resilient workers may have been more inclined to be registered. Thus, the positive mediation effect as expected by welfare registration was not supported.

A second combined model used actual welfare benefit receipt instead of registration:

$$RS_i = \beta_0 + \beta_1 FLI_i + \beta_2 WB_i + \beta_3 Age_i + \beta_4 Gender_i + \beta_5 Education_i + \beta_6 Income_i + \varepsilon_i$$

This model was also statistically significant ($F = 33.450$, $p < .001$; $R^2 = .683$). The positive and significant financial literacy ($B = 0.522$, $p = .044$) and negative but not significant welfare benefit receipt ($B = -0.276$, $p = .361$) were found. The most predictive and stable one was income ($B = 2.434$, $p < .001$). These findings show that although financial literacy plays a positive role in resilience in a multivariate scenario, actual receipt of welfare benefits also does not play a significant role in explaining the differences in resilience amongst workers. Simply put, the results do not substantiate the definite positive mediating role of welfare usage between financial literacy and resilience. Rather, the resilience is modelled primarily by income, and the secondary role of financial literacy is incorporated into the comprehensive model. Table 6 shows the combined summary of all the regression models. Where FLI = Financial Literacy Index; RS = Resilience Score; WRC = Welfare Registration Count; WB = Welfare Benefit Count; B = unstandardized regression coefficient; R^2 = coefficient of determination; Adj. R^2 = adjusted coefficient of determination.

Table 6. Combined summary of regression models

Subsection	Model	Dependent Variable	Main Predictor(s)	Key Result	Model Fit	Interpretation
A. Financial Literacy as a Predictor of Welfare Registration	Model 1	Welfare Registration Count (wrc)	Financial Literacy Index (FLI)	$B = .320$, $p < .001$	$R^2 = .107$, $F = 11.792$, $p < .001$	Financial literacy significantly and positively predicts welfare registration. Workers with higher financial literacy tend to be registered in more welfare schemes.
	Adjusted Model 1	Welfare Registration Count (wrc)	FLI, Age, Gender, Education, Income	FLI: $B = .267$, $p = .020$	$R^2 = .134$, Adj. $R^2 = .088$, $F = 2.914$, $p = .017$	Financial literacy remains a significant predictor even after controlling for socio-demographic variables, while the control variables

						themselves are not significant.
B. Financial Literacy as a Predictor of Economic sustainability	Model 2	Resilience Score (RS)	Financial Literacy Index (FLI)	B = .440, p = .221	R ² = .015, F = 1.516, p = .221	Financial literacy alone does not significantly predict economic sustainability in the simple model.
	Adjusted Model 2	Resilience Score (RS)	FLI, Age, Gender, Education, Income	FLI: B = .475, p = .061; Income: B = 2.402, p < .001	R ² = .680, Adj. R ² = .663, F = 40.040, p < .001	Income is the strongest predictor of resilience, while financial literacy becomes only marginally significant after controls are added.
C. Combined Models of Financial Literacy, Welfare Utilisation, and Economic sustainability	Model 3	Resilience Score (RS)	FLI, Welfare Registration Count (WRC), Age, Gender, Education, Income	FLI: B = .615, p = .017; WRC: B = -.523, p = .021; Income: B = 2.387, p < .001	R ² = .698, Adj. R ² = .679, F = 35.874, p < .001	Financial literacy becomes a significant positive predictor of resilience, while welfare registration shows a significant negative association; income remains the dominant predictor.
	Adjusted Model 3	Resilience Score (RS)	FLI, Welfare Benefit Count (WB), Age, Gender, Education, Income	FLI: B = .522, p = .044; WB: B = -.276, p = .361; Income: B = 2.434, p < .001	R ² = .683, Adj. R ² = .663, F = 33.450, p < .001	Financial literacy remains significant, but welfare benefit receipt is not a significant predictor of resilience; income continues to exert the strongest effect.

5. Discussion

The findings show that there is a strong but limited role of financial literacy on welfare and resilience outcomes of workers in the leather industry. Financially literate workers were more prone to enrol in welfare schemes, and to a certain degree, they obtained benefits, showing that financial knowledge and coverage enhance the capacity of workers to navigate formal systems of support. Nonetheless, in the simplified models, financial literacy was not a strong predictor of economic sustainability. Rather, income has proven to be the strongest and most consistent predictor of resilience, indicating that the capacity of the workers to manage a difficulty is not only based on the awareness of the workers but also on their economic resources. The positive impact of welfare utilisation on resilience was also not anticipated, which could suggest that registration and benefit receipt alone are not enough to decrease vulnerability, or that the benefits present in the market are too limited to generate fiscal security of any significance. Such outcomes suggest that financial literacy programmes are required and not adequate. They are able to enhance access to welfare and institutional inclusion, although these need to be coupled with more extensive actions like stable employment, higher wages, and enhanced delivery of benefits.

Thus, the current results are generally in agreement with the previous studies on informal labour, social protection, and resilience. The poor translation of welfare registration to real benefit receipt confirms the issue of good intentions but bad execution of workers' social protection strategies, as pointed out by Mohapatra and Sahoo (2025). The high position of income in the explanation of resilience is also indicative of the larger structural risks of the informal labour market in India (Shrivastav and Husain, 2026). Theoretically, the research is in agreement with proposing that resilience is not a unidimensional economic ideology but a multidimensional state that is determined by resources, stability, and coping capacity, as suggested by Barrett and Constan (2014) and Salignac et al. (2019). The resilience of the leather workers is also low, which is also echoed by the labour and well-being issues reported in the leather cluster in Kanpur by Shukla et al. (2025). Nonetheless, this study goes on to state that financial literacy enhances access to welfare more explicitly than resilience. The small sample and the cross-sectional design, however, limit the study to generalised causality. Welfare was used in the form of counts, as opposed to the adequacy and quality of benefits. The future study should be conducted with more samples, longitudinal study designs and more rigorous welfare effectiveness and resilience measures.

6. Policy recommendations

The research indicates that leather industry workers have to make efforts to enhance their quality of life and resiliency, and that this cannot be achieved without a comprehensive policy approach. Workers need to be introduced to specific financial literacy training; that is, it should be aimed at banking, digital payments, saving behaviour, insurance knowledge, and knowledge of government plans. Second, mobile welfare enrollment camps must be established regularly in leather industry clusters, where workers can complete registration, document verification, and benefit claims near their places of work. This would decrease the time spent on administration and travelling expenses. Third, there is a need to have stronger industry-government partnerships that would tie labour welfare to employment realities. The owners of the factories, workers' unions, local governments and welfare agencies should help identify the qualified workers and create awareness. Lastly, the training on digital inclusion needs to be increased to enhance the capacity of workers to utilise mobile banking, UPI services, online applications, and digital identity systems. Enhanced financial inclusion and welfare access can be achieved by increasing digital confidence. A combination of these measures will be able to increase financial empowerment, decrease vulnerability, and promote a more inclusive economic development.

7. Conclusion

The study examined the relationship between financial literacy, welfare scheme utilisation, and economic sustainability among leather industry workers. The findings show that financial literacy plays an important role in improving welfare registration and benefit access, indicating that workers with better financial awareness are more capable of navigating formal support systems. However, financial literacy alone does not automatically translate into

stronger economic sustainability. Instead, income emerged as the strongest and most consistent predictor of resilience, showing that material economic conditions remain central to workers' ability to cope with economic difficulties. The study also found that awareness and registration in welfare schemes do not necessarily ensure effective benefit receipt, highlighting a gap between formal inclusion and actual welfare outcomes. This suggests that the problem is not only one of awareness, but also of implementation, access, and adequacy of support. Overall, the study concludes that financial empowerment among workers must be understood as a combination of literacy, access, and economic security. Financial literacy can improve institutional inclusion, but without stable income and effective welfare delivery, its impact on resilience remains limited.

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