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From Home to the Gig: Empowering Women in Thoothukudi District of Tamil Nadu state

D. Amutha

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ABSTRACT

The rise of the gig economy has opened new pathways for women to engage in income-generating activities, providing flexibility, autonomy, and opportunities for economic empowerment. This study examines the experiences of women gig workers in Thoothukudi district, focusing on their socio-economic characteristics, occupational patterns, income levels, and factors influencing earnings. A total of 120 women working in diverse gig sectors such as catering, tailoring, beauty services, and online freelancing were surveyed using structured questionnaires. Data were analyzed using descriptive statistics, Garrett Ranking, correlation, and multiple regression techniques.

Results indicate that most participants are middle-aged and have completed higher secondary or graduate-level education. Gig work offers flexible hours, supplementary income, opportunities to apply skills, and enhanced confidence, thereby serving as a platform for both economic and social empowerment. Nevertheless, challenges such as digital illiteracy, irregular earnings, absence of social security, cultural constraints, and safety concerns hinder full participation. Statistical findings highlight education as the strongest predictor of monthly income, while age and prior employment experience exert a smaller, yet positive influence.

The study concludes that while gig work provides significant opportunities for women, interventions such as digital literacy training, skill development initiatives, and social protection measures are crucial for promoting income stability, safety, and long-term empowerment. Such strategies can help women in Thoothukudi district maximize the benefits of gig work and contribute effectively to local economic development.

KEYWORDS

• Women Gig Workers • Opportunities • Challenges • Income • Digital Literacy

AUTHOR'S AFFILIATION:

Head & Associate Professor (Economics), St. Mary's College (Autonomous), Thoothukudi, Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli, Tamil Nadu, India.

CORRESPONDING AUTHOR:

D. Amutha, Head & Associate Professor (Economics), St. Mary's College (Autonomous), Thoothukudi, Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli, Tamil Nadu, India.

E-mail: amuthajoe@gmail.com

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INTRODUCTION

The gig economy has emerged as a significant avenue for income generation and employment in India, particularly for women seeking flexible work arrangements. Unlike conventional employment, gig work involves short-term, task-based assignments, often facilitated through digital platforms (Amutha, D., 2015). Empowering women requires a multifaceted approach, including access to quality education, good health, entrepreneurship, and political participation, which collectively enable them to make informed decisions and lead fulfilling lives (Abubakar & Dasuki, 2018). In this context, the gig economy offers several opportunities for women's empowerment.

The reach of the gig economy has expanded beyond traditional service sectors and across generations. As contemporary challenges require modern solutions, India's platform economy has grown substantially, transforming the ways people earn and engage in work (D. Amutha, 2011). For individuals seeking flexibility and the chance to work on multiple projects, gig employment provides an additional income stream. It also facilitates skill development and professional growth through diverse assignments (D. Amutha, 2011).

Women's participation in the gig economy, however, presents a complex picture. While gig work can enhance financial independence, flexibility, and work-life balance, it also poses challenges such as wage inequality, income instability, safety risks, and lack of employment benefits (Amutha, D., 2012). In rural areas, gig programs hold particular promise for women's empowerment by fostering productivity, specialization, and work-life balance. By offering skill training and access to secure and remunerative work, gig opportunities can advance social empowerment, especially in less urbanized regions (Waldkirch *et al.*, 2021).

Flexible work arrangements have been recognized as crucial for enhancing women's economic empowerment (Wood *et al.*, 2019). Yet, women gig workers often encounter irregular income, absence of social protection, and limited legal safeguards (De Stefano, 2016). Cultural norms and family responsibilities can restrict mobility, while safety concerns particularly in client-facing roles further constrain participation (Berg *et al.*, 2018). Research from Tamil Nadu indicates that

women's involvement in informal work is shaped by social norms, educational attainment, and skill levels (Anitha & Kumar, 2017).

Educational attainment is particularly important, as it enables access to higher-paying, skill-intensive, and online-based gig work (Chakravarty, 2020). While age and previous work experience may influence earnings to some extent, education remains a more significant determinant of financial outcomes (D. Amutha, 2011). Consequently, digital literacy and skill development programs are essential for sustaining income and improving women's prospects in the gig economy (ILO, 2021).

In Thoothukudi district, women traditionally engage in beedi making, salt pan labor, domestic work, and small-scale enterprises. Gig work offers an alternative path to financial independence, especially with the proliferation of smartphones, internet connectivity, and social media platforms. Many women are now participating in home-based businesses such as online food services, tailoring, handicrafts, and digital freelancing. These initiatives not only supplement household income but also enhance women's confidence, decision-making capacity, and social status. However, challenges such as digital illiteracy, lack of social security, financial constraints, and cultural restrictions remain. Therefore, examining both the opportunities and challenges of gig work in Thoothukudi district is essential to understand its role in empowering women and promoting inclusive local development.

OBJECTIVES

1. To examine the socio-economic profile of women engaged in gig work.
2. To analyze the factors influencing women's participation in gig employment.
3. To investigate the relationship between age, educational attainment, and income among women gig workers.
4. To assess the impact of education, age, and prior employment status on women's monthly earnings.
5. To identify the opportunities and challenges encountered by women in gig-based occupations.

METHODOLOGY

This study adopts a descriptive and analytical research design to explore women's participation in gig work in Thoothukudi district and the associated opportunities and challenges. Both primary and secondary data sources are used. Primary data are collected through structured questionnaires and personal interviews with women involved in various gig activities, including catering, tailoring, handicrafts, beauty services, and online freelancing. A purposive sampling method is employed to select 120 respondents from urban and rural areas, ensuring representation across different gig occupations.

Secondary data are sourced from government reports, NSSO publications, academic articles, and existing research on the gig economy and women's employment. Data analysis combines quantitative and qualitative techniques. Descriptive statistics, including percentages, averages, and frequency distributions, are used to summarize respondents' demographic and work-related characteristics. Chi-square tests examine associations between socio-economic factors and gig work participation, while correlation and regression analyses assess the effects of education, age, and employment status on income and empowerment. The study was conducted over a three-month period, from June 2025 to August 2025.

REVIEW OF LITERATURE

Kalleberg and Dunn (2016) highlight that gig work offers flexibility in terms of timing and location, which is particularly beneficial for women managing household responsibilities alongside employment. Mukherjee (2020) observed that women in semi-urban areas often prefer home-based gig activities such as tailoring, food services, and beauty care due to social norms and limited mobility. Rani and Singh (2021) noted that digital platforms enable opportunities in online tutoring, freelancing, and small-scale entrepreneurship; however, digital literacy remains a significant barrier for many women in rural and semi-urban settings.

RESULTS & DISCUSSION

The study of women gig workers in Thoothukudi district reveals important patterns related to age, education, employment background, occupation, income, and challenges.

Table 1: Age-wise classification of sample respondents

Age (years)	Number of Respondents	Percentage (%)
Below 20	10	8.33
20–30	25	20.83
30–40	30	25.00
40–50	35	29.17
50 and above	20	16.67
Total	120	100.00

Source: Primary data (**Note:** The mean age of respondents is 37.5 years.)

The age distribution of women gig workers in Thoothukudi district reveals that the largest proportion (29.17%) falls within the 40–50 years age group, highlighting active participation among middle-aged women. Those aged 30–40 account for 25% of the respondents, while younger women between 20 and 30 years constitute 20.83% of the sample. Only 8.33% of the participants are below 20 years, indicating limited involvement of very young women, possibly due to ongoing education or lack of work experience. Women aged 50 and above make up 16.67% of the sample, suggesting that even older women engage in gig work, likely as a means to supplement household income. The mean age of respondents is 37.5 years, reflecting that the typical gig worker is middle-aged and manages both domestic responsibilities and income-generating activities.

Table 2: Education level of sample respondents

Education Level	Number of Respondents	Percentage (%)
Secondary	30	25.00
Higher Secondary	35	29.17
Graduate	35	29.17
Postgraduate	20	16.66
Total	120	100.00

Source: Primary data

The data indicate that most respondents (58.34%) have completed higher secondary or graduate education, reflecting a moderate to high literacy level among women engaged in gig work. A smaller share of participants are postgraduates (16.66%), while 25% have only completed secondary education. This suggests that educational attainment plays a crucial role in enabling women to access skill-intensive and digitally enabled gig opportunities.

Table 3: Employment status before gig work

Employment Status	Number of Respondents	Percentage (%)
Unemployed	35	29.17
Part-time	25	20.83
Full-time (low-income)	20	16.67
Housewife	40	33.33
Total	120	100.00

Source: Primary data

A large proportion of women (62.5%) were previously unemployed or homemakers, indicating that gig work offers them a new avenue for income generation and economic independence. Women with prior part-time or low-income employment have also benefited from gig opportunities by augmenting their earnings.

Table 4: Occupation in gig work

Occupation in Gig Work	Number of Respondents	Percentage (%)
Catering / Food Services	42	35.00
Tailoring / Handicrafts	30	25.00
Beauty Services	24	20.00
Online Tutoring / Freelancing	24	20.00
Total	120	100.00

Source: Primary data

Table 6: Socio-Economic Factors Influencing Women's Gig Work Participation

Socio-Economic Variables	χ^2 Value	df	p-value	Significance (5%)
Education	7.82	3	0.049	Significant
Age	4.75	4	0.314	Not Significant
Previous Employment	3.45	3	0.327	Not Significant

Source: Computed from Primary data

The Chi-square analysis reveals that among the socio-economic variables examined education, age, and prior employment status only education has a statistically significant association with participation in gig work at the 5% level. This suggests that higher educational attainment supports women's involvement in gig occupations, particularly those requiring specialized skills or digital proficiency. Age does not have a significant effect, indicating that women across different age groups participate in gig work, with a slightly higher representation between 30 and 50 years. Prior employment status also does not show a significant impact, although women who were previously unemployed or homemakers tend

to engage more in gig activities. Among women gig workers, catering and food services are the most common occupations, engaging 35% of respondents, followed by tailoring and handicrafts at 25%. Beauty services and online tutoring/freelancing each account for 20% of participants. This pattern indicates a preference for flexible, home-based, and skill-oriented work among women.

Table 5: Monthly income from gig work

Income Range (₹)	Number of Respondents	Percentage (%)
5,000–7,000	30	25.00
7,001–10,000	40	33.33
10,001–12,000	30	25.00
12,001–15,000	20	16.67
Total	120	100.00

Source: Primary data

The majority of women gig workers (33.33%) earn between ₹7,001 and ₹10,000 per month, reflecting moderate income generation through gig activities. A smaller group (16.67%) with higher education and digital skills earn between ₹12,001 and ₹15,000, emphasizing the importance of knowledge and skill development in achieving higher earnings.

Overall, these results underscore the pivotal role of education in facilitating women's engagement in the gig economy in Thoothukudi district.

Table 7: Pearson Correlation between Age, Education, and Monthly Income

Variables	Age	Education	Monthly Income
Age	1.00	0.15	0.18
Education	0.15	1.00	0.65
Monthly Income	0.18	0.65	1.00

Pearson correlation analysis was conducted to explore the relationships between age, education, and monthly income. The

correlation between age and monthly income is 0.18, indicating a weak positive relationship, which suggests that older women earn slightly more, possibly due to greater experience. In contrast, the correlation between education and monthly income is 0.65, showing a strong positive relationship and confirming that higher educational attainment significantly boosts earnings. The correlation between age and education is 0.15, reflecting a low association and indicating that education levels are relatively evenly distributed across age groups. These findings emphasize the critical role of education in influencing income among women engaged in gig work.

Table 8: Effect of Education on Women's Monthly Earnings: Regression Analysis

Coefficient	Value (₹)	t-value	p-value
Intercept (β_0)	4,000	4.2	<0.001
Education (β_1)	2,200	7.8	<0.001

Model Summary:

- $R^2 = 0.42 \rightarrow$ Education explains 42% of the variation in monthly income.
- F-test: Significant at $p < 0.001 \rightarrow$ Model is statistically significant.

A simple linear regression was conducted using education as a predictor of monthly income, resulting in the equation:

$$\text{Income} = 4,000 + 2,200 \times \text{Education Level}$$

The model indicates that each step up in education (for example, from secondary to higher secondary) is associated with an increase of approximately ₹2,200 in monthly income. Education accounts for 42% of the variation in income ($R^2 = 0.42$), and the model is statistically significant ($p < 0.001$), highlighting the substantial influence of educational attainment on earnings among women gig workers.

Table 9: Effect of Education, Age, and Employment Status on Women's Monthly Earnings

Predictor	Coefficient (₹)	Standard Error	t-value	p-value
Intercept (β_0)	3,500	800	4.38	<0.001
Education (β_1)	2,000	260	7.69	<0.001
Age (β_2)	150	80	1.88	0.063
Employment (β_3)	400	120	3.33	0.001

Model Summary:

- $R^2 = 0.48 \rightarrow$ The model explains 48% of the variation in monthly income.
- F-test: $F = 29.7$, $p < 0.001 \rightarrow$ Model is statistically significant.

A multiple regression analysis was carried out using education, age, and employment status as predictors of monthly income. The resulting regression equation is:

$$\text{Income} = 3,500 + 2,000 \times \text{Education} + 150 \times \text{Age} + 400 \times \text{Employment Status}$$

The analysis shows that education is the strongest predictor, with each additional level of education increasing income by ₹2,000 ($p < 0.001$). Age has a small positive effect, adding ₹150 per year, but it is not statistically significant at the 5% level ($p = 0.063$). Employment status has a moderate impact, raising income by ₹400 per unit increase ($p = 0.001$). Overall, the model explains 48% of the variation in monthly income ($R^2 = 0.48$) and is statistically significant ($F = 29.7$, $p < 0.001$), highlighting the central role of education alongside modest contributions from age and employment background.

Table 10: Opportunity Scores of Women Gig Workers (n=120)

Opportunity	Number of Respondents	Percentage (%)
Flexible work hours	95	79.2
Home-based enterprises (catering, tailoring, etc.)	85	70.8
Access to digital platforms	50	41.7
Enhancement of confidence & decision-making power	75	62.5
Source of supplementary income	90	75.0

Source: Primary data

Among the opportunities of gig work, flexible working hours received the highest score (79.2), followed by supplementary income (75.0), highlighting that time flexibility and additional earnings are the most valued benefits for women. In contrast, access to digital platforms scored the lowest (41.7), indicating that limited digital literacy continues to restrict women's participation in online gig opportunities.

Table 11: Challenges faced by women gig workers

Challenges	Garrett Score	Rank
Digital Illiteracy	68.5	1
Irregular Income	61.8	2
Lack of Social Security / Benefits	53.4	3
Cultural / Family Restrictions	45.2	4
Safety / Harassment Concerns	37.6	5

Source: Computed from Primary data

The Garrett Ranking analysis highlights the primary challenges faced by women engaged in gig work in Thoothukudi district. Digital illiteracy ranks highest, with a Garrett score of 68.5, indicating that limited digital skills hinder women from effectively accessing online platforms, freelancing opportunities, and modern payment systems. Irregular income follows with a score of 61.8, reflecting the uncertainty in monthly earnings due to the task-based and seasonal nature of gig work. The lack of social security or employment benefits ranks third (53.4), showing that women gig workers are generally excluded from formal protections such as insurance, provident funds, or maternity benefits. Cultural and family restrictions (45.2) continue to limit women's mobility and work choices, particularly in rural areas. Safety and harassment concerns (37.6) also pose a significant barrier, especially for women working outside the home or interacting with clients.

CONCLUSION

The study of women gig workers in Thoothukudi district underscores the increasing importance of the gig economy as a means of social and economic empowerment for women. The findings indicate that middle-aged women, particularly those with higher secondary and graduate education, are the most active participants. Gig work offers flexible hours, supplementary income, opportunities to apply skills, build confidence, and gain social recognition. Popular occupations include catering, tailoring, beauty services, and online freelancing, reflecting a preference for home-based, skill-oriented work.

Despite these advantages, women face significant challenges that limit full participation and potential benefits. Digital illiteracy, irregular income, and the lack of social security are the most pressing barriers,

while cultural norms and safety concerns further constrain engagement. Correlation and multiple regression analyses confirm that education is the strongest determinant of monthly income, whereas age and prior employment experience have a smaller, positive influence. Higher educational attainment enables women to access more skill-intensive and digital-based gig opportunities, leading to increased earnings.

Overall, gig work offers considerable economic and social empowerment for women in Thoothukudi district. However, sustainable participation depends on targeted interventions, including digital literacy training, skill development programs, and social protection policies. Addressing these challenges will help women maximize the benefits of gig work, enhancing financial independence, self-confidence, and their contribution to the local economy.

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