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Original Research Paper

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WOMEN'S EARNINGS, INFORMAL EMPLOYMENT AND ECONOMIC VULNERABILITY IN TELANGANA AN EMPIRICAL STUDY OF HOME-BASED BEEDI WORKERS

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ABSTRACT

Informal employment remains an important source of livelihood for economically disadvantaged women in India, but participation in informal work does not automatically provide adequate income, economic independence or livelihood security. This study examines the earnings structure and economic vulnerability of women engaged in home-based beedi rolling in selected districts of Telangana. The paper adopts a descriptive and analytical secondary-data design based primarily on the 2025 study of the V. V. Giri National Labour Institute (VVGNLI), which covered 400 women workers from six villages in Nizamabad, Kamareddy and Nirmal districts. The analysis distinguishes household income, individual earnings and reported production because these measures capture different dimensions of economic well-being. The findings show that 81.5 per cent of respondents belonged to households reporting monthly family income between Rs.5,000 and Rs.15,000. In terms of daily beedi-rolling earnings, 62.75 per cent reported Rs.151–Rs.200 and 37 per cent reported Rs.201–Rs.250. The overall reported average daily production was 731 beedis. The study argues that the apparent flexibility of home-based employment can coexist with low remuneration, weak bargaining power and restricted occupational mobility. The evidence therefore supports a broader understanding of inclusive structural transformation in which employment quality, wage adequacy, income stability, social protection and access to alternative livelihoods are considered alongside labour-force participation.

KEYWORDS : Women Beedi Workers; Informal Employment; Economic Vulnerability; Household Income; Piece-Rate Wages; Labour Productivity; Gender Economics; Telangana; Structural Transformation; Livelihood Security.

INTRODUCTION

Economic development is not merely an increase in aggregate income. It is also a process through which productive opportunities, employment conditions, capabilities and living standards improve across different sections of society. Structural transformation is an important component of this process because it involves changes in the sectoral and occupational composition of employment and output. In conventional development thinking, movement from low-productivity traditional activities towards higher-productivity manufacturing and services is expected to raise earnings and improve welfare. Yet this transition is neither automatic nor evenly distributed.

Women working in home-based informal activities illustrate this unevenness. Home-based beedi rolling can provide an income-generating opportunity to women who may face constraints relating to mobility, household responsibilities, education, access to formal employment and the availability of local jobs. The household location of work may reduce some barriers to labour-market participation, but it can also make the intensity and duration of labour less visible.

Beedi rolling is generally organised through piece-rate remuneration, so payment is linked to accepted output rather than simply to hours of labour supplied. Earnings consequently depend on production, the applicable piece rate, availability of raw materials, acceptance of finished products and payment arrangements. Where alternative employment is scarce, workers may also have limited bargaining power.

Telangana provides a relevant setting for examining these issues because home-based beedi work continues to support livelihoods in selected rural and semi-rural areas. The VVGNLI study used in this paper provides empirical evidence from 400 women workers in six villages across Nizamabad, Kamareddy and Nirmal districts.

The central argument is that employment participation should not be treated as synonymous with economic empowerment. A woman may contribute to productive activity and household income while still receiving low remuneration, having little control over financial resources, facing uncertain work opportunities and lacking a realistic pathway to occupational mobility.

2. Statement of the Research Problem

The persistence of low-earning informal employment presents a challenge for inclusive economic development. Women engaged in home-based beedi rolling may face low piece-rate wages, limited bargaining power, uncertain income, weak employment protection and restricted access to alternative occupations. These conditions can create a situation in which employment provides immediate subsistence income without necessarily generating long-term economic security.

The research problem is therefore not simply whether women are employed, but whether the form of employment in which they participate provides adequate and stable economic returns. If sections of the workforce remain concentrated in traditional low-return activities while other sectors become more productive, aggregate economic progress may coexist with persistent occupational vulnerability. The present study accordingly examines the earnings structure and economic vulnerability of women beedi workers in selected districts of Telangana.

3. Objectives of the Study

- To examine the household income distribution of women beedi workers in selected districts of Telangana.
- To analyse the daily earnings of women engaged in home-based beedi rolling.
- To examine reported average daily beedi production and its implications for labour productivity.
- To investigate economic vulnerabilities associated with dependence on informal employment.
- To interpret the findings within the broader framework of women's economic empowerment and inclusive structural transformation.
- To identify policy measures that can strengthen wage security, payment transparency, skills and alternative livelihood opportunities.

4. Research Questions

- What is the household income position of women beedi workers in the selected study locations?
- What daily earnings do women obtain from home-based beedi production?
- What does reported production volume imply for the assessment of labour productivity?
- Does participation in home-based informal employment necessarily provide adequate economic security?

- What policy interventions are required to improve earnings and occupational opportunities?

5. Research Hypotheses

Null Hypothesis (H_0): There is no statistically significant association between monthly earnings from beedi rolling and household livelihood vulnerability among women beedi workers in Telangana.

Alternative Hypothesis (H_1): There is a statistically significant association between monthly earnings from beedi rolling and household livelihood vulnerability among women beedi workers in Telangana.

These are research propositions rather than statistically tested findings of the present paper. The published aggregate tables do not contain linked individual-level observations required to estimate the proposed relationship. Future primary research should collect individual earnings, household expenditure, income stability, debt exposure, household size and other relevant variables.

6. Review of Literature

Chen (2012): The informal economy includes a wide range of employment relationships in which workers may experience low earnings, insecurity and inadequate social protection. This framework is useful for interpreting home-based beedi work as a form of vulnerable informal employment.

International Labour Organization (2018): The ILO literature emphasises the vulnerability of women in informal employment and the importance of decent work, equal opportunity and social protection.

Arora et al. (2020): Research on the Indian beedi industry identifies employment and wage differentials and highlights unequal economic conditions among beedi workers.

Siddaraju (2013): Research on social security and welfare programmes for beedi workers emphasises effective welfare provision and implementation.

Samantroy, Parande and Das (2025): The VVGNLI study provides the primary empirical basis for the present paper and documents socioeconomic vulnerability, earnings conditions and the importance of alternative livelihood opportunities among women beedi workers in Telangana.

International Labour Organization (2019): The decent-work framework links productive employment, labour rights and social protection with inclusive economic development.

6. Research Gap

Three analytical issues remain particularly important. First, household income and individual earnings are distinct measures and should not be merged. Second, production volume requires interpretation alongside working time, accepted output and remuneration if it is to be used to discuss productivity. Third, continued dependence on home-based piece-rate work should be situated within the broader process of structural transformation. The present study organises the published Telangana evidence into a labour-economics framework connecting household income, individual earnings, production and vulnerability.

7. Research Methodology

7.1 Research Design

The study adopts a descriptive and analytical secondary-data research design. It is based principally on the published findings of the V. V. Giri National Labour Institute's 2025 report, supplemented by literature on informal employment, women's work, beedi employment and labour-market transformation. The paper does not claim to have independently conducted the original household survey or collected additional primary observations.

7.2 Study Area and Sample

The underlying survey covered selected villages in Nizamabad, Kamareddy and Nirmal districts of Telangana. The sample comprised 400 women home-based beedi workers across six villages.

District	Villages covered	Respondents	Percentage
Nizamabad	Borgaon and Menrajpally	140	35.00
Kamareddy	Kalwaral and Vajjepally	120	30.00
Nirmal	Rampur and Gundampally	140	35.00
Total	Six villages	400	100.00

Source : Primary data

Nizamabad and Nirmal each contributed 35 per cent of respondents, while Kamareddy contributed 30 per cent. The evidence represents the selected survey locations and should not automatically be treated as a statewide estimate.

7.3 Sources and Analytical Techniques

The principal source is Samantroy, E., Parande, P., and Das, A. (2025), Vulnerability Mapping and Identification of Alternative Livelihood for Women Beedi Workers in Telangana, V. V. Giri National Labour Institute. The study uses frequency distributions, percentage analysis, comparative interpretation of income categories, descriptive examination of daily production and economic interpretation of piece-rate employment.

The study does not generate new regression coefficients, p-values or confidence intervals because the necessary individual-level microdata are not available in the published aggregate tables.

7.4 Measurement Considerations

Household income refers to total income received by household members. Individual earnings refer to income earned by the woman through beedi rolling. Labour productivity refers to the relationship between productive output and labour input. These measures are conceptually distinct and cannot be treated as interchangeable.

8. Conceptual Framework

The analytical framework links employment form to economic outcomes. Home-based informal employment determines the institutional setting in which labour is supplied. Piece-rate remuneration connects output to earnings. Household income reflects combined household resources rather than the worker alone. Economic vulnerability emerges from the interaction of low earnings, income instability, limited savings capacity, occupational dependence and restricted access to alternatives. Structural transformation is relevant because it determines whether workers can move from low-return activities towards more productive and secure employment.

Dimension	Indicator used	Interpretive significance
Household resources	Monthly family income	Broader resource position of the household
Individual remuneration	Daily beedi earnings	Direct monetary return to the woman's work
Production	Average daily beedi output	Descriptive output measure
Employment structure	Home-based piece-rate work	Organisation of remuneration and risk
Economic vulnerability	Income/employment insecurity	Risks not captured by employment participation

Occupational mobility	Alternative livelihoods	Potential for inclusive structural transformation

9. Empirical Findings and Discussion

9.1 Household Income Distribution

Monthly family income	Respondents	Percentage
Rs.5,000–Rs.10,000	193	48.25
Rs.10,001–Rs.15,000	133	33.25
Rs.15,001–Rs.20,000	42	10.50
Rs.25,001–Rs.30,000	8	2.00
Rs.30,001–Rs.35,000	9	2.25
Rs.35,001–Rs.40,000	7	1.75
Rs.40,001 and above	8	2.00
Total	400	100.00

Source : Primary data

The findings indicate a strong concentration in the lower reported income categories. A total of 193 respondents, or 48.25 per cent, belonged to households reporting monthly family income of Rs.5,000–Rs.10,000. Another 133 respondents, or 33.25 per cent, belonged to the Rs.10,001–Rs.15,000 category. Together, these groups account for 326 respondents, or 81.5 per cent of the sample.

This concentration suggests that a substantial share of surveyed households operated with relatively limited monthly resources. Such a position may constrain saving capacity and the ability to absorb unexpected expenditure. It may also restrict investment in education, health and productive assets. Nevertheless, household income should not be interpreted as the woman's individual earnings, and the table alone cannot establish poverty status without household-size and expenditure information.

9.2 Daily Earnings from Beedi Rolling

Daily earnings	Respondents	Percentage
Rs.100–Rs.150	1	0.25
Rs.151–Rs.200	251	62.75
Rs.201–Rs.250	148	37.00
Total	400	100.00

Source : Primary data

The largest group, 251 respondents or 62.75 per cent, reported daily earnings of Rs.151–Rs.200. A further 148 respondents, or 37 per cent, reported Rs.201–Rs.250. Only one respondent reported Rs.100–Rs.150.

The concentration of earnings within these categories raises questions about remuneration relative to the time and labour required to achieve reported production. Under piece-rate work, higher earnings generally require higher accepted output unless the rate changes. The economically relevant measure is therefore not only daily earnings but effective earnings per hour after considering working time, rejected output, interruptions and payment practices.

9.3 Average Daily Production and Labour Productivity

District	Average daily production
Nizamabad	751 beedis
Nirmal	790 beedis
Kamareddy	641 beedis
Overall reported average	731 beedis

Source : Primary data

The overall reported average daily production was 731 beedis. Nirmal recorded the highest district average at 790, followed by Nizamabad at 751, while Kamareddy recorded the lowest at 641. The difference between the highest and lowest district averages was 149 beedis.

The district variation is descriptively important but cannot establish causation. Differences may reflect working time, production practices, availability of raw materials, household responsibilities or local work arrangements, but these explanations require additional evidence.

Production volume should also be distinguished from labour productivity. Two workers may produce the same quantity while spending different amounts of time. A more complete productivity assessment would require output, working hours, accepted production, piece rates, actual payments and relevant work-related costs.

9.4 Piece-Rate Remuneration and Home-Based Work

9.5 Household Income and Individual Earnings

Household income may come from several members, so it should not be treated as the woman's individual earnings. Beedi earnings represent her direct labour income but not total household resources. Women's financial empowerment also depends on control over income and household decisions.

9.6 Economic Vulnerability

Women beedi workers face multiple vulnerabilities:

- Income: Low earnings limit savings.
- Employment: Irregular work and raw-material shortages affect income.
- Remuneration: Piece-rate payment creates uncertainty.
- Health: Illness can reduce production.
- Opportunities: Limited alternative employment increases occupational dependence.

9.7 Women's Economic Empowerment

Employment alone does not ensure economic independence. Fair wages, stable income, financial control, skill development and better employment opportunities are essential for women's empowerment.

9.8 Structural Transformation and Occupational Mobility

Women need accessible training, financial support and market opportunities to move into better employment. Training programmes should be evaluated through actual employment, improved earnings and income stability.

10. Policy Implications

Policy area	Suggested intervention
Wage protection	Improve awareness of wage standards, fair payment rates and workers' rights.
Payment transparency	Maintain records of production, accepted beedis, rates, deductions and wages received.
Alternative livelihoods	Promote viable activities such as tailoring, food processing and small businesses.
Skill development	Provide practical training linked to identifiable employment or self-employment.
Financial inclusion	Improve access to banking, savings and financial literacy.
Labour-market information	Conduct regular surveys covering earnings, hours, production and payment conditions.
Social protection	Strengthen awareness and effective access to relevant welfare measures.
Market linkage	Support inputs, market access and continuity for alternative livelihoods.

11. Limitations of the Study

- The study is based on secondary data and depends on the scope and quality of the published survey information.
- The sample covers 400 women beedi workers from selected villages in three Telangana districts and cannot be treated as a statewide estimate.
- Individual-level linked observations are not available in the published aggregate tables, limiting statistical testing

and regression analysis.

- Household income and individual beedi earnings are different concepts and cannot be directly substituted.
- Reported production does not establish actual hourly productivity because working hours, accepted output and deductions are not fully available.
- The study does not independently verify wage compliance, payment delays or health outcomes.
- The hypotheses are propositions for future empirical testing rather than statistically confirmed findings.

12. Suggestions for Future Research

Future research should use primary micro-level data to connect daily production, working hours, piece rates, actual payments and household conditions for the same respondent. Such a dataset would permit estimation of effective hourly earnings, examination of determinants of earnings and statistical testing of the relationship between income and livelihood vulnerability.

Future studies should also examine intra-household control over earnings, savings, debt exposure, welfare access, health-related constraints and the opportunity cost of household labour. Comparative studies across districts and between beedi workers and women in other informal occupations could provide stronger evidence on the relative returns and risks of different livelihood strategies.

13. CONCLUSION

The economic circumstances of women engaged in home-based beedi rolling provide an important lens through which to understand the relationship between informal employment, gender inequality and structural transformation in Telangana. The published VVGNLI evidence indicates that a substantial proportion of surveyed households were concentrated in relatively low monthly income categories. Daily beedi-rolling earnings were concentrated between Rs.151 and Rs.200 for 62.75 per cent of respondents, while the overall reported average daily production was 731 beedis.

The findings reinforce the importance of interpreting remuneration in relation to production requirements and working time. They also demonstrate why household income, individual earnings and labour productivity should be treated as separate concepts. A household's total income cannot be attributed entirely to the woman worker, while production volume alone cannot establish effective productivity or adequate remuneration.

The broader implication is that employment participation should not automatically be equated with economic empowerment. Inclusive development requires attention to employment quality, wage adequacy, income stability, bargaining power, social protection and occupational mobility. For women dependent on home-based piece-rate work, policy should combine immediate income protection with longer-term strategies for skills, financial inclusion and alternative livelihoods.

Ultimately, structural transformation should be judged not only by aggregate growth or employment participation but also by whether workers in vulnerable occupations gain access to better and more secure economic opportunities.

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