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The synergetic role of gig work in sustainable financial independence in academic pursuits: Insights from women learners

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ABSTRACT

The increasing cost of higher education has significantly increased women learners' reliance on education loans, influencing their financial decisions and academic involvement. At the same time, the rapid growth of the gig economy provides flexible employment opportunities for women learners. This study aims to examine the relationship between education loans and academic pursuit by analyzing the mediating role of gig work and the sequential influence of financial planning and financial independence. Data were collected from women learners in South Karnataka, India, yielding 383 responses via a structured questionnaire that covered constructs such as education loans, gig work, financial planning, financial independence, and academic pursuits. The conceptual model was developed based on Human Capital Theory, Social Cognitive Theory, and Behavioral Finance Theory to examine the relationships among the study variables. This research supports the Sustainable Development Goals, especially SDG 4, SDG 5, and SDG 8, by highlighting how flexible work arrangements can support education and empower women economically. Universities, policymakers, and financial institutions can design support systems that help women learners manage gig work with academic responsibilities while promoting long-term financial stability. The results indicate that education loans encourage women learners to engage in gig work to effectively manage their education-related financial commitments. The findings further demonstrate that gig work is a key mechanism by which women learners transform education financing into improved financial planning and greater financial independence, thereby supporting sustained academic engagement. By uncovering these sequential relationships, the study provides valuable insights into how financial and employment opportunities can be leveraged to strengthen women's education persistence and economic empowerment. The findings further highlight the significance of integrating education financing with gig work opportunities to enhance financial independence among women learners, thereby advancing sustainable development through inclusive education, gender equality, and socio-economic resilience.

Keywords: education loan, gig work, financial planning, financial independence, academic pursuit, women learners, sustainable education

INTRODUCTION

Higher education is generally recognized as a primary engine of socio-economic development and career progression. Accessible higher education contributes to the development of human capital, innovation, and participation in the knowledge-based economy. As emphasized by Mohamed et al. (2021), the role of universities is to transform individuals with critical skills and competencies to thrive in the highly competitive world market. In fact, the last two decades have witnessed a substantial increase in global tertiary enrollment rates driven by rising demand for higher education and the perceived economic benefits. In addition, education loans have become common in both developed and emerging economies. In the United States, women's loan and consumer debt remain significant concerns (Moeed & Afjal, 2024), which may create financial barriers to accessing higher education. In this context, SDG 4 emphasizes the importance of ensuring inclusive and equitable access to quality higher education (Hales & Birdthistle, 2023).

In emerging economies like India, education loans have been rising as the government and financial institutions aim to promote equitable access to higher education (Tilak, 2020). Although education loans can be beneficial for women learners, they can also create obligations that can affect their decision-making process and behavior (Greer et al., 2025).

Women learners with education loans can be under pressure to pay the loans as well as other expenses such as tuition fees and living expenses. These pressures can encourage them to look for other sources of income while at

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study phase (Dynarski et al., 2023). In recent years, the rise of the gig economy has created tremendous income-generating opportunities for women learners through flexible work arrangements. According to Mimi and Mani (2024), gig work is usually defined as short-term, freelance, or platform-based working arrangements, such as ride sharing, online freelancing, tutoring, content creation, or digital services. This empirical research suggests that the gig economy has experienced tremendous growth worldwide over the years. For instance, estimates indicate that approximately 30-35% of the global workforce is engaged in gig or independent work arrangements, with a larger concentration among youth and women populations, which provide flexible income opportunities supporting decent work and economic participation in line with SDG 8 (Chigbu & Nekhwevha, 2023).

The tremendous growth of gig work can be attributed to technological advancements and the proliferation of digital platforms worldwide. According to Acs et al. (2021), digital labor platforms have experienced tremendous growth over the last ten years, with platform-based working arrangements rising by over 70% between 2015 and 2021. Moreover, research suggests that over 50% of women learners are attracted to gig work because of its flexible arrangements, which allow them to balance academic activities with income generation. This is why gig work is becoming a popular work arrangement among women.

While gig work may help women learners manage financial obligations, it may also affect their academic performance and educational outcomes. Those who devote significant time to gig work may face challenges in maintaining academic focus and completing academic tasks. Conversely, income persistence and educational attainment are more (Hammond, 2025).

Rani and Goyal (2025) make the point that, through effective financial planning, women may achieve financial autonomy, which refers to the ability to sustain financial needs without relying heavily on family support or additional borrowing. Financial independence may contribute to women learners' s confidence and reduce financial hardship, thereby positively influencing their academic pursuit and long-term career planning.

In spite of the increasing importance of women's financial issues and the gig economy, surprisingly little attention has been devoted to the combined effects of women's finances and the gig economy in the literature. A comprehensive review by Li et al. (2025) suggests that the gig work is in its early stages, and there is a need to conduct more integrated and forward-looking studies. Only a small fraction of the literature (i.e., fewer than 15%) has adopted a more complete approach by employing multidimensional approaches that take into account important constructs of financial behavior, such as financial planning or financial independence. Even more surprisingly, only about 10-12% of the literature has specifically addressed the combined effects of financial constraints and participation in the gig economy on women learner's outcomes. This glaring omission of the combined effects of women learners' finances and the gig economy in the literature has created a critical oversight, limiting a more complete understanding of the dynamic interrelations among financial constraints, income-generating behaviors, and financial behaviors in shaping women learners' outcomes in the increasingly complex economy.

The literature has examined the relationships among education loans, gig work, financial planning, financial independence, and academic pursuit among women learners. However, these constructs have largely been investigated in isolation. Addressing this gap, the present study integrates them into a unified framework, offering a fresh perspective on women's financial empowerment and sustainable access to higher education. The study further advances the literature by proposing a novel sequential framework that explains how education financing influences academic pursuit through gig work, financial planning, and financial independence.

Accordingly, the study aims to examine the relationships among education loans, gig work participation, financial planning, financial independence, and academic pursuit among women learners, while providing insights to support inclusive higher education, women's economic empowerment, and sustainable employment opportunities.

LITERATURE REVIEW

The growing intersection between education financing, gig work, financial independence, financial planning, and academic pursuit has attracted increasing scholarly attention in recent years. However, research examining these variables together, particularly in the context of women pursuing higher education, remains fragmented. This section reviews the literature construct-wise to identify key insights and research gaps that inform the present study.

Education Loan

Education loans have become a significant financial instrument that enables women to access higher education despite financial constraints. Rising tuition fees and the increasing cost of living have compelled many women to rely on loans to finance their academic programs. According to Chapman and Dearden (2021), education loan systems are designed to associate with access to higher education while distributing the financial burden across women learner's future earnings. Similarly, Kim et al. (2025) highlight that women with education loans serve as an investment in human capital, allowing individual to pursue education that lead to their productivity and long term economic outcomes.

However, the growing dependence on women's loans has also raised concerns regarding financial stress and repayment obligations. Minaya et al. (2023) argue that high levels of women's debt can influence their financial decisions, career choices, and academic engagement. In addition, Tilak (2020) notes that education loans in developing countries such as India have expanded rapidly as governments attempt to widen access to higher education. While these loans provide financial support, they may also create financial pressure, prompting women learners to seek additional income sources during their studies. Research also indicates that women with loan obligations are more likely to engage in employment during their academic programs in order to manage educational expenses and reduce financial uncertainty (Jach & Trolian, 2022). Therefore, education loans not only affect women

learner's financial situations but also shape their employment behavior and academic experiences.

Gig Work

The gig economy has emerged as a prominent labor market phenomenon characterized by short-term, flexible, and task-based employment arrangements. Digital platforms such as online freelancing, marketplaces, and ride-sharing services have significantly expanded opportunities for gig work. According to Wood et al. (2023), the gig economy has grown rapidly due to technological advancements and digital labor platforms that connect workers with clients globally. Women increasingly participate in gig work because of the flexibility it offers compared with traditional employment. He also describes gig work as a form of labor that allows individuals to control their working hours and intensity, making it particularly suitable for balancing academic commitments. Furthermore, this study shows that digital labor platforms have created new employment opportunities for young workers and women learners seeking supplementary income.

Although gig work provides financial benefits, its effects on women learner's academic performance remain mixed. Some studies suggest that working during studies can strengthen financial independence and practical skills, while excessive working hours may negatively affect academic engagement (Grozev & Easterbrook, 2022). Thus, gig work plays a complex role in shaping women's financial stability and academic pursuits.

Financial Planning

Financial planning is the process of managing financial resources to achieve long-term financial goals. It involves activities such as budgeting, saving, investment planning, and financial decision-making. Effective financial planning is considered an essential component of financial well-being (Xiao et al., 2022). Also emphasize that financial literacy and financial planning enable individuals to make informed financial decisions and avoid excessive debt. In this context, Women with strong financial planning skills are better equipped to manage educational expenses, allocate employment income effectively, and maintain financial stability throughout their academic pursuits (Park et al., 2021).

In addition, Kim et al. (2025) highlights that financial education plays a crucial role in improving financial planning behavior among young adults. Women learners who develop financial management skills early in life are more likely to adopt responsible financial behaviors and achieve long-term financial security. For women learners engaged in gig work, financial planning is particularly important because income from gig platforms is often irregular. Proper budgeting and financial management allow women to allocate resources effectively and maintain a balance between financial responsibilities and academic commitments.

Financial Independence

According to Garg et al. (2024), financial independence refers to an individual's ability to meet financial needs without relying heavily on external financial support. It is often associated with increased self-confidence, autonomy, and financial well-being. Achieving financial independence is particularly important for women as they transition into adulthood and professional careers. Further, Kaur and Singh (2024) suggest that the attainment of financial independence among young adults is strongly influenced by financial socialization processes and responsible financial management practices. Women learners who develop responsible financial behaviors and income-generating strategies are more likely to achieve financial independence. Similarly, Sajid et al. (2024) argue that financial satisfaction and financial independence are closely related to financial planning and financial literacy. Individuals who manage their finances effectively tend to experience greater financial security and contribute to psychological well-being. For women learners engaged in gig work, financial independence may emerge from income generated by flexible employment opportunities. Further financial autonomy can reduce dependence on family support and enable women to manage their educational expenses more effectively.

Academic Pursuit

Academic pursuit refers to women's commitment to achieving educational goals, including academic performance, degree completion, and engagement in learning activities. Moreover, Academic pursuit indicates that the learner's sustained engagement in educational activities, commitment toward educational goals, persistence in continuing studies, and efforts directed toward successful academic progression (Sá, 2023). According to Elder (2021), women's persistence in higher education depends on both academic integration and financial stability. Financial challenges may lead to reduced academic engagement or even dropout if women learners struggle to balance financial obligations with academic responsibilities. Research also suggests that employment during studies can have both positive and negative effects on academic outcomes.

While moderate employment may contribute to time management and financial independence, excessive working hours can reduce study time and negatively impact academic performance (Libago et al., 2024). Therefore, understanding the financial and employment factors that influence academic pursuit is essential for developing policies that support women learners in successfully completing their education.

Despite the growing body of literature on education loans, gig work participation, and financial behavior, existing studies have largely examined these variables in isolation. Prior research has explored how education loans influence students' financial decisions, while other studies have investigated the role of gig work in generating supplementary income and enhancing economic participation. Similarly, financial planning and financial independence have been examined as important determinants of financial well-being. However, limited attention has been given to understanding how these factors operate together among women learners pursuing higher education.

More specifically, existing studies have not examined the sequential mechanism by which education loans encourage participation in gig work, which, in turn, strengthens financial planning behavior, strengthens financial independence, and ultimately supports academic pursuit. Consequently, the underlying pathways linking education financing and

Table 1. Research gap analysis, significance, and novel contributions of the present study

Research Construct	Existing Literature	Research Gap	Novelty
Education Loans	Education loans facilitate access to higher education and influence student's financial decisions.	Limited evidence explains how education loans contribute to academic pursuit through intermediary financial and employment mechanisms.	Examines education loans as a catalyst for a chain of financial and behavioral outcomes.
Gig Work	Gig work provides flexible income opportunities and supports economic participation.	The role of gig work as a financial coping strategy among women learners with education loans remains underexplored.	Introduces gig work as a mechanism through which education loans translate into improved educational outcomes.
Financial Planning	Financial planning promotes responsible financial behavior and financial well-being.	Little is known about how financial planning transforms gig-work earnings into sustainable educational support.	Establishes financial planning as a key mediating process linking gig work and educational advancement.
Financial Independence	Financial independence enhances economic self-sufficiency and empowerment.	Its contribution to sustaining academic pursuit among women learners has received limited scholarly attention.	Demonstrates how financial independence directly supports academic pursuit and educational continuity.
Academic Pursuit	Academic pursuit is influenced by various personal, social, and institutional factors.	The pathways to academic pursuit are not fully understood.	Positions academic pursuit as the ultimate outcome of interconnected financial mechanisms.
Integrated Perspective	Education loans, gig work, financial planning, and financial independence have largely been studied in isolation.	The sequential process linking these constructs remains theoretically and empirically unexplored.	Develops and validates a comprehensive sequential mediation framework connecting all four constructs.
Women Learners Context	Existing studies often focus on general student populations.	Limited evidence is available on how women learners navigate education financing and academic persistence simultaneously.	Provides gender-specific insights into financial empowerment and sustainable educational participation.

Source: Developed by the authors based on the reviewed literature

academic engagement remain insufficiently understood. Addressing this gap, the present study develops and tests a sequential mediation model that integrates gig work, financial planning, and financial independence to explain how education loans influence academic pursuit among women learners, which promotes long-term socio-economic sustainability.

Research Significance and Novelty

Table 1 presents the identified research gaps and the study's key contributions.

Theoretical Background of the Study

Understanding the relationship between education loans, gig work, financial planning, financial freedom, and academic pursuit requires a theoretical framework that explains the underlying economic and behavioral factors shaping women learner's decisions. This study uses the combination of the Human Capital Theory, Social Cognitive Theory, and Behavioral Finance Theory to understand the behavioral responses of women learners facing financial constraints in pursuing higher education.

Human capital theory

Human Capital Theory (Becker, 1993), views higher education as an investment that contributes to individual's knowledge, skills, and future economic prospects. In this study, education loans serve as a financial resource that enables women learners to invest in higher education. However, loan obligations often motivate learners to engage in gig work to generate additional income for educational expenses and repayment commitments (Serra, 2023). Earnings from gig work encourage financial planning through budgeting and resource management, which strengthens financial independence. Increased financial independence enables women learners to sustain their educational participation and achieve their academic goals (Brown et al., 2020). Therefore, Human Capital Theory provides the economic foundation linking education loans, gig work, financial planning, financial independence, and academic pursuit.

Social cognitive theory

Social Cognitive Theory (Bandura, 1977), emphasizes that human behavior is shaped through interactions among personal factors, environmental influences, and behavioral actions. A central concept of Social Cognitive Theory is self-regulation, whereby individuals monitor, evaluate, and control their actions to achieve desired outcomes (Chou et al., 2024).

In this study, education loan obligations create an external financial environment that requires women learners to actively regulate their financial and academic behaviors. To manage these obligations, learners engage in gig work as a proactive behavioral response (Chou et al., 2024). Participation in gig work promotes their confidence in managing financial challenges and develops self-regulatory skills related to income generation, time management, and resource allocation (Shukla & Shaheen, 2024).

These self-regulatory capabilities are reflected in financial planning behaviors, where learners consciously budget earnings, control expenditures, and prepare for future financial needs. Successful financial planning strengthens perceptions of financial competence and autonomy, leading to greater financial independence. Financial independence subsequently increases learners' confidence in their ability to continue higher education despite financial constraints,

thereby supporting academic pursuit. Accordingly, the suggested theory explains the sequential pathway through which self-regulation transforms financial challenges into adaptive behaviors that promote educational persistence.

Behavioral finance theory

Behavioral Finance Theory argues that financial decisions are influenced not only by rational economic considerations but also by psychological factors, attitudes, and behavioral tendencies (Shefrin, 2002). Individuals differ in their ability to manage financial resources, control spending behavior, and make future-oriented financial decisions.

In the present study, women learners who take out education loans face financial commitments that require responsible financial behavior (Berlinger et al., 2025). To meet educational expenses and loan-related obligations, they participate in gig work and generate additional income. However, earning income alone does not necessarily promote financial well-being. The positive outcomes depend on how effectively individuals manage those earnings.

Financial planning represents a critical behavioral finance mechanism through which learners allocate income, control expenditures, save for future educational needs, and avoid financial hardship (Hernandez-Perez & Cruz Rambaud, 2025). Such disciplined financial behaviors contribute to financial independence by increasing economic security and reducing financial vulnerability. When learners achieve financial independence, they experience lower financial anxiety and greater capacity to concentrate on academic responsibilities, thereby enhancing academic pursuit (Borjas et al., 2020). Behavioral Finance Theory, therefore, explains how financial behavior serves as the mechanism connecting gig work earnings to educational outcomes.

The proposed model integrates Human Capital Theory, Social Cognitive Theory, and Behavioral Finance Theory to explain how women learners sustain their academic pursuits despite financial constraints. Human Capital Theory provides the economic justification for education loans as investments in future educational and economic returns, while explaining why learners engage in gig work to support this investment. Social Cognitive Theory explains the self-regulatory processes through which learners respond to financial obligations by engaging in gig work, managing resources, and developing financial autonomy. Behavioral Finance Theory complements these perspectives by explaining how financial planning behaviors transform gig work earnings into financial independence. Together, these theories explain the sequential pathway whereby education loans encourage gig work participation, gig work promotes financial planning, financial planning support financial independence, and financial independence ultimately contribute to sustained academic pursuit among women learners. This integrated explanation aligns directly with your serial mediation model and avoids the common reviewer criticism of presenting theories without linking them to specific constructs.

Hypothesis Development

Education loan and gig work participation

One of the crucial factors that affects individual decisions, especially regarding economic and educational activities, is financial access. Education loans have been identified as a crucial financial tool that enables women learners to make the right investment in their higher education, especially when their personal and financial situations do not allow them to do so. In terms of human capital theory, women perceive higher education as an investment that will contribute to their future employment and economic prospects. On the contrary, women learners with education loans may encounter challenges during their studies (Mahmoud et al., 2024).

Women learners who have access to education loans may face various financial constraints, including tuition and living expenses, as well as future repayment obligations. These financial constraints may prompt women learners to participate in economic activities while continuing their studies. In recent years, the growth of the gig economy has provided flexible employment opportunities for women learners, especially given its flexible working hours. Gig economy jobs have enabled individuals to participate in various economic activities, such as freelance work, sharing economy jobs, and online tutoring, while contributing to the economy alongside their academic activities.

Past studies have indicated that financial factors have a considerable impact on women learner's participation in labor activities during their studies. For instance, other studies have shown that women learners who are more financially burdened are more likely to participate in flexible work arrangements to help them meet their financial needs associated with education loans. The gig economy, which is flexible and easily accessible, would therefore be an interesting platform for women learners to help them meet the financial needs associated with education loans. In addition, gig economy platforms have increased job opportunities for young people, reducing barriers to labor market participation and allowing people to use their skills and time to earn a living online (Wood et al., 2023).

Therefore, access to education loans may encourage women to participate in the gig economy to meet their financial needs during their studies. Based on this reasoning, the following hypothesis is proposed:

H1: Access to education loans significantly influences women learners' participation in gig work activities.

Gig work and academic pursuit

Involvement in gig work may have significant effects on the academic experiences and educational outcomes of the women learners. The financial support provided by gig work may help women learners overcome financial stress and cover educational expenses. The financial resources from gig work may help women learners sustain their educational investments and continue their academic programs.

Gig work could also provide women learners with flexible working arrangements that help them manage their responsibilities effectively. Unlike any other job, the individual can be given with the freedom to choose the number of

working hours and the nature of the work to be performed (Sharma & Sharma, 2025).

Empirical findings suggest that moderate work involvement during the period of women learners may predict their financial stability and alleviate financial anxiety. Women who earn their own income may develop greater self-confidence and work experience, which can positively affect their educational engagement (Kroupova et al., 2024). However, the impact of work involvement on academic performance depends on its nature and intensity.

Thus, if well managed, gig work can help women learners make a positive contribution to their academic endeavors, especially by helping them sustain their financial independence while remaining fully engaged in their studies. Recent studies on the gig economy have shown that flexible work arrangements offer young individuals, especially women learners, excellent opportunities to develop their skills while engaging in their academic endeavors (Smit & Lawson, 2023).

Thus, engaging in gig work can serve as a supportive role, helping women learners sustain their academic endeavors while addressing their financial needs.

H2: Participation in gig work is significantly associated with women learners' academic pursuits.

Sequential mediation of financial planning and financial independence

Although gig work may help women learners generate income, the extent to which this income affects educational outcomes depends on the individual's ability to manage their finances. According to financial behavior theory, an individual who employs financial management techniques is likely to attain financial stability in the future.

Financial planning is the process by which an individual manages their financial resources through budgeting and planning for the future. Women who participate in gig work may experience irregular income and inconsistent work schedules. This may encourage them to develop financial planning behavior to effectively respond to income irregularities. Research indicates that financial literacy and financial planning play a critical role in an individual's financial stability (Lone & Bhat, 2024).

By planning their finances properly, individuals can gradually become financially independent. Financial independence is the capacity to meet financial obligations without relying heavily on external sources, such as relatives or additional borrowing. Becoming financially independent can help individuals overcome financial difficulties and build confidence in their ability to manage their finances effectively (Hernandez-Perez & Cruz Rambaud, 2025).

Financial independence may have significant implications for academic engagement for women learners. Women who enjoy financial independence may be able to maintain concentration in pursuing academic objectives without disturbances Influence by financial uncertainty. Financial uncertainty may distract them from participating in academic engagement.

Recent studies on financial behavior have pointed out that financial planning is an essential link between income generation and financial outcomes. People who adopt financial planning may be able to build savings and attain financial independence, thereby improving overall well-being (Govindharaj, 2025). Thus, financial planning and financial independence may sequentially serve as mediators in the relationship between gig work and academic pursuit.

Based on this reasoning, the following hypotheses are proposed:

H3: Financial planning and financial independence sequentially mediate the relationship between gig work and academic pursuits.

H3a: Engagement in gig work positively influences financial planning behavior.

H3b: Financial planning positively influences financial independence.

H3c: Financial independence positively influences academic pursuits.

METHODOLOGY

Research Design

The research design offers a systematic framework that guides the entire research process by incorporating all components in a logical and coherent manner. It ensures that the research aims are achieved through appropriate methodologies and analyses. In the present study, the research design was well framed to assess the relationships among gig work, financial independence, financial planning, education loans, and academic pursuits among women learners in the South Karnataka state of India.

To accomplish this objective, the study employs a quantitative research design, which is appropriate because it allows measurement of the relationships among the identified variables. The study employs a quantitative research design because it is appropriate when the researcher wants to test theoretical relationships and assess the extent of the relationship between the variables of interest.

Recent studies across diverse disciplines increasingly employ advanced data-driven and predictive analytical frameworks to examine complex relationships among multiple variables, validate theoretical assumptions, and enhance predictive accuracy (Farrokh Ghatte & Nazari, 2025; Nemati et al., 2025; Norouzi & Naghipour, 2026; Sabetifar et al., 2026; Sasania et al., 2025; Shariati et al., 2024). Consistent with this predictive orientation and emphasis on analytical robustness, PLS-SEM was considered the most appropriate technique for the present study.

Sampling and Data Collection

To carry out an in-depth analysis of the contribution of gig work to achieving financial independence and pursuing academic activities among women learners, the study adopted a quantitative research methodology. The study population comprised women learners in the state of Karnataka, India, pursuing higher education and engaging in gig work to meet their financial needs or support their learning. Since there was no existing database of women learners engaged in gig work, the exact population size was unknown. Therefore, the study

adopted Cochran's (1977) formula for determining the sample size, based on a 95% confidence level and a 5% margin of error, the minimum required sample size was 383 respondents, which was sufficient to obtain reliable results.

To obtain the desired population representation, the study area (i.e., the state of Karnataka) was stratified into three geographical strata: Coastal Karnataka, Southern Karnataka, and Northern Karnataka. These regions highlight the varying opportunities in education, connectivity, and socio-economic conditions that may impact women's participation in gig work and financial literacy. For each region, convenience sampling was the primary sampling method. To minimize selection bias, respondents were recruited from diverse educational institutions and gig work platforms. Nevertheless, convenience and snowball sampling may limit generalizability. The convenience sampling method was particularly appropriate because women in gig work tend to operate in informal networks as part of a community, thereby making it somewhat difficult to sample. The initial set of participants was sourced through college networks, communities, freelance networks, and peer networks, who then identified women learners in gig work. To ensure the data are relevant and valid, certain criteria were formulated. The women learners had to be currently enrolled in higher-level academic courses, such as undergraduate, postgraduate, and doctoral courses. The women had to be actively involved in gig work such as freelancing, online tutoring, content creation, delivery services, digital services, and other flexible work arrangements.

A pilot study with 25 women learners was conducted before collecting the actual data to check the comprehensiveness, relevance, and reliability of the questionnaire. The feedback received from the pilot study women helped to make some of the questions more comprehensible and relevant to the women learners. Following the pilot validation, the final structured questionnaire was distributed electronically using online survey platforms. The online mode enabled a wider reach and greater convenience, particularly for respondents balancing academic responsibilities with gig work commitments.

A total of 383 responses were collected, and all were included in the analysis after ensuring they were complete, eligible, and consistent. This ensured a valid response rate of approximately 95.7%. This sample size is sufficient with the recommended statistical data that can be used in Structural Equation Modeling (SEM) analysis, as suggested in Hair et al. (2021), due to its suitability for prediction-oriented research, complex mediation analysis, and its robustness to non-normal data distributions.

Overall, the use of a multi-stage sampling strategy that includes regional stratification and snowball sampling helps ensure the data are reliable and representative. This is because such a strategy provides a robust basis for understanding the relationships among gig work, financial planning, financial independence, and the academic pursuit of women learners.

Following content validity and reliability assessment, data were collected using a structured questionnaire administered to women pursuing undergraduate, postgraduate, and doctoral studies in South Karnataka, India. Participants were recruited through academic institutions, women learners' networks, email communication, and social media platforms. The survey link was distributed online, participation was voluntary and anonymous, and informed consent was required. Follow-up reminders were issued through academic contacts and peer networks to predict response rates and ensure broader representation across academic levels. In selected institutions, hard-copy questionnaires were also administered and subsequently digitized for analysis. These procedures facilitated the collection of a diverse and representative sample of women learners engaged in or exposed to gig work while pursuing higher education.

Following data collection, responses from paper-based questionnaires were manually entered, while online survey data were exported to a data spreadsheet. Categorical variables were numerically coded to facilitate statistical analysis. The finalized dataset was analyzed using a statistical software package and subsequently imported into structural equation modeling software.

Demographical profile

As shown in the findings in **Table 2**, the demographic profile of the respondents revealed that the participants were women learners aged 19-40 years, with an average age of 21.49 years. The majority of the participants learned about gig work from other sources (40.5%), then from friends (26.1%), and the media (25.3%). Few participants learned from relatives (4.4%) and colleagues (3.7%). Most participants were enrolled in general degree or postgraduate programs (51.7%), followed by medical education (43.1%). Few participants were engaged in technical education (4.2%) and doctoral programs (1.0%). Most participants worked as gig workers occasionally (71.5%), then 18.0% worked part-time, and the remaining worked full-time (10.4%). Most participants worked as sellers of goods or services online (55.1%), then freelancing (18.0%), online tutoring (15.7%), and delivery work (9.4%). Most participants did not wish to disclose their income (63.2%). However, some participants earned money within different income ranges. Most participants had more than three years of experience in gig work, indicating that they are engaged in the sector. Most participants did not have dependents (71.5%), lived in urban areas (54.0%), and were unmarried (92.4%).

Research Instrument

The research instrument is an essential component that helps collect reliable and meaningful information from the target population. In this study, the research instrument was structured as a questionnaire to collect primary data from women learners actively engaged in their higher education pursuits. The questionnaire was developed with insights from previous scholarly studies, focus group discussions, observations, and the researcher's overall understanding of the subject area.

To make the questionnaire an effective research instrument that aligns with the objectives of the study, the hypotheses, and the overall research model, the questionnaire was structured with sections that were aligned with the constructs of the research model, i.e., gig work, financial independence, academic pursuit, financial planning, education loan, etc. The structuring of the questionnaire

Table 2. Demographical profile

Age	Ranging from 19 years to 40 years					
	21.49					
Source of knowledge about Gig Work	Friends	Relatives	Media	Colleague	Others	
	26.1%	4.4%	25.3%	3.7%	40.5%	
Field of study	Medical Education	Technical Education	General (Degree or PG)	Doctoral Degree		
	43.1%	4.2%	51.7%	1.05		
Participating in gig labor of any kind at present	Yes, full-time (more than 30 hours/week)	Yes, part-time (less than 30 hours/week)	Occasionally (irregular or seasonal gig work)			
	10.4%	18.0%	71.55%			
Type of gig work are you involved in	Freelancing (e.g., writing, design, consulting)	Online tutoring or teaching	Online tutoring or teaching	Food or parcel delivery	Selling goods/services online	Virtual assistance or administrative support
	18.0%	15.7%	.35%	9.4%	55.1%	1.6%
Average monthly income from gig work (in Indian Rupees)	5,000 – 9,999	10,000 – 19,999	20,000 – 29,999	30,000 – 49,999	50,000 or more	Prefer not to say
	15.1%	7.3%	3.4%	7.3%	3.7%	63.2%
Indicate how long you have been working gigs	Less than 6 months	7 months to 1 year	2–3 years	More than 3 years		
	71.0%	18.0%	4.7%	6.3%		
Any dependents (children, elders, others relying on your income)	Yes	No				
	28.5%	71.55%				
Region are you presently resides in	Urban area	Sub urban area	Rural area			
	54.0%	31.6%	14.4%			
Marital status	Unmarried	Married				
	92.4%	7.6%				

Source: Survey Data

around the constructs of the research model helped in analyzing the collected data with respect to the variables, as well as in the overall data analysis process.

The questionnaire consisted of two main sections.

Part 1: Demographic profile of respondents

The initial section was used to obtain demographic and background information from the respondents. In this section of the questionnaire, respondents were asked questions about their age, area of study, highest level of education, and whether they participated in any gig work. Furthermore, the respondents were asked about the nature of the gig work activities they were currently engaged in, the average monthly income from these activities, and their perceptions of the contribution of gig work to achieving financial independence. It was essential to obtain the demographic and background information from the respondents as this was instrumental in helping to establish the nature of the respondents and the financial environment within which they pursued their academic goals.

Part 2: Measurement of Study Constructs

The second section of the questionnaire was concerned with measuring the primary variables of the study, i.e., gig work participation, financial independence, education loan, financial planning, and academic pursuits of women learners. Each variable was represented by well-crafted statements based on the prior literature on the topic.

To effectively measure respondents' perceptions and experiences, the items were measured on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). This scaling was effective in helping respondents indicate the extent of their agreement with the items, thereby enabling the researchers to quantify attitudes and perceptions towards the variables of interest.

The selection of these constructs in the questionnaire was based on the study's conceptual objective to evaluate the impact of access to education loans on women learners' participation in gig work and the impact of such participation on academic pursuits. The questionnaire was specifically designed to evaluate the relationships proposed by the conceptual framework, including the direct effect of education loans on participation in gig work and the impact of gig work participation on academic pursuits. In addition, the questionnaire evaluates the mediating role of financial planning and financial independence in explaining the impact of gig work participation on academic pursuits. For instance, the questionnaire measures whether participation in gig work promotes financial planning, whether financial planning promotes financial independence, and whether financial independence promotes academic pursuits. In this respect, the questionnaire provides a comprehensive evaluation of the relationships proposed by the conceptual framework.

Through this structure, the questionnaire seeks to capture not only quantified responses but also the underlying financial experiences of women learners seeking to balance their academic aspirations with their financial obligations. Each answer is a narrative of the experiences of the women learners, who are attempting to balance education, work, and financial

management simultaneously a reality that is at the heart of this research.

Construct Development

The constructs used in this study were developed by conducting a comprehensive review of the literature related to the concept of the gig economy, financial behavior, women learners' financing, and higher education engagement. As such, the constructs of the variables used in this study are as follows: education loans, gig work, financial planning, financial independence, and academic pursuit, which form the study's conceptual framework. The concept of education loans is the financial support received by women learners to pursue higher education and the level at which such financial support can affect the economic behavior of the women learners.

Previous literature suggests that the financial burden of student loans motivates women learners to seek additional income sources to support themselves while pursuing higher education. Therefore, the concept of gig work measures the level at which women learners engage in such economic activities to generate income while pursuing higher education. Previous literature suggests that the concept of gig work provides flexible income opportunities to the women learners and helps them manage the dual responsibility of work and education (Wood et al., 2023). Participation in gig work is expected to influence women learners financial behavior, particularly their engagement in financial planning practices such as budgeting, saving, and managing financial resources effectively. Financial planning, on the other hand, reflects the ability of individuals to organize and allocate financial resources to achieve short- and long-term financial goals. Previous studies emphasize the importance of financial planning in enhancing financial management skills and responsible financial decision-making practices among young adults (Maji & Laha, 2023). Financial planning helps women learners achieve financial independence gradually, which reflects the ability of young adults to manage personal and educational expenditures with the help of their financial resources instead of relying on external sources of financial assistance. Financial independence has been linked to financial autonomy and financial well-being of young adults (Riitsalu et al., 2023).

These capabilities will, in turn, shape academic pursuit, which is a measure of women's commitment, engagement, and perseverance in achieving their academic goals. Financial stability and independence, for example, can help reduce stress and enable women learners to engage more productively in their academic activities (Francis et al., 2025). Thus, the proposed framework suggests that access to education loans can motivate women learners to engage in gig work, and gig work engagement can, in turn, positively contribute to academic pursuits, both directly and indirectly through the sequential effects of financial planning and financial independence. The proposed set of constructs, in this sense, offers a holistic framework for understanding the joint effects of access to education loans, gig work engagement, financial planning, and financial independence on the academic pursuits of women learners.

Reliability and Validity Checks

In addition, assessments for validity and reliability have been conducted during the entire analysis. This includes composite reliability for construct reliability and Cronbach's alpha for internal reliability. To ensure that the constructs were assessed and were distinct from each other, convergent and discriminant validity tests were conducted.

Ethical considerations

To ensure the safety, confidentiality, and ethical compliance of the participants, the study was reviewed and approved by the Institutional Scientific Review Board (SRB). In addition, the participants were assured of the confidentiality and security of the data. The participants were informed about the study and the fact that the study was conducted on a voluntary basis. In addition, based on the participants' request, the study was conducted in different ways, either digitally or physically.

Descriptive Statistics and Reliability Assessment of Measurement Scales

Confirmatory factor analysis measurement model was tested (See **Table 3** and **Figure 1**). For the structured model, 5 construct were considered and also 25 items were tested. The construct validity and reliability were confirmed for the Measurement Scale using composite reliability and the average variance extracted. As shown in **Table 3**, Reliability for academic pursuit was 0.882, for Education Loan was 0.822, for Financial Independence was 0.860, and for financial planning and for gig work participation were 0.793 and 0.827, respectively. This shows how reliable the scale items are (See **Table 3**).

Table 3. Descriptive statistics and reliability assessment of measurement scales

Dimensions	Definition	Source	No. of Items	Item code	Description	Mean	SD	CFA λ
Gig Work	The extent to which women learners engage in flexible, short-term, or freelance work to generate income.	(Mimi & Mani, 2024)	6	GW1	Regular engagement in short-term or freelance work helps me to earn more income.	3.96	1.074	0.810
				GW2	Gig work serves as a valuable source of income to meet personal financial needs.	3.97	.926	0.847
				GW3	Gig work is often preferred over traditional part-time jobs due to its flexibility.	3.82	.969	0.856
				GW4	Participation in gig work can boost confidence in personal financial management.	3.94	.961	0.852
				GW5	Involvement in gig work contributes to the development of effective time management skills.	3.95	.952	0.874
				GW6	Gig work income is stable and predictable .	3.72	.945	0.713

Table 3. Descriptive statistics and reliability assessment of measurement scales

Dimensions	Definition	Source	No. of Items	Item code	Description	Mean	SD	CFA λ
Financial Planning	The extent to which women learners budget, manage, and allocate financial resources to meet educational needs.	(Govindharaj, 2025)	5	FP1	Creating a prudent financial plan is essential to controlling my earnings.	3.99	.917	0.735
				FP2	Effective financial goal and work systematically is facilitated by the capacity to establish and adhere to a personal budget.	3.96	.901	0.799
				FP3	Regularly monitor spending and make necessary financial adjustments.	4.02	.833	0.832
				FP4	Overall financial well-being is supported by confidence in financial resource management.	3.87	.909	0.770
				FP5	It is better to know how to prioritize essential expenses over non-essential ones.	3.96	.938	0.823
Education Loan	The extent to which women learners can access and utilize educational credit to finance higher education expenses.	(Mahmoud et al., 2024)	5	EL1	Education loan repayments place a financial burden on the borrower.	4.11	.833	0.769
				EL2	Loan obligations limit a person's ability to achieve financial independence.	3.98	.828	0.862
				EL3	Repaying an education loan impacts spending on academic needs.	4.01	.826	0.827
				EL4	Education loan obligations influence the decision to take on gig work.	3.83	1.008	0.822
				EL5	Education loans affect an individual's ability to save money.	3.94	.970	0.828
Financial Independence	The ability of women learners to meet educational and personal expenses using their own financial resources.	(Hernandez-Perez & Cruz Rambaud, 2025)	5	FI1	Financial independence allows individuals to fund their own education.	4.11	.852	0.815
				FI2	The ability to cover academic expenses without relying on others reflects strong financial self-sufficiency.	4.03	.892	0.870
				FI3	Earnings from gig work can play a significant role in meeting personal financial needs.	3.99	.889	0.875
				FI4	Effectively managing personal finances fosters a sense of empowerment and control.	3.99	.876	0.846
				FI5	Financial independence provides the freedom to pursue education with reduced financial stress.	4.00	.908	0.890
Academic Pursuit	The extent to which women learners actively continue and remain committed to their higher education goals.	(Libago et al., 2024)	4	AP1	Commitment in completing an academic program successfully is a key priority for students.	4.20	.855	0.886
				AP2	Financial independence enables access to necessary academic materials and resources.	4.07	.951	0.874
				AP3	Lower financial stress allows greater focus on academic responsibilities.	3.99	.942	0.892
				AP4	Financial security positively influences academic performance and overall well-being.	3.99	.904	0.877

Source: Survey data

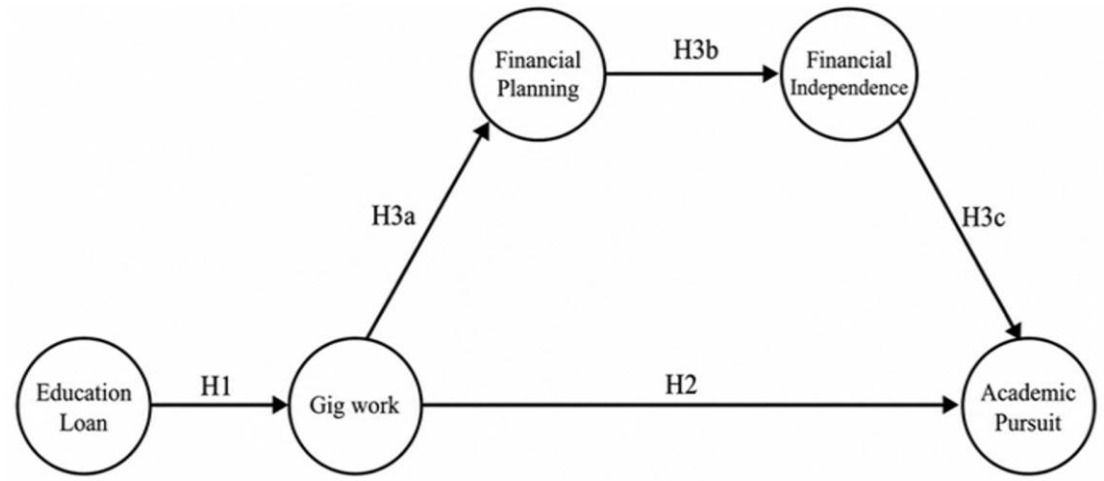


Figure 1. Figure on top of a page (Source: Authors' own elaboration)

In addition, the existence of convergent validity in all items measuring all dimensions is justified by the values of AVE being greater than 0.5. The Fornell-Larcker test was used to check whether there is discriminant validity in the independent variables. As shown in **Table 3**, the square of AVE is greater than the values below it, implying that discriminant validity is not a problem.

Reliability and validity assessment

The results presented in **Table 4** indicate that the measurement model demonstrates strong reliability and

Table 4. Reliability and validity assessment

Variables	Cronbach's alpha	Composite reliability (rhoc)	Average variance extracted (AVE)	Academic Pursuit	Education Loan	Financial Independence	Financial Planning	Gig Work
Academic Pursuit	0.905	0.934	0.778	0.882				
Education Loan	0.880	0.912	0.676	0.593	0.822			
Financial Independence	0.911	0.934	0.739	0.725	0.739	0.860		
Financial Planning	0.851	0.894	0.628	0.669	0.742	0.733	0.793	
Gig Work	0.907	0.928	0.684	0.489	0.701	0.560	0.712	0.827

Source: Survey Data

Table 5. Discriminant validity using HTMT ratios

	Academic Pursuit	Education Loan	Financial Independence	Financial Planning	Gig Work
Academic Pursuit					
Education Loan	0.664				
Financial Independence	0.796	0.824			
Financial Planning	0.760	0.853	0.829		
Gig Work	0.530	0.775	0.609	0.799	

Source: Survey Data

validity across all constructs, including Academic Pursuit, Education Loan, Financial Independence, Financial Planning, and Gig work. The values of Cronbach's alpha vary between 0.851 and 0.911, which are greater than the minimum limit of 0.70. Furthermore, the values of composite reliability (CR) vary between 0.894 and 0.934, which confirms the high level of internal consistency between the measurement items. The Average Variance Extracted (AVE) values vary between 0.628 and 0.778, which are greater than the minimum limit of 0.50. The square root of Average Variance Extracted (AVE) values (diagonal elements) are greater than the inter-construct correlations for each construct. The square root of Average Variance Extracted (AVE) values for each construct are as follows: Academic Pursuit (0.882), Education Loan (0.822), Financial Independence (0.860), Financial Planning (0.793), and Gig Work (0.827). This confirms that each construct is unique and measures different concepts or constructs, thus establishing discriminant validity.

Discriminant validity using HTMT ratios

In addition, the Heterotrait-Monotrait Ratio (HTMT) was used to assess the discriminant validity of the constructs. It should be noted that all HTMT values are below the recommended threshold of 0.90, thereby ensuring satisfactory discriminant validity (See **Table 5**). The values range from 0.530 to 0.853, indicating that the constructs of Academic Pursuit, Education Loan, Financial Independence, Financial Planning, and Gig Work are empirically distinct. Hence, the results clearly prove that the measurement model meets the discriminant validity requirement.

Common method bias

Harman's single-factor test was conducted to assess the possibility of common-method bias. The Kaiser-Meyer-Olkin (KMO) value of 0.930 and Bartlett's Test of Sphericity (χ^2 = 7887.114, $p < 0.001$) confirmed the suitability of the data for factor analysis. Principal Component Analysis extracted five factors with eigenvalues greater than one. The first unrotated factor accounted for 50.959% of the total variance. Although this value is marginally above the commonly accepted threshold of 50%, the emergence of multiple factors suggests that common method bias is unlikely to pose a substantial threat to the validity of the findings.

In order to overcome the limitations of Harman's single-factor, common method bias and collinearity issue was assessed using the Variance Inflation Factor (VIF) values. Following Kock's (2015) recommendation, VIF values below 3.3 indicate the absence of substantial collinearity and common method bias. The VIF values for all indicators ranged from 1.635 to 3.160, which are below the critical threshold of 3.3. Therefore, the results confirm that multicollinearity is not a concern and that common-method bias is unlikely to threaten the validity of the study's findings.

RESULTS

Descriptive statistics

The descriptive analysis shows that participants' overall perceptions are positive across all constructs. Gig work as a source of income is perceived as important (M = 3.97). However, perceptions regarding income stability are also evident (M = 3.72). Financial planning is seen as a proactive behavior, especially regarding expense monitoring (M = 4.02). Perceptions regarding financial management are relatively low (M = 3.87). Education loans are perceived as a major financial burden (M = 4.11). The influence of this on gig work is moderate (M = 3.83). Financial independence is highly valued as a source of funding for education (M = 4.11). Perceptions regarding financial empowerment are relatively moderate (M = 3.99). Academic pursuit is seen as a highly committed endeavor (M = 4.20). Perceptions regarding financial factors and academic performance are relatively moderate (M = 3.99). The results shown in (See **Table 3**) clearly indicate that all the relationships are statistically significant.

Hypothesis testing

The results in **Table 5** indicate that education loans have a strong and significant positive effect on gig work ($\beta = 0.701$, $p < 0.001$), implying that access to education loans encourages women learners to take up gig work activities. Likewise, gig work has a significant positive effect on financial planning (β

Table 6. Direct effects

H	Relationship	β	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
H1	Education Loan -> Gig Work	0.701	0.031	22.452	0.000
H2	Gig Work -> Academic Pursuit	0.121	0.055	2.192	0.028
H3a	Gig Work -> Financial Planning	0.712	0.032	21.940	0.000
H3b	Financial Planning -> Financial Independence	0.733	0.035	20.892	0.000
H3c	Financial Independence -> Academic Pursuit	0.658	0.084	7.826	0.000

Source: Output computed using SMART PLS

Table 7. Mediating role of financial planning and financial independence

H	Relationship	Original sample (O)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
H3	Gig Work -> Financial Planning -> Financial Independence -> Academic Pursuit	0.343	0.054	6.371	0.000

Source: Output computed using SMART PLS

Table 8. Total effects

Relationship	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Gig Work -> Academic Pursuit	0.464	0.465	0.052	8.997	0.000

Source: Output computed by SMART PLS

= 0.712, p < 0.001), suggesting that participation in gig work activities promotes better financial planning behavior in learners.

Additionally, financial planning has a strong positive effect on financial independence (β = 0.733, p < 0.001), implying that effective financial management c women learner's financial independence. Finally, financial independence has a significant positive effect on academic pursuit (β = 0.658, p < 0.001), implying that financially independent learners are committed to their academic pursuits.

Finally, gig work has a positive and significant effect on academic pursuit (β = 0.121, p = 0.028), though the effect is relatively small. Overall, the results support the proposed hypotheses and indicate that gig work and financial behaviors play a crucial role in shaping the academic experiences of women learners.

Direct effects

The direct effect represents the immediate influence of one construct on another, as indicated by the path coefficients (β values), without the involvement of any mediating variables. **Table 6** shows the direct effects among the constructs studied, and all relationships are positive and significant at p < 0.05. The impact of the education loan on gig work is strong and significant (β = 0.701, t = 22.452), suggesting that the need to be financially free encourages women learners to seek gig work opportunities. Similarly, the impact of gig work on financial planning is significant (β = 0.712, t = 21.940), and this in turn has a strong and significant impact on financial independence (β = 0.733, t = 20.892). The impact of financial independence on academic pursuit is significant and strong (β = 0.658, t = 7.826), suggesting that financially independent women learners are more likely to focus on their academic pursuit. The direct impact of gig work on academic pursuit is significant but low (β = 0.121, t = 2.192).

Mediating role of financial planning and financial independence

The specific indirect effect was also analyzed to determine whether financial planning and financial independence sequentially mediate the relationship between gig work and academic pursuit. As presented in **Table 7**, the indirect effect that exists between Gig Work - Financial Planning - Financial Independence - Academic Pursuit is positive and statistically significant (β = 0.343, t = 6.371, p < 0.001).

The finding suggests that gig work has a significant impact on financial planning, financial independence, and ultimately academic pursuit among women learners. The significant indirect effect supports the proposed mediation hypothesis (H3), suggesting that financial planning and financial independence sequentially mediate the relationship that exists between gig work and academic pursuit.

Total effects

The total effect examines the overall influence of gig work on academic pursuit, including both direct and indirect effects through mediating variables.

As presented in **Table 8**, the total effect of Gig Work towards Academic Pursuit is positive and statistically significant (β = 0.464, t = 8.997, p < 0.001).

This result indicates that participation in gig work significantly contributes to women learners' academic pursuits when both the direct impact and the indirect effects through financial planning and financial independence are considered. The relatively higher total effect than the direct effect suggests that mediating pathways play an important role in strengthening the relationship between gig work and academic pursuit. Overall, the findings confirm that gig work supports academic engagement not only directly but also indirectly by improving financial planning behavior and enhancing financial independence.

The structural model presented in **Figure 2** illustrates the relationships among Education loan, Gig work, Financial planning, Financial independence, and Academic pursuit,

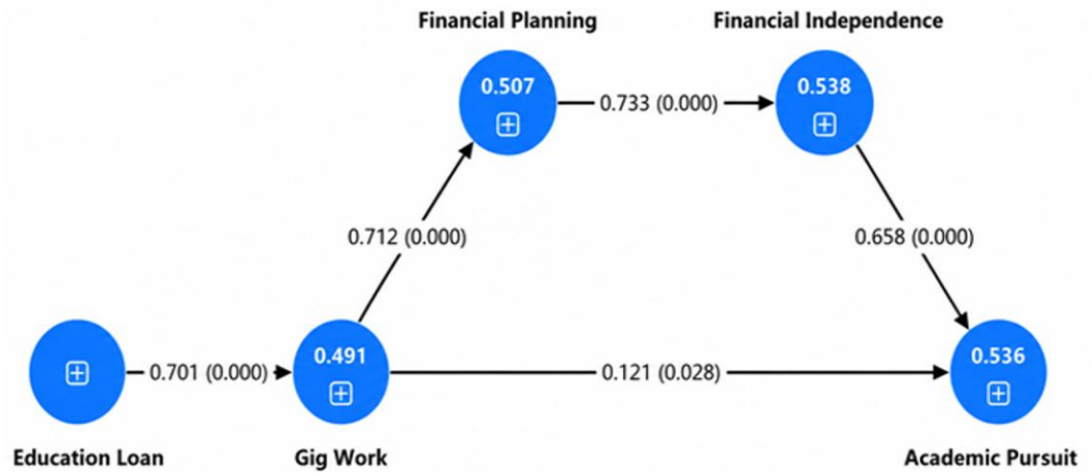


Figure 2. Figure on top of a page (Source: Authors' own elaboration, using SmartPLS output)

along with the explained variance (R^2) of each endogenous construct.

The results show that education loans have a strong and significant positive effect on Gig work ($\beta = 0.701$, $p < 0.001$), indicating that access to education loans encourages women learners to engage in gig work activities to support their financial needs. Gig work, in turn, significantly influences Financial planning ($\beta = 0.712$, $p < 0.001$), suggesting that women learners who participate in gig work tend to develop stronger financial planning practices, such as budgeting and managing their income.

Furthermore, Financial planning has a strong positive impact on Financial independence ($\beta = 0.733$, $p < 0.001$), implying that effective financial management contributes significantly to learners' ability to achieve financial autonomy. Financial independence subsequently has a significant positive influence on Academic Pursuit ($\beta = 0.658$, $p < 0.001$), indicating that financially independent learners are better able to maintain focus and commitment toward their educational goals.

In addition to the mediated relationships, Gig Work also has a direct positive effect on Academic Pursuit ($\beta = 0.121$, $p = 0.028$), although the magnitude of this relationship is relatively moderate. This indicates that gig work not only supports academic engagement indirectly through financial planning and financial independence but also contributes directly to women learner's academic persistence.

The R^2 values further indicate the explanatory power of the model. Gig Work has an R^2 of 0.491, meaning that education loans explain 49.1% of the variance in gig work participation. Financial Planning shows an R^2 of 0.507, indicating that gig work explains 50.7% of the variance in financial planning behavior. Financial independence has an R^2 of 0.538, suggesting that financial planning explains 53.8% of the variance in financial independence. Finally, Academic Pursuit demonstrates an R^2 of 0.536, meaning that gig work and financial independence together explain 53.6% of the variance in academic pursuit.

Overall, the structural model demonstrates that education loans encourage gig work participation, which subsequently promotes financial planning and financial independence, ultimately enhancing women learner's academic pursuits. The results confirm the proposed conceptual relationships and highlight the importance of financial behaviors in shaping the academic experiences of women learners.

DISCUSSION

This study aims to reveal the role of education loans in women learner's engagement in gig work, as well as the role of gig work in academic pursuit through financial planning and financial independence. The study aims to provide a broader understanding of the role of financial behavior, employment dynamics, and the gig economy.

The results reveal that education loans significantly influence gig work participation among women learners, thereby supporting H1. This finding suggests that women learners who rely on education loans are more likely to seek flexible employment to manage tuition fees, living expenses, and anticipated loan repayment obligations (Bhandary et al., 2024). The result is consistent with Mahmoud et al., (2024), who reported that financial constraints encourage women learners to engage in flexible employment to sustain their higher education. However, while previous studies primarily viewed gig work as an income-generating strategy, the present study extends the literature by demonstrating that education financing acts as an important driver of gig work participation within a broader financial pathway that supports academic pursuit. The findings further indicate that gig work positively influences academic pursuit, thereby supporting H2. This result aligns with Shaiwalini & Patnaik, (2025), who found that flexible employment can alleviate financial stress and enable students to remain engaged in their academic journey. Similarly, Govindharaj, (2025) highlighted that flexible work arrangements help learners balance employment commitments with academic responsibilities, while Wood et al., (2023), reported that moderate employment can positively influence academic engagement when work schedules remain manageable. Unlike earlier studies, which predominantly examined the direct effects of student employment on academic outcomes, the present study demonstrates that gig work constitutes an integral component of a broader sequential framework linking education financing to sustained academic pursuit among women learners. These findings

provide additional evidence that flexible employment not only supplements students' financial resources but also contributes to educational continuity through strengthened financial capability and economic resilience.

Although the findings indicate that gig work positively contributes to academic pursuits, the potential challenges associated with gig work should also be acknowledged. Women learners who devote substantial time to income-generating activities may experience work–study conflict, making it difficult to balance academic responsibilities and employment commitments. Excessive engagement in gig work may also contribute to emotional exhaustion and academic burnout, particularly when financial pressures compel learners to accept multiple assignments or irregular work schedules. Furthermore, some digital labor platforms have been criticized for income uncertainty, limited social protection, and unequal bargaining power, which may expose women workers to forms of platform exploitation. Therefore, while gig work can serve as a valuable financial resource, its benefits are likely to be maximized when participation remains compatible with academic commitments and personal well-being.

Another key finding is that gig work significantly affects financial planning behavior, thereby validating H3a. For instance, women learners who earn money through gig work may strengthen their financial management skills as they learn to manage their finances effectively (Sunita, 2025). Financial planning is a critical aspect in transforming gig-based financial instability into a more stable financial state.

As H3b proposes, the findings reveal that financial planning is critical in achieving financial independence. For instance, when women learners participate in financial planning activities, they are better positioned to manage their educational expenses and other financial needs independently. Financial independence is critical in improving financial well-being among young individuals (She et al., 2023).

The study also supports that financial independence has a positive effect on academic pursuit, thus validating H3c. This is because financially independent women learners are less likely to experience financial pressure and are more likely to be self-assured in handling their responsibilities as women learners (Maharjan, 2026). This would enable them to focus more on their academic pursuits and maintain high levels of academic engagement.

Lastly, the mediation results show that financial planning and financial independence sequentially mediate the relationship between gig work and academic pursuit, thus validating H3. The indirect effect results show that gig work predicts academic pursuit not only directly but also indirectly through the development of financial capabilities and financial independence. This further underscores the role of financial behavior in understanding how work experiences during academic pursuit influence academic outcomes.

The findings further demonstrate the value of examining interconnected factors through robust analytical frameworks, consistent with recent studies emphasizing multidimensional relationship assessment and predictive evaluation (Farrokh Ghatte & Nazari, 2025; Sasania et al., 2025; Shariati et al., 2024).

Rather than directly affecting academic engagement, education loans appear to trigger a chain of financial and behavioral responses. Specifically, the financial obligations associated with student loans encourage participation in gig work, thereby strengthening financial planning behavior and promoting financial independence. These findings demonstrate that financial behavior serves as an important mechanism linking education financing decisions to academic outcomes.

IMPLICATIONS

The findings provide several practical implications for universities, policymakers, gig platforms, and financial institutions.

First, universities should strengthen financial literacy and financial planning programs specifically designed for women learners, including those with education loans. Such initiatives can help students manage earnings from gig work more effectively and develop long-term financial independence. Universities may also consider introducing flexible academic schedules, blended learning opportunities, and academic support systems that enable learners to balance educational commitments with gig work participation.

Second, policymakers should develop targeted support mechanisms that reduce financial barriers faced by women learners. These may include subsidized education loan schemes, financial counseling services, and entrepreneurship development programs that encourage sustainable income generation alongside higher education.

Third, gig-platform providers can play a constructive role by establishing partnerships with universities to create learner-friendly work opportunities that offer flexible schedules, transparent payment systems, and opportunities for skill development. Such collaborations may help women learners engage in productive gig work without compromising their academic progression.

Finally, financial institutions and fintech companies should design tailored financial products and digital support services for women learners. These may include budgeting applications, financial planning tools, micro-savings programs, and advisory services that encourage responsible financial management. In addition, women-focused entrepreneurship incubators and fintech-enabled support initiatives can strengthen financial independence and create sustainable pathways for long-term economic empowerment.

This research contributes to Human Capital Theory by showing how education loan obligations encourage women learners to engage in gig work to sustain their investment in higher education. It also extends Cognitive Theory by demonstrating that participation in gig work promotes financial planning behavior, thereby enhancing financial independence and academic pursuit. Further, the study contributes to Behavioral Finance Theory by revealing how education loan-related financial pressures influence women learners' employment and financial decisions, leading them to use gig work and financial planning to achieve financial independence and continue their academic pursuits.

Moreover, it has important implications for inclusive growth and sustainable development by demonstrating how education financing and gig work opportunities can help women learners overcome financial barriers, strengthen financial independence, and sustain their academic pursuits. By supporting equitable access to higher education, enhancing women's economic empowerment, and promoting participation in flexible income-generating opportunities, the findings highlight pathways through which financial and employment support mechanisms can contribute to long-term educational and socioeconomic advancement among women learners.

CONCLUSION

Overall, this study demonstrates that education financing supports academic pursuit through a sequential pathway involving gig work participation, financial planning, and financial independence among women learners. By integrating financial and behavioral perspectives into a single framework, the study advances existing knowledge by explaining how these interconnected mechanisms collectively enable women learners to sustain their educational aspirations despite financial challenges. Unlike previous studies that have largely examined these factors independently, the present study highlights their combined influence in shaping educational persistence and financial well-being.

Beyond its theoretical contribution, the findings offer valuable practical implications for policymakers, higher education institutions, financial institutions, and digital employment platforms. The results suggest that education financing initiatives should be complemented by programmes that strengthen financial planning skills and facilitate access to flexible and secure gig work opportunities. Such an integrated approach can help reduce financial barriers, improve women's ability to manage educational expenses, and foster greater financial independence throughout their academic journey. Educational institutions may also consider incorporating financial capability programmes and career support services to enable women learners to make informed financial decisions while balancing academic and employment responsibilities.

The study further highlights that strengthening the link between education financing and flexible employment can create a more supportive ecosystem for women pursuing higher education. This not only provide educational persistence but also promotes women's economic participation by equipping them with practical financial management skills and sustainable income opportunities. Ultimately, these findings provide a meaningful foundation for developing policies and institutional strategies that expand equitable access to higher education, promote women's economic empowerment, and encourage sustainable employment opportunities, thereby contributing to more inclusive and resilient social and economic development.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Although the study made significant contributions, it also had limitations that should be taken into account while using the findings.

First, the study was conducted only among women learners, which may limit the generalizability of the results to other women learners. Future research could extend this model by including both men and women learners, or by conducting gender-based research to understand differences in financial behaviors and labor-market engagement.

Second, this study used a cross-sectional design, which does not allow the researcher to observe changes in financial behaviors and academic engagement. Future research could use longitudinal designs to observe changes in gig work and financial independence throughout women learner’s academic journey.

Third, the use of convenience and snowball sampling may restrict sample representativeness and limit the generalizability of the findings. Future research may employ probability-based or larger multi-regional samples to predict the external validity.

Fourth, the current research used a quantitative method, which may be subject to response and social desirability biases. Future studies could adopt a mixed-methods approach to deepen understanding of women learner’s financial decision-making processes.

Fifth, although the current research was designed to examine financial planning and financial independence as mediating variables, other factors, such as financial literacy, entrepreneurial personality, work-study balance, digital competence, and mental health, may also mediate the relationship between gig work and academic outcomes.

Furthermore, future research could explore the mental health implications of gig work among women learners. While gig work offers flexibility and additional income opportunities, it may also expose women to challenges such as irregular workloads, unstable earnings, job insecurity, and difficulties in balancing academic, professional, and personal responsibilities. These challenges can influence psychological well-being and may contribute to stress, anxiety, burnout, and emotional exhaustion. Therefore, examining how the demands and uncertainties of gig work affect the mental health of women pursuing higher education would provide a more holistic understanding of their experiences. Such insights could help educators, policymakers, and platform providers develop supportive strategies that promote not only financial empowerment but also the overall well-being of women learners.

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Data sharing statement: Data supporting the findings and conclusions are available upon request from corresponding author.

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