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Research Article

Skill Formation and Informal Employment in Bangalore Slums: An Empirical Study

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Abstract

Skill formation is increasingly recognised as an important factor influencing employment opportunities and livelihood outcomes among the urban poor. In Bangalore, a large section of slum residents depends on informal work, including domestic work, construction and manual labour, street-based activities and small self-employment. This paper examines the relationship between skill formation and informal work among residents of Bangalore slums using published secondary microdata and empirical research. The study draws primarily on two major datasets: a survey of 1,107 households across 36 Bangalore slums and a two-round survey covering 1,482 informal workers residing in declared slums of Bangalore. The analysis examines the nature of informal employment, income vulnerability, occupational characteristics and the role of technical, language, digital, personal and social skills. The findings show that informal employment remains the principal source of livelihood for a substantial majority of slum workers. At the same time, informal workers possess a diverse set of skills that are often acquired through work experience, social interaction and informal learning rather than through formal training institutions. English proficiency and computer literacy are associated with better labour-market outcomes, while personal and social skills also play an important role in determining wage levels and wage stability. The study concludes that skill development programmes for the urban poor should move beyond short-duration occupational training and adopt a broader approach that combines technical skills with communication, digital, language, financial and entrepreneurial capabilities. The paper recommends stronger integration between skill formation, urban livelihood programmes, placement support and social protection.

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1. INTRODUCTION

Bangalore, officially known as Bengaluru, has developed into one of India's most important centres of information technology, services, manufacturing and entrepreneurship. Economic expansion has generated employment and attracted migrants from different parts of Karnataka and other states. At the same time, the benefits of urban growth have not been distributed evenly. A significant section of the urban population continues to live in slums and depends on insecure, low-paid and largely informal forms of employment. The informal economy performs an important role in sustaining the functioning of the city. Domestic workers, construction labourers, street vendors, drivers, delivery workers, waste pickers, security workers and other informal workers provide essential services to urban households and businesses. Yet these workers often operate without stable contracts, social security, employment protection or predictable earnings. The question of skills is particularly important in this context. Informal workers are frequently described as unskilled or low-skilled. Such a description, however, does not adequately represent the range of abilities required to perform informal work. Domestic work requires time management, interpersonal communication and practical household skills. Construction work requires physical and technical competence. Street vending and self-employment require customer interaction, financial management and market knowledge. Workers may therefore possess substantial capabilities even when these skills have not been formally certified. Skill formation among slum residents takes place through multiple channels. Formal education provides basic literacy and numeracy. Vocational training may provide occupational and technical competencies. Work experience develops practical knowledge. Family members, friends and social networks contribute to occupational learning and access to employment. Increasingly, digital and communication skills also influence access to information and economic opportunities.

2. REVIEW OF LITERATURE

The relationship between education, skills and labour-market outcomes has been widely examined within human capital theory. **Becker (1964)** argued that investments in education and training improve productive capabilities and can increase earnings. However, the returns to skills may vary according to labour-market structure, institutional conditions and the availability of employment opportunities.

Sen (1999) broadened the discussion by treating education and skills as capabilities that expand an individual's freedom to participate in economic and social life. From this perspective, skill formation is not limited to wage enhancement. It can also improve agency, occupational mobility and the capacity to respond to changing labour-market conditions.

Roy et al. (2018) developed a detailed socio-economic dataset covering 1,107 households in 36 slums of Bangalore. Their findings demonstrated the predominance of informal employment among slum residents. Domestic work and manual labour constituted major occupations, while only 13 per cent of

respondents were engaged in formal employment. The dataset also highlighted the low-income conditions of many slum households and the importance of livelihood choices, migration and access to financial systems.

Sengupta, Gaurav and Evans (2021) provided one of the most detailed empirical analyses of skill formation among informal workers in Bangalore slums. Using microdata from nearly 1,500 workers, the authors examined technical, language, personal and social skills and their relationship with wage levels and wage stability. Their study demonstrated that informal workers possess diverse skill portfolios and that English and computer literacy, together with personal and social capabilities, can influence labour-market outcomes.

Mehrotra et al. (2014) argued that India's skill-development challenge cannot be understood only as a shortage of training institutions. The quality, relevance and labour-market connection of training are equally important. Training that does not correspond with local employment demand may have limited economic value.

The International Labour Organization has also emphasised that informal employment is characterised by vulnerability, weak social protection and limited access to institutional support. Skills may improve employability, but skill development alone cannot eliminate the structural disadvantages associated with informal employment.

The National Urban Livelihoods Mission recognises the need to link the urban poor with employment-oriented skill training, self-employment and institutional support. The Employment through Skills Training and Placement component aims to provide market-oriented training and improve access to wage and self-employment opportunities.

Statement of the Problem

Bangalore's rapid economic growth has created a strong demand for labour across formal and informal sectors. However, many residents of urban slums continue to depend on informal occupations characterised by low and irregular income, absence of employment security and limited access to social protection. A common policy response to urban poverty is the provision of vocational and skill-development training. The underlying assumption is that better skills will improve employability and income. Yet informal workers already possess a variety of occupational, personal and social skills. The important issue is whether these skills are recognised, upgraded and connected to better employment opportunities. The problem addressed in this study is therefore to understand the relationship between skill formation and the nature of informal work among slum residents in Bangalore, with particular attention to employment patterns, income vulnerability, digital and language skills and the broader role of personal and social capabilities.

3. OBJECTIVES OF THE STUDY

1. To examine the nature and extent of informal employment among residents of Bangalore slums.

2. To analyse the role of technical, language, digital, personal and social skills in shaping informal workers' employment and livelihood outcomes.
3. To examine the implications of skill-development programmes for improving the employability and economic security of the urban poor.

4. RESEARCH METHODOLOGY

The study is based entirely on secondary empirical data. Two principal datasets form the basis of the analysis. The first is the Bangalore slum socio-economic dataset reported by Roy et al. (2018). The survey covered 1,107 households in 36 slums and collected approximately 267,894 data points through 242

questions. The survey examined demographic characteristics, income, expenditure, employment, migration, infrastructure and financial access. The second major source is the study by Sengupta, Gaurav and Evans (2021), which used a two-round survey of informal workers residing in declared slums of Bangalore. The final dataset consisted of 698 respondents in the first round and 784 respondents in the second round, giving a combined sample of 1,482 informal workers. The study examined demographic and employment characteristics and a broad range of self-reported task, language, personal and social skills.

5. DATA ANALYSIS AND INTERPRETATION

Table 1: Major Empirical Databases Used in the Study

Particulars	Roy et al. Slum Dataset	Sengupta et al. Skills Dataset
Study area	Bangalore	Bangalore
Type of respondents	Slum households	Informal workers living in declared slums
Number of slums covered	36	Multiple declared slums across two rounds
Sample size	1,107 households	1,482 workers
Survey rounds	Two stages	Two rounds
Major focus	Socio-economic and livelihood conditions	Skills and labour-market outcomes
Variables/information	242 questions	Employment, demographic and skill information
Important analytical dimension	Income, occupation, migration and finance	Task, language, personal and social skills

Source: Compiled from Roy et al. (2018) and Sengupta et al. (2021).

The two datasets complement each other. The Roy et al. dataset provides a broader understanding of household poverty, income, employment and livelihood conditions across Bangalore slums. The Sengupta et al. study provides a more specialised analysis of the skills possessed by informal workers

and their relationship with labour-market outcomes. Together, the datasets make it possible to examine both sides of the problem. The first explains the economic context in which informal work takes place, while the second shows that informal workers possess a broad and diverse skills base.

Table 2: Scale and Design of the Bangalore Slum Socio-Economic Survey

Particulars	Details
Total slums included in final survey	36
Total households surveyed	1,107
Approximate data points collected	267,894
Number of survey questions	242
Estimated Bangalore slum households used in sample design	321,296
Initial calculated sample requirement	1,067
First survey phase	20 slums
Second survey phase	16 slums

Source: Roy et al. (2018).

The socio-economic survey represents a substantial empirical resource for studying Bangalore's slum population. The sampling process considered geographical location, size, land type, declaration status, linguistic composition, religious profile and development characteristics. The large number of

observations and variables allow employment and livelihood conditions to be studied within a broader context of poverty, migration, infrastructure and financial access. This is important because skill formation cannot be understood independently of the household conditions in which workers live.

Table 3: Employment Structure among Surveyed Bangalore Slum Residents

Employment Category	Share / Observation
Informal employment	Majority of workers
Formal employment	13%
Major informal occupations	Domestic help and manual labour
Nature of employment	Predominantly informal and vulnerable

Source: Roy et al. (2018).

The most important finding from the employment data is the dominance of informal work. Only 13 per cent of the respondents were reported to be engaged in formal occupations

such as white-collar, blue-collar and sales employment. The remaining large majority depended primarily on informal work.

This finding indicates that urban economic growth does not automatically translate into formal employment for residents of low-income settlements. Many slum residents participate actively in the urban economy but do so under insecure

conditions. The result also challenges the assumption that informal workers are simply outside the economic system. They are integrated into the city through labour and services, but their participation is frequently informal and inadequately protected.

Table 4: Income Vulnerability among Bangalore Slum Households

Income Indicator	Observation
Respondents earning below ₹2,000 per month	25%
Basic amenities expenditure among this group	93% of income
Respondents earning below ₹4,000 per month	75%
Basic amenities expenditure among this group	91% of income
Households earning above ₹10,000 per month	Around 13%
Basic amenities expenditure among this group	Around 77% of income
Median monthly household income	Approximately ₹3,000

Source: Roy et al. (2018).

The income data demonstrate the economic vulnerability associated with low-paid employment. A large share of households had very limited income, and most of that income was required for basic needs. The findings have direct implications for skill formation. Households with low disposable income may face difficulty in paying for training, transportation, digital devices, certification or the opportunity

cost of time spent outside paid work. Therefore, the poor may be unable to participate fully in skill-development opportunities unless programmes are accessible and supported. The data also indicate that employment alone does not guarantee economic security. The quality, stability and remuneration of employment are equally important.

Table 5: Demographic and Migration Characteristics Relevant to Skill Formation

Particulars	Percentage / Observation
Respondents below 18 years	35%
Respondents below 35 years	About 70%
Migrants from rural areas within Karnataka	73% of migrants
Migrants from other parts of India	27% of migrants
Median household size	5 persons
Households with Tamil as native language	45%
Households with Kannada as native language	17%
Households with Telugu as native language	15%

Source: Roy et al. (2018)

The population profile indicates that Bangalore's slum communities contain a relatively young population and a substantial migrant workforce. This has important implications for skill-development policy. A young workforce creates an opportunity for skill investment and occupational mobility. At the same time, linguistic diversity may affect access to information, training and employment. Workers who migrate

from different linguistic backgrounds may require training programmes that combine occupational skills with communication and language support. The high proportion of younger residents also indicates the importance of connecting skill development with school retention, career guidance and entry-level employment opportunities.

Table 6: Financial Sources Used for Self-Employment

Source of Finance	Percentage
Own sources	37.29%
Informal borrowing without interest	7.63%
Informal loan or moneylender	46.61%
Formal loan without collateral	5.08%
Other sources	3.39%

Source: Roy et al. (2018)

The financial data show an important constraint affecting informal workers and self-employed households. Nearly half of the reported financing came from informal loans or moneylenders, while only a small proportion came from formal collateral-free loans.

Skill formation may increase a worker's productive capacity,

but workers require finance to convert skills into sustainable enterprises. A trained tailor, electrician, food vendor or service provider may still remain economically vulnerable without access to working capital, equipment and formal credit. Therefore, skill development should be linked with financial inclusion, enterprise support and market access.

Table 7: Skill Categories Identified among Informal Workers in Bangalore Slums

Skill Category	Examples of Capabilities
Task and occupational skills	Job-specific practical abilities
Language skills	Communication and language proficiency
Digital skills	Computer and related literacy
Personal skills	Reliability, confidence and self-management
Social skills	Communication, networking and interaction
Experience-based skills	Knowledge acquired through work and practice

Source: Based on the skill framework developed by Sengupta et al. (2021).

The skill profile of informal workers is broader than the conventional distinction between skilled and unskilled labour. Informal work requires a combination of practical and non-technical capabilities. A worker may have limited formal education but possess considerable occupational experience. Similarly, an informal worker's ability to maintain customers,

negotiate wages, obtain information and secure repeat work may depend on communication and social skills. The evidence therefore supports a broader understanding of skill formation that includes both formal training and learning acquired through work, family and social networks.

Table 8: Sample Structure of the Informal Worker Skills Study

Survey Round	Number of Respondents
Round 1	698
Round 2	784
Total	1,482

Source: Sengupta et al. (2021).

The skills study is particularly valuable because of its large worker-level sample and its focus on the capabilities of informal workers. The use of two rounds also enabled the researchers to refine the analysis of skills reported by respondents. The evidence demonstrates that skill formation among informal workers can be studied empirically rather than through the assumption that all workers outside formal employment are unskilled.

6. CONCLUSION

The study demonstrates that skill formation and informal work are closely connected in Bangalore's slum economy. Informal employment is not synonymous with an absence of skills. Workers possess practical knowledge, occupational experience, language abilities and personal and social capabilities that contribute to their economic survival. The empirical evidence from Bangalore also shows that certain skills can improve labour-market outcomes. English proficiency, computer literacy and personal and social skills are associated with wage levels and wage stability. At the same time, the dominance of informal employment indicates that skills alone cannot overcome all structural barriers to secure work. The central policy implication is that skill development for the urban poor should move beyond a narrow model of short-term vocational training. A more effective approach should combine occupational upgrading with digital literacy, communication, language skills, financial capability, entrepreneurship support, placement assistance and social protection. Bangalore's continued economic growth creates opportunities for employment, but these opportunities will not automatically become accessible to residents of urban slums. Inclusive urban development requires deliberate investment in the capabilities of the urban poor and institutional mechanisms that connect these capabilities with dignified and economically sustainable work.

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