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The effect of job satisfaction and moonlighting intentions with mediating and moderating effects of commitment and HR practices an empirical study

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Moonlighting as a practice, the limelight was gained during the COVID-19 pandemic due to remote work involving flexible work, which saved employees' commuting time to the office and has become a potential source of income for individuals seeking other jobs. The authors examined the phenomenon of moonlighting by assessing the relationships between job satisfaction, organizational commitment, and moonlighting intentions. The authors also examined the mediating effects of employee organizational commitment and economic intentions and the moderating role of human resource practices on the relationship between job satisfaction and moonlighting intentions. The data were gathered for five reflective constructs of this empirical study—job satisfaction, organizational commitment, human resources practices, economic intentions, and moonlighting intentions—by surveying IT-enabled industry employees in Hyderabad. The data from 311 valid responses were subjected to structural equation modeling analysis using IBM AMOS version 28. The model-fit indices from SEM analysis indicate excellent model fit. The structural model from SEM analysis reveals that 50% of the variance in moonlighting is accounted for by job satisfaction and organizational commitment. The factor of job satisfaction is statistically significant and influences the moonlighting intentions of employees in IT-enabled industries. Job satisfaction has a positive impact on organizational commitment, and when organizational commitment increases, moonlighting intentions decrease. Organizational commitment partially mediates moonlighting intentions through job satisfaction. The study also assessed the moderating role of human resource practices on the relationship between job satisfaction and moonlighting intentions. The moderation analysis results reveal statistically significant and positive moderating effects of human resource practices on intentions to moonlight through job satisfaction. The slope analysis indicated that human resource practices strengthen the positive relationship between job satisfaction and moonlighting.

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Introduction

Moonlighting refers to holding a second job, typically in addition to a full-time job. This is done for various reasons, including financial needs, economic causes, career advancement, or personal fulfillment. Moonlighting can take many forms, such as working part-time on weekends, freelancing in a field related to one's full-time job, or starting a side business. Moonlighting can positively and negatively affect an individual's work-life balance, job performance, and overall well-being. Most employees moonlight in their free time after their first job to supplement their income (Ashwini et al., 2017). It can be an opportunity to gain new skills, increase income, and build professional networks, but it can also lead to burnout and negatively impact one's health and relationships.

There are a variety of factors that can lead employees and individuals to have moonlighting intentions. Financial needs are one of the most common reasons for moonlighting. Many individuals may be unable to make ends meet with their full-time job alone and may turn to a second job to supplement their income (Rispel et al., 2014). Some individuals may commit to career advancement to gain additional skills or experience that can help them advance their primary career (George and George, 2022). Akmaliah and Hisyamuddin (2009) noted that the entrepreneurial aspirations of individuals who want to start their own business and who are moonlighting can provide a way to test water and gain experience in their desired field. Personal fulfillment is one of the reasons individuals have moonlighting intentions and may take on a second job simply because they enjoy the work or find it fulfilling (Bell and Roach, 1998).

In a study of teachers, the authors observed that teachers may take up moonlighting if they are not satisfied with their current job and want to explore new opportunities or gain additional skills to find a better job in the future (Raffel and Groff, 1990). The cost of living in certain regions can be very high, and moonlighting can be a way for people to make ends meet (Ballou, 1995). In today's economy, many people face job insecurity, moonlighting can provide an additional source of income, and a safety net in the case of job loss and lack of job security may be one of the reasons for employee intentions toward moonlighting (Kisumano and Wa-Mbaleka, 2017). Flexibility is another reason for moonlighting, as some individuals who have job flexibility may moonlight for additional income (Kimmel, 1995).

The part-time job, freelancing, side business, self-employment, gig economy with working short-term contracts, moonlighting in the same type of employment, and different types of moonlighting that employees take. It is worth noting that some people may engage in more than one type of moonlighting, depending on their circumstances and goals. Additionally, these types may overlap with each other. Additional income, career development, flexibility, diversification of income, and a sense of accomplishment are some of the advantages of moonlighting. Some disadvantages of moonlighting include time constraint fatigue, burnout, potential conflicts of interest, income tax issues, and the risk of job loss.

However, moonlighting can also create conflicts of interest, mainly if the second job is in a similar area to the primary job. Additionally, it can also lead to time management and work-life balance issues (Baldwin Jr. and Daugherty, 2002). Overall, moonlighting can be a valuable opportunity for individuals to gain additional skills and income, but it is crucial to consider the potential implications and manage time and responsibilities effectively (Sussman, 1998). Moonlighting can also have implications for an individual's employer and colleagues. Employers may have policies that prohibit or limit moonlighting, while others may support it. Some employers may see this as a way for employees to gain additional skills and experience to benefit the company (Lyle, 2015). However, if an employee is exhausted from working multiple jobs, this may negatively impact their job performance and productivity. Additionally, moonlighting can create conflicts of interest, mainly if the second job is in a field similar to or related to the full-time job (Jamal, 1986).

In another study, the authors evaluated the positive impacts of moonlighting on workers who had second jobs that were different from their primary jobs. They emphasized the method of increasing salaries heavily. From a training standpoint, worker turnover affects the wages of individuals in primary occupations (Panos et al. (2014). Campion et al. (2020) presented an integrative systematic review of multiple job holding tasks and performed a coherent synthesis of multiple job holding tasks. The authors presented the financial reasons—pay off debts, meet regular expenses, future savings; career development—an opportunity to enhance and learn new skills; and heterogeneous job models; psychological fulfillment—work enjoyment, desire to mix with other groups, to balance negative primary job experiences, work-life balance and flexibility—the components critically reviewed. The authors opined that multiple job-holding intentions vary from person to person based on one's needs.

Ashwini et al. (2017) investigated the intentions of middle-level employees working for selected information technology companies in southern India to engage in moonlighting. They researched the different aspects of the workforce that contribute to the phenomenon of moonlighting and concluded that the lack of proactive retention benefits for committed employees who are experienced and loyal leads to a loss of organizational commitment on the part of those workers, leading them to seek secondary job holding to pursue their ambitions. According to George and George (2022), IT workers may switch jobs to obtain new skills to switch careers. Secondary jobs can help people shift occupations or foster entrepreneurship. This notion emphasizes investing in moonlighting rather than consumption. This approach is similar to that of employment diversity but considers the financial benefits of moonlighting.

Methodological choices

Several previous studies and methods for assessing moonlighting intentions and factors associated with employee moonlighting intentions have been reported. Šťastný et al. (2021) examined the factors that cause Czech teachers of lower secondary schools to commit private tuition and a paid job to moonlighting. The results revealed that economic factors are the main cause of male teachers' responses to moonlighting. Male teachers were more likely to moonlight if they were part-time, had less professional experience, had more significant household financial burdens, or were less satisfied with their pay. Using structural equation modeling analysis, Sai Manogna and Swamy (2023) examined the influence of organizational commitment dimensions on secondary hiring decisions made by teachers in higher education. The study's findings suggest a negative correlation between organizational commitment and intentions to moonlight, and higher education institutions can lessen faculty members' intentions to moonlight by creating an environment that encourages organizational commitment. This study emphasizes that it is essential to comprehend the factors that lead to moonlighting intentions to assist organizations in putting in place procedures and policies that lessen the possibility that employees will moonlight. Seema and Sachdeva (2020) reported that financial or economic strain has been the most discussed or studied motive in the recent past. The PLS-SEM results demonstrate the critical roles that organizational commitment and entrepreneurial motivation play in motivating employees to moonlight. Using SEM analysis, Seema

et al. (2021) reported the relationship between employee job satisfaction and moonlighting intentions, with organizational commitment serving as a mediator. While job satisfaction has a very strong positive impact on organizational commitment, job satisfaction also has a mediating effect on the relationship between job satisfaction and intentions to moonlight. Furthermore, there is a noteworthy inverse relationship between organizational commitment and moonlighting intentions.

The authors followed the methods of Seema et al. (2021) in the present study to assess the relationships among job satisfaction, organizational commitment and moonlighting intentions. The mediating and moderating effects of employee organizational commitment, economic intentions, and human resource practices were examined by surveying information technology-enabled employees. This model fits well with the study we carried out; however, the authors used IBM SPSS AMOS for structural equation modeling analysis.

Several studies have been carried out in the area of moonlighting. Although employees may moonlight for various reasons, the most explored and researched motivations in the literature are financial strain, economic needs and causes. However, no researcher has reported the association between economic intentions and moonlighting. This paper aims to empirically investigate the relationship between job satisfaction and moonlighting intentions through multiple mediation analyses with organizational commitment and economic intentions as mediators. The moderating role of human resource practices in the IT-enabled industry is also examined. The primary data from 311 IT-enabled industry professionals were gathered using reliability-tested scales. IBM SPSS 29 and AMOS 28 ver. software were used for structural equation modeling analysis to test the statistical significance of the differences. This study contributes to identifying employee multitasking capabilities and predicting employee well-being by studying whether a second job has an additive or interactive effect on employee well-being. Employee retention and turnover, employee job satisfaction, and, in some cases, employee conditions were identified.

Literature review

Sai Manogna and Swamy (2023), in the context of intended moonlighting, investigated the influence of organizational commitment factors on secondary employment decisions among higher education professors. The study's findings suggest that there is a negative correlation between organizational commitment dimensions and intentions to moonlight and that higher education institutions can lessen faculty members' intentions to moonlight by creating an environment that fosters organizational commitment. The associations between job happiness and moonlighting intentions, as well as the mediating effect of organizational commitment on this relationship, were investigated by Seema et al. (2021). According to the study, job satisfaction has a very high positive impact on organizational commitment, and organizational commitment has a mediating effect on the relationship between job satisfaction and intentions to moonlight. Furthermore, there is a noteworthy inverse link between Organizational Commitment and Moonlighting Intentions. An empirical study examined the relationship between two non-financial factors—organizational commitment and entrepreneurial motivation—and IT professionals' inclinations to moonlight. The PLS-SEM results show that entrepreneurial motivation and organizational commitment are critical factors that influence employees' aspiration to moonlight (Seema and Sachdeva, 2020). Because of globalization and technological growth, the environment and scenario under which firms function have drastically changed. Numerous effects of this transition have been felt by the economy. The idea of moonlighting has gained traction because of the current state of the economy and the volatility of job prospects. The authors concluded that employees' organizational engagement has decreased as a result of moonlighting (Joseph and Ambily, 2019).

In an empirical study, the authors examined how job satisfaction differed between moonlighters and nonmoonlighters in relation to job stress and teachers' well-being in Canadian colleges. The majority of the findings were consistent with the energizing/opportunity theory of moonlighters rather than the depriving/constraining hypothesis, which holds that job satisfaction has a statistically significant impact on employees' intentions to moonlight (Jamal et al. 1998). The impact of moonlighting on teachers' job satisfaction at public universities in Punjab and the Federal Capital was investigated by Ara and Akbar (2016). Four factors were examined to determine the causes of moonlighting among university teachers: extra income, denied promotions, skill diversity, and job autonomy. Overall, the study's main conclusions showed that moonlighting has a large impact on job satisfaction. The impacts of job satisfaction, organizational citizenship behavior, turnover intention, and moonlighting intentions on an organization's success were examined by the authors in an empirical study. The authors found a negative relationship between IT professionals' intentions toward moonlighting and job satisfaction. The authors suggest that people who are happy in their current position are less likely to look for new work. Furthermore, the research findings indicate that turnover intention is considerably negatively impacted by job satisfaction and organizational commitment. Thus, by improving job satisfaction, organizational commitment, and person-organization fit, organizations can reduce turnover intention. In an empirical study, the authors examined the connection between job satisfaction and IT professionals' intentions to moonlight within the theoretical framework of the "Attitudes and Alternatives Model" (AAM) of Withdrawal Cognitions. This model explains turnover as a result of generalized dissatisfaction, along with its associated antecedents and potential consequences. The results demonstrated that people's intentions to put in more hours were significantly and negatively influenced by job satisfaction (Malodia and Butail (2024).

The difficulties that managers and organizations face as a result of employees who intend to moonlight were studied by Banerjee (2012). The author proposed that moonlighting needs to be controlled and regulated to avoid ambiguities. For employees to understand the repercussions of breaking policies, they must be implemented, and their terms must be included in the employment contract. Appropriate policies should be formulated to synergize moonlighting practices with mainstream practices to ensure stability in future work interactions (Bakare, 2021). Llobet and Fito (2013) studied theoretical frameworks for organizational behavior and job satisfaction concerning changes in social and economic situations in most Western nations. The study reported that workers' identification with the organization and their impression of job satisfaction are the major variables in organizational adaptation and retention. The organization must identify and embrace these important aspects to implement an effective human resource policy.

Research gap

Despite significant research on employee moonlighting intentions, there may be a lack of understanding of the underlying mechanisms of how organizations should allow/disallow moonlighting practices. There is a need to identify the causes and mechanisms that lead to an employee's moonlighting intentions. The authors observed inconsistent findings, and there may be a

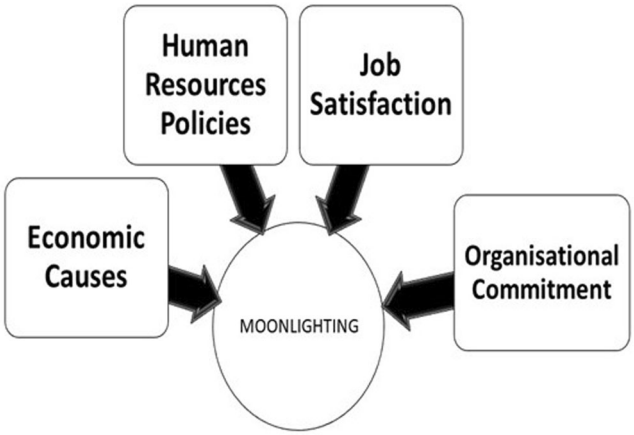

Fig. 1 Theoretical framework: Moonlighting.

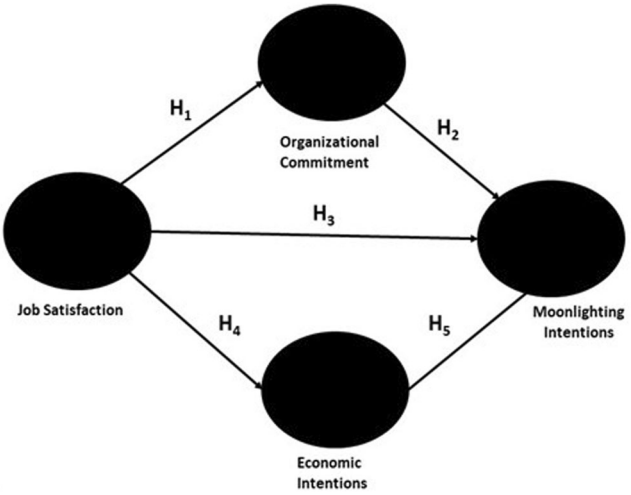

Fig. 2 Researcher hypothetical framework.

need for further research to clarify or resolve these inconsistencies. As new human resource practices and policies emerge, there may be limited research on their applications, benefits, and potential drawbacks. Furthermore, the authors could identify gaps, that moonlighting phenomenon was not researched with economic intentions and human resource practices. These factors influence the moonlighting intentions of employees in general or of IT-enabled industry employees in particular. Therefore, the researchers assessed the relationship between job satisfaction and moonlighting intentions—the mediating and moderating effects of employee organizational commitment, economic intentions, and human resource practices—for the employees of the information technology-enabled industry.

Objective of the study

To investigate the phenomenon of "moonlighting" (i.e., working a second job or additional source of income) among employees in the IT-enabled industry in and around Hyderabad, an Indian Metro. The study also examines the influence of job satisfaction, human resource practices, economic intention, organizational commitment, and moonlighting intentions.

Theoretical framework and hypothetical model

The theoretical framework was developed following the model of Seema et al. (2021), who studied job satisfaction, moonlighting intentions, and the mediating effect of organizational commitment. Tjahjanto and Riady (2015) examined the turnover intentions of outsourced employees by assessing job satisfaction and organizational commitment as mediators in the service industry in Jakarta. The authors reported insignificant results for the intervening variables of organizational commitment and job satisfaction on the turnover intentions of employees. Palumbo (2020) investigated the effects of working from home on the mediating effects of work-related well-being and highlighted the limitations and implications for organization and employee well-being; home-based work or flexible working can be allowed if there is any mutually beneficial situation. The authors followed these studies and presented their hypothetical model and theoretical relationships and mediating and moderating frameworks in Figs. 1–4.

To better understand this phenomenon, this study modeled the moderating effects of human resource practices on moonlighting intentions through job satisfaction by adopting the model (Fig. 4) of Hair et al. (2021). The moderating effect (P3) is represented by an arrow pointing at the effect P1 linking job satisfaction and

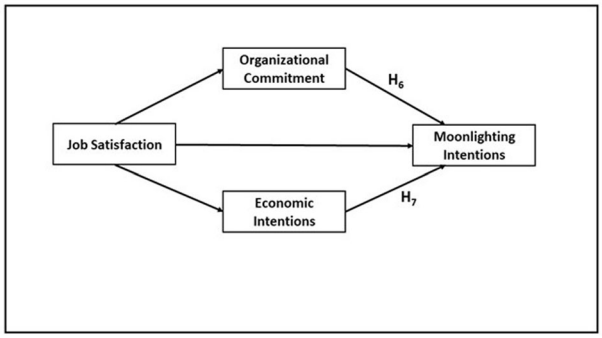

Fig. 3 Theoretical model and relationships among variables (author creation) adopted from Metselaar et al., 2023).

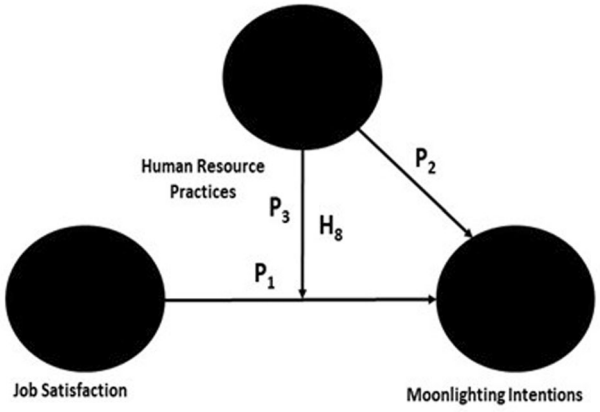

Fig. 4 Moderation model adopted from Hair et al. (2021).

moonlighting intentions. Furthermore, when the moderating impact is included in an SEM path model, there is also a direct relationship (P2) from the moderator to the endogenous construct of moonlighting intentions.

Research hypotheses

H_1: Job satisfaction is statistically significant and influences the organizational commitment of employees working in IT-enabled industries.

H_2: Organizational commitment is statistically significant and influences the moonlighting intentions of employees working in IT-enabled industries.

H_3: Job satisfaction is statistically significant and influences the moonlighting intentions of employees working in IT-enabled industries.

H_4: Job satisfaction is statistically significant and influences the economic intentions of employees working in IT-enabled industries.

H_5: Economic intentions have consequences for the moonlighting intentions of employees working in IT-enabled industries.

H_6: Organizational commitment mediates the relationship between job satisfaction and the moonlighting intentions of employees working in an IT-enabled industry.

H_7: Economic intentions mediate the relationship between job satisfaction and the moonlighting intentions of employees working in IT-enabled industries.

H_8: Human resource practices moderate the relationship between job satisfaction and the moonlighting intentions of employees working in IT-enabled industries.

Data collection and research instruments

The data were gathered using standardized, tested, and published scales that were modified to suit the study and were used to measure job satisfaction and organizational commitment. The job satisfaction scale was adapted from Huddleston and Good (1999). A modified organizational commitment scale was adapted from Mowday et al. (1979) to measure the construct of organizational commitment. The economic intentions scale was developed by appropriately modifying the statements to suit the study following the interitem moonlighting scale developed by Jehan et al., 2021. Human resource practices were developed by adopting appropriate items from Moonlighting practices (Puja Khatri and Khushboo, 2014) and Demo et al. (2012) from items of the Human Resources Policies and Practice Scale (2012). All the statements are Likert-type measures ranging from strongly agree 5 to strongly disagree 1.

All the items of the scales were tested to determine whether these scales measure the unobservable constructs that the study needs to measure; the scales are valid and measure the intended constructs consistently and precisely (reliable). The authors carried out a pilot study and assessed interrater reliability, test-retest reliability, and internal consistency reliability by assessing Cronbach's alpha statistic. Further factor analysis was carried out on the data, and only those items/statements with factor loadings >0.6 were considered for the study. Seema and Sachdev's (2020) Moonlighting Intentions Scale was adapted and modified to measure the intentions of employees to moonlight. The reliability of the economic intentions scale and human resource practices scale were 0.86 and 0.87, respectively.

Sample size estimation

The present study targeted employees from the IT-enabled industry and sample subjects from Hyderabad, an Indian Metro. The IT-enabled employees' population in Hyderabad Metro is not known, the authors followed the Cochran (1977) formula and estimated the required sample size to be 385. The questionnaire was developed and published online, and the link was shared with 800 employees working in the IT-enabled industry. Three hundred and fifty responses were received; the study considered only 311 valid responses, 39 were discarded because of respondents' misbehavior, and some of the responses were incomplete. Another school of thought concerning the sample size was to have a minimum sample size of $50 + 5x$, where x represents several statements. The present study included 21 statements, and the required sample size was calculated based on formula 155 (James Gaskin, 2020). Therefore, the valid data from 311 subjects in this study are far higher than the minimum sample size required to subject the data to structural equation modeling analysis using the IBM AMOS version 28.

Table 1 Demography characteristics and descriptive statistics of the study sample.

Item	N	Per cent
Gender		
Male	154	49.51
Female	157	50.49
Age Group (Years)		
20–29	99	31.83
30–49	82	26.36
40–49	75	24.13
>49	55	17.68
Marital Status		
Married	187	60.10
Unmarried	124	39.90
Education		
SSC	33	10.63
Graduate	127	40.83
Post-Graduate	122	39.22
Others	29	9.32
Children		
Yes	171	55.00
No	140	45.00
Experience (Years)		
1–5	64	20.57
6–10	63	20.27
11–20	103	33.12
>20 Years	81	26.04

Source: primary data processed.

The demographic characteristics of the participants are presented in Table 1.

Data analysis. The data were subjected to factor analysis using IBM SPSS version 29 and structural equation modeling (SEM) using IBM AMOS version 28 to test the authors' hypothetical framework. The outer measurement and inner structural models were examined. In the present study, the outer measurement model consisted of five reflective latent constructs with 22 indicators. However, one item, ECON4, was dropped from the study because it was not appropriately worded to measure economic intentions. Using IBM AMOS, researchers have established methods for measuring absolute path coefficients in several types of research studies and organizational psychology studies with small and large sample sizes, including nonnormal and normal data (Hair et al., 2016; Hair et al., 2013).

Before proceeding with the data analysis, the normality of the data was assessed by the Shapiro–Wilk test ($p > 0.05$), and kurtosis and skewness were assessed. The data are normal, as the skewness values are within the recommended range of −2 to +2 and the kurtosis is between −7 and +7 (Hair et al., 2010). After the assessment of data normality, exploratory factor analysis (EFA) was carried out to uncover the underlying structure and patterns of the set of observed variables. EFA analysis is needed to simplify complex datasets by identifying common underlying factors that explain the observed relationships between variables.

Table 2 KMO and Bartlett's Test. a Items for Job satisfaction scale and outer loadings. b Items for Organizational Commitment Scale and Outer Loadings. c Items for Human Resource Practices Scale and Outer Loadings. d Items for Economic intentions and outer loadings. e Items for Moonlighting intentions and outer loadings.

Kaiser–Meyer–Olkin Measure of Sampling Adequacy.		0.796
Bartlett's Test of Sphericity	Approx. Chi-Square	3897.273
	df	210
	Sig.	<0.001

a

Job satisfaction	Outer loadings
JS1- My job is usually interesting enough to keep me from getting bored.	0.83
JS2- I enjoy my work more than my leisure time.	0.72
JS3- I feel fairly satisfied with my job.	0.86
JS4 -I feel I am happier in my work than most other people.	0.86

b

Organizational Commitment	Outer loadings
OC4-I believe that my contribution to the organization is valued.	0.88
OC6-I am loyal to my organization.	0.75
OC7-I am emotionally attached to my organization.	0.85
OC9-I am fully committed to the present organization.	0.66

c

Human Resource Practices	Outer loadings
HPR1-HR policies allow moonlighting	0.71
HPR2-HR policies permit flexible hours so I moonlight	0.92
HPR3-HR policies encourage employees to develop multitasking so I moonlight	0.72
HPR4-HR has not interested if once the employee achieve his/her goals	0.87
HPR5-HR policies allow moonlight in the pursuit of professional perfection	0.73
HPR6-HR policies are employee friendly so I do moonlight	0.71

d

Economic intentions	Outer loadings
ECON1-Moonlighting will help me achieve household income targets.	0.84
ECON2-Moonlighting acts as coping mechanism for temporary financial jolts.	0.83
ECON3-Salary from my second job is intended for future savings.	0.81
ECON5-To help my ailing funding situation	0.80

e

Moonlighting intentions	Outer loadings
ML4-How often do you consider pursuing your hobby/passion other than a professional career to make extra money	0.71
ML5-How often do you think of taking another job with high growth potential	0.81
ML6-Have you ever registered on an online platform for seeking a second job along with your present job	0.78

Source: primary data processed.

Results and discussion

In the following sections, the results of the factor analysis, SEM analysis, the measurement structural model, mediation analysis, and moderation analysis are presented along with the testing of hypotheses.

Factor analysis. The data were subjected to factor analysis, which grouped the 21 variables into 5 components based on their shared variance. The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy is a statistic that measures the suitability of data for factor analysis. A value of 0.796 (Table 2) indicates that the data are suitable for factor analysis. All five components explained 71.986% of the variance, which is greater than the recommended value of 60% (Hair et al., 2016).

In factor analysis, the "sphericity" assumption states that the correlation matrix of observed variables is an identity matrix, meaning that variables are uncorrelated and therefore not suitable for factor analysis. To evaluate whether this assumption was met, Bartlett's test was carried out. The p value from Bartlett's test is

Table 3 Model fit statistics.

Item	Estimate	Range	Reference
CMIN	396.948		
DF	175.000		
Relative Chi-Square (CMIN/DF)	2.268	<3	Kline, 2011
Comparative Fit Index (CFI)	0.941	>0.90	Bentler and Bonett, 1980
Incremental Fit Index (IFI)	0.939	>0.90	Bollen and Lennox, 1991
Tucker Lewes Index	0.935	>0.90	Tucker and Lewis, 1973
Normed Fit Index	0.921	>0.90	Bentler and Bonett, 1980
Root Mean Square Error of Approximation (RMSEA)	0.048	0.5 or less	MacCallum et al. 1993
Standardized Root Mean Square Residual (SRMR)	0.049	<0.05	MacCallum et al. 1993

low (less than 0.05), indicating that the correlations between variables are significantly different from zero, and the data are appropriate for factor analysis. The factor loadings for all the constructs and their items are greater than the recommended value of 0.6 (Chin et al., 2008). Therefore, a measurement model was constructed.

Tables 2a–e present the respective items for the adopted and modified statements from the original instruments and outer loadings, which are measured using IBM-AMOS for the outer measurement model.

Measurement model. CFA was computed using AMOS to test the measurement model. As part of the CFA, factor loadings were assessed for each item. The model fit measures were used to assess the model's overall goodness of fit (CMIN/df, GFI, CFI, TLI, SRMR, and RMSEA); all the values were within their respective recommended and common acceptance levels (Ullman and Bentler, 2012; Hu and Bentler, 1998; Bentler, 1990). The five-factor model (moonlighting intentions, job satisfaction, organization commitment, human resource practices and economic intentions) fit the data well (Table 3). The model-fit indices are "CMIN/DF 2.268, CFI 0.941, IFI 0.936, TLI 0.924, NFI 0.914, RMSEA 0.05 and SRMR 0.048". The factor loading values (Kline, 2011) are excellent, acceptable, and nonnegative, and all are greater than 0.5, with an average factor loading >0.7 for all the five constructs; additionally, the model has an excellent fit, as presented in Table 3 (Byrne, 2013). The measurement model is presented in Fig. 5.

The construct reliability was assessed using Cronbach's alpha and composite reliability. The Cronbach's alpha for each construct in the study was measured are above the recommended value of >0.70 (Nunnally and Bernstein, 1994). The composite reliabilities ranged from 0.811 to 0.901, above the recommended and benchmark values of 0.70 (Hair et al., 2010). Therefore, construct reliability was established (Table 4).

The convergent validity of the scale items was estimated using the average variance extracted (AVE) (Fornell and Larcker, 1981). The AVE values were above the threshold of 0.50 (Fornell and Larcker, 1981). Hence, the scales used in this empirical study have convergent validity(Table 4).

Discriminant validity illustrates how a specific construct varies from other constructs and explains how closely correlated the measures should be (Anderson and Gerbing, 1988). Discriminant validity was assessed in the present study using the Fornell–Larcker criterion and the Heterotrait–Monotrait (HTMT) ratio. According to the Fornell and Larcker criterion, discriminant validity is established when the square root of the AVE for a construct is greater than its correlation with the other constructs in the study. However, the Fornell and Larcker criterion has recently been criticized, and a new method for assessing discriminant validity, the HTMT ratio, has been increasingly utilized. In the present study, discriminant validity was established using the Fornell and Larcker criterion. However, discriminant validity was also assessed using the HTMT ratio, and all ratios were less than the required limit of 0.85 (Henseler et al., 2015). Therefore, discriminant validity was established (Tables 5 and 6).

After assessing the factor loadings, the CR and AVE were measured. The CRs for all five constructs are >0.5 (Hair et al., 2013), indicating the reliability of the latent constructs (Table 4).

Heterotrait–Monotrait (HTMT) ratio analysis. The HTMT analysis examines the ratio of trait correlations between two constructs. If the HTMT value is <0.90, discriminant validity is established between two constructs. In the following table, all the values are <0.90; therefore, discriminant validity is established (Hensler et al., 2015):

According to the model's assessment, the recommended cutoff value of 0.7 loading constitutes a good outer measurement (Chin et al., 2008; Hair et al., 2013). However, one loading on the construct job satisfaction OC9 (0.66) was retained for the analysis because the respective construct's average loading is >0.7 and the AVE for every construct is >0.5 (Hair et al., 2013).

Structural model. A structural model generated through AMOS was used to test the relationships between job satisfaction and organizational commitment and between job satisfaction and moonlighting intentions (Fig. 6). A good fitting model is accepted if the CMIN/df is <5, the GFI is >0.90 (Hair et al., 2010), the Tucker and Lewis indices are >0.90 (1973), and the confirmatory fit index (CFI) (Bentler, 1990) is >0.90 (Hair et al., 2010). In addition, an adequate-fitting model was accepted if the AMOS computed value of the standardized root mean square residual (RMR) was <0.05 and the root mean square error approximation (RMSEA) ranged between 0.05 and 0.08 (Hair et al., 2010). The indices indicated in Table 3 fall within the acceptable range.

The squared multiple correlation was 0.50 for moonlighting, which indicates that 50% of the variance in moonlighting is accounted by job satisfaction and organizational commitment (Fig. 6).

Common method bias. Common method bias (CMB) is inflation or rare case depletion of the true correlation between the observable variables in the study. In most of the cases, the respondents responded to questions consisting of independent and dependent variables at the same time, and there was a chance for artificial inflation of covariance. The study estimated common method bias using Harman's single factor test and included common method latent factor methods.

Harman's single factor test: The indicators were loaded to one factor in this test, and confirmatory factor analysis was performed

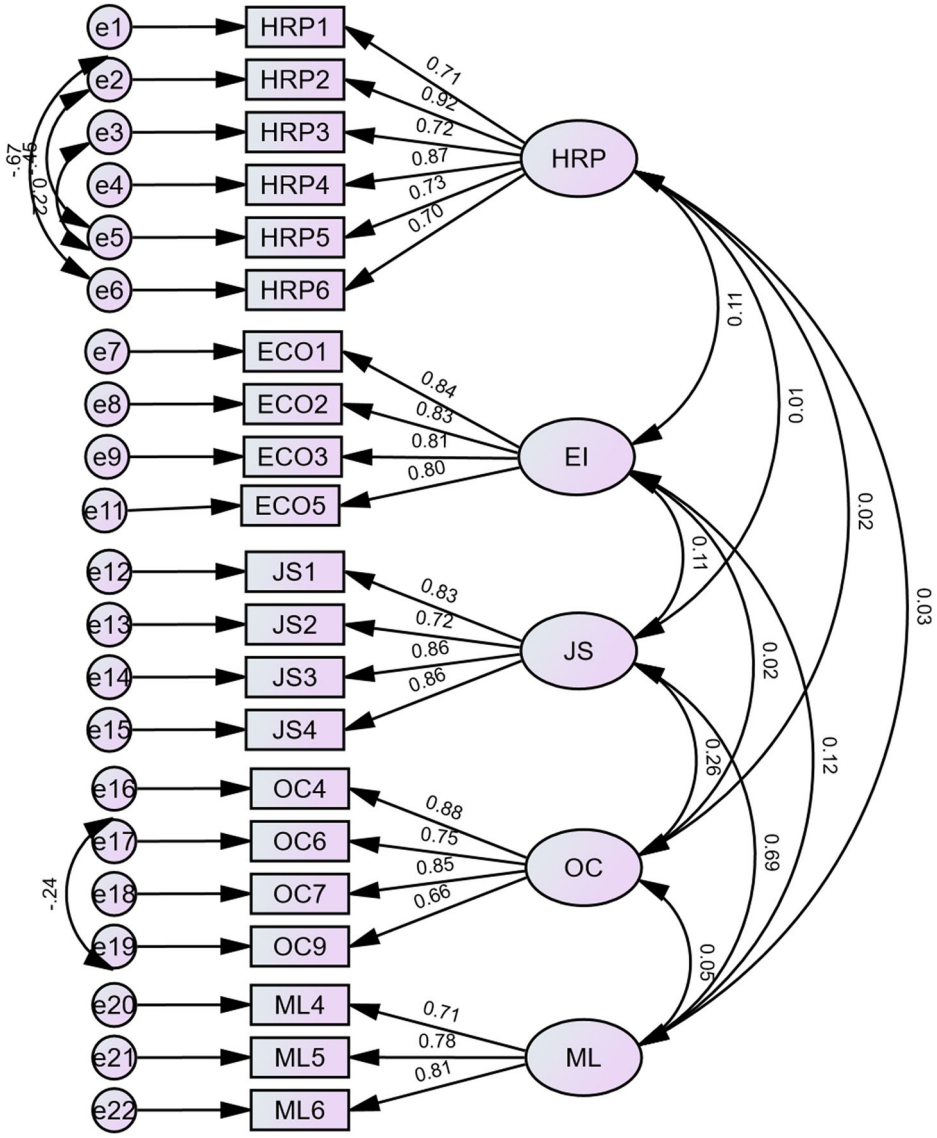

Fig. 5 Measurement model with constructs.

Table 4 Reliability and Convergent Validity of the Constructs.

Factor	Cronbach's alpha	Composite Reliability	Average Variance Extracted/Convergent Validity
Human Resources Practices	0.892	0.901	0.607
Economic Intentions	0.930	0.892	0.675
Organizational Commitment	0.853	0.891	0.673
Job Satisfaction	0.810	0.868	0.625
Moonlighting Intentions	0.821	0.811	0.589

Source: Primary data processed.

to assess the model fit. The model fit was verified and observed, with no common method bias.

Latent Common Method Factor: In this procedure, we used a latent variable that has a direct relationship with all the construct indicators in the model. A latent construct was drawn and labeled as a common method. The model included a directo relationship from the unobserved common method latent construct to every indicator in the model. After drawing a path from the common method construct to all the indicators in the model, all the relationships from the method factor are constrained to be equal to examine whether there is any common influence across all the indicators. The model was run with the latent common method variable, which has a direct relationship with all the factors, and the chi-square value of this CFA model was noted. The observed chi-square value is 391.912, with 174 degrees of freedom. The original model chi-square without a latent factor is 396.443 with 175 degrees of freedom. The difference between the chi-square values is 4.531, indicating that there is common method bias; however, this is not a substantial concern in this study because the CMB is very

Table 5 Discriminant validity of constructs.

Factor	Human Resources Practices	Economic Intentions	Organizational Commitment	Job Satisfaction	Moonlighting Intentions
Human Resources Practices	**0.779**				
Economic Intentions	0.106	**0.821**			
Organizational Commitment	0.013	0.110	**0.820**		
Job Satisfaction	0.015	0.020	0.264*	**0.791**	
Moonlighting Intentions	0.025	0.124	0.692*	0.046	**0.767**

Source: Primary data processed
Diagonal bold values are square root of AVE; *$p < 0.05$

Table 6 Heterotrait-Monotrait analysis.

	Human Resources Practices	Economic Intentions	Organizational Commitment	Job Satisfaction	Moonlighting Intentions
Human Resources Practices					
Economic intentions	0.105				
Organizational commitment	0.043	0.106			
Job satisfaction	0.022	0.021	0.241		
Moonlighting intentions	0.038	0.096	0.583	0.043	

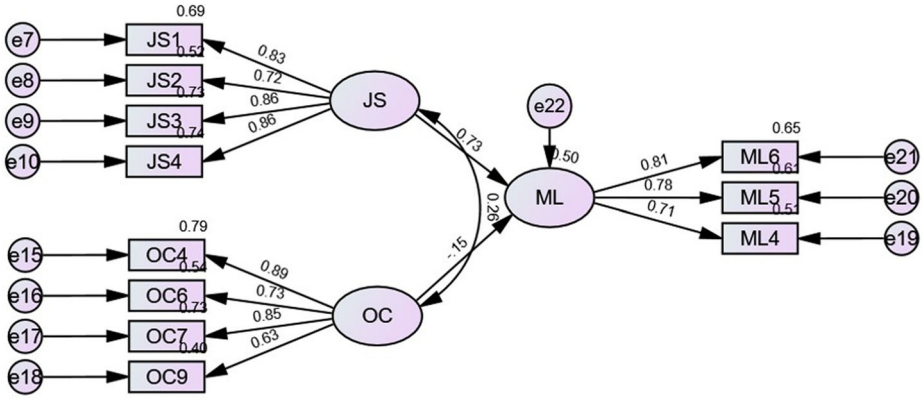

Fig. 6 Structural model (Testing of Hypotheses H1 and H2).

low and has not affected the outcome of the study. The results are presented in Tables 7 and 8.

Testing of hypotheses. The study assessed the impact of H_1: job satisfaction → organizational commitment, H_2: organizational commitment → moonlighting intentions, H_3: job satisfaction → moonlighting intentions, H_4: job satisfaction → economic intentions, and H_5: economic intentions → moonlighting intentions. The impact of job satisfaction on organizational commitment is positive and statistically significant ($\beta = 0.346$; $t = 4.180$). $p < 0.001$), supporting H_1 (Table 8).

The impact of organizational commitment on moonlighting intentions is statistically significant and negative ($\beta = -0.117$, $t = -2.673$, $p < 0.05$) (Table 8). If organizational commitment decreases by one unit, moonlighting intentions increase by 0.117 units. Hence, H_2 is supported.

Furthermore, the impact of job satisfaction is positive and statistically significant ($\beta = 0.741$, $t = 9.713$, $p < 0.001$), supporting H_3 (Table 8).

Similarly, the impact of job satisfaction on economic intentions, $\beta = 0.090$, $t = 1.742$, $p > 0.05$, is not supported. The impact of economic intentions on moonlighting intentions ($\beta = 0.058$, $t = 0.876$, $p > 0.05$) does not support H_5.

These findings indicate that the hypothetical framework model developed by the authors is supported by enough empirically and statistically significant evidence of path coefficients and coefficients of determination (0.73 for organizational commitment and 0.50 for moonlighting intentions, Fig. 6), where the value of organizational commitment is greater than the recommended value of 0.26 (Cohen, 1992), indicating a good structural model.

Mediation analysis. The influence between two constructs follows an indirect path through a third variable called a mediator. At this point, the third variable affects the influence of the two constructs. A mediating variable is also referred to as an intervening variable. The direct effect, indirect effect, and total effect need to be assessed to measure the effect of mediating variables.

Multiple mediation analysis. This study examined the effect of more than one mediator on the dependent variable, namely, moonlighting intentions. The authors followed the procedure of Preacher and Hayes (2008), who assessed indirect effects, if any, in multiple mediator models. This study examined the indirect effect of the mediator variables of organizational commitment and economic intentions on moonlighting intentions. Several studies have reported the mediating effects of organizational commitment on several study variables. A study by Gamal et al. (2022) with a sample of 86 employees reported that work satisfaction is a mediator that improves the effect of the work environment on employee performance. Additional income, job dissatisfaction, diversified skills, and autonomy are factors that impact moonlighting intentions, with autonomy serving as a mediator (Ara and Akbar, 2016). Holding multiple jobs and motives were studied by Dickey et al. (2011), who indicated that financial reasons are one of the reasons for moonlighting intentions. In a study on the effects of moonlighting on job satisfaction among academic staff and medical doctors in Nigeria, multivariate analysis of variance revealed that moonlighting intentions are statistically significant and positive; however, academic staff moonlight more than doctors (Adelugba et al., 2020). Based on the literature, the authors included organizational commitment and economic causes, and multiple mediation analysis was carried out using IBM SPSS Amos ver. 28. The authors used the estimands function of IBM SPSS Amos to estimate the mediating roles of job satisfaction and employee performance.

Results of mediation analysis. This study assessed the mediating role of organizational commitment and economic intentions on the relationship between job satisfaction and moonlighting intentions. The results revealed a statistically significant indirect effect of organizational commitment on the relationship between job satisfaction and moonlighting intentions ($\beta = -0.039$, $t = -1.982$, $p < 0.05$), indicating that an increase in one unit of job satisfaction decreases 0.039 units of moonlighting intentions, supporting H_6: Organizational Commitment mediates moonlighting intentions through the job satisfaction of employees working in IT-enabled companies (Table 9, Fig. 7).

Analyzing the mediating role of economic intentions on the linkages between job satisfaction and moonlighting intentions ($\beta = 0.38$, $t = 1.245$, $p > 0.05$) and hence H_7 is not supported. The mediation analysis summary is presented in Table 10.

Moderation analysis. This study assessed the moderating effect of human resource practices (HRPs) on the relationship between job satisfaction and moonlighting intentions. The results reveal a statistically significant positive moderating impact of human resource practices on the relationship between job satisfaction and moonlighting intentions ($\beta = 0.306$, $t = 7.128$, $p < 0.01$), supporting H_8: Human resource practices moderate moonlighting intentions through the job satisfaction of employees working at IT-enabled companies (Table 11).

A simple slope analysis (Fig. 8) indicates that the steep line for low human resource practices indicates that if human resource practices are not employee friendly, the impact of job satisfaction on moonlighting intentions is much weaker than that for high-level and employee-friendly human resource practices. At a high level of employee-friendly human resource practices, the positive relationship between job satisfaction and moonlighting intentions is strengthened.

Discussion and conclusions

The associations among job attitudes, turnover intentions, and their effects on moonlighting intentions were studied decades ago by March and Simon (1958). Several efforts have been made to study the influence of employee moonlighting intentions in the context of job satisfaction on teaching staff. Additional income, job dissatisfaction, diversified skills, and autonomy are factors that impact moonlighting intentions (Ara and Akbar, 2016). Holding multiple jobs and motives for doing so were studied by Dickey et al. (2011), who indicated that financial reasons are one of the reasons for moonlighting intentions. In a study on the effects of moonlighting on job satisfaction among academic staff and medical doctors in Nigeria, multivariate analysis of variance revealed that moonlighting intentions are statistically significant and positive; however, academic staff moonlight more than doctors (Adelugba et al. 2020). In a study on moonlighting intentions and their association with job satisfaction and organizational commitment among university teachers in the Punjab province of Pakistan, the authors reported a statistically significant association between moonlighting and job satisfaction and organizational commitment. Furthermore, a study revealed statistically significant group differences between moonlighting teachers and nonmoonlighting teachers (Ara and Akbar, 2016). Seema and Sachdeva (2020) reported that financial or economic strain has recently been the motivation of MSOTs. The authors presented the SEM results, which demonstrated the critical roles of organizational commitment and entrepreneurial motivation as the main factors motivating employees to moonlight. Using SEM analysis, Seema et al. (2021) reported the relationship between employee job satisfaction and moonlighting intentions, with organizational commitment

Table 7 CMIN (without latent common method).

Model	NPAR	CMIN	DF	*P*	CMIN/DF
Default model	77	396.948	175	0.000	2.268
Saturated model	252	0.000	0		
Independence model	42	3998.305	210	0.000	19.040

Table 8 CMIN (with the latent common method).

Model	NPAR	CMIN	DF	*P*	CMIN/DF
Default model	75	391.012	174	0.024	2.340
Saturated model	252	0.000	0		
Independence model	42	3998.305	231	0.000	21.883

Table 9 Estimates of structural equation modeling (Hypothesis testing).

Hypothesized relationship	Standardized estimates	t-statistic	*p* value	Decision
H_1: Job satisfaction → Organizational commitment	0.346	4.180	<0.001	Supported
H_2: Organizational Commitment → Moonlighting intentions	−0.117	−2.673	<0.05	Supported
H_3: Job satisfaction → Moonlighting intentions	0.741	9.713	<0.001	Supported
H_4: Job satisfaction → Economic intentions	0.090	1.742	>0.05	Not Supported
H_5: Economic intentions → Moonlighting intentions	0.058	0.876	>0.05	Not supported

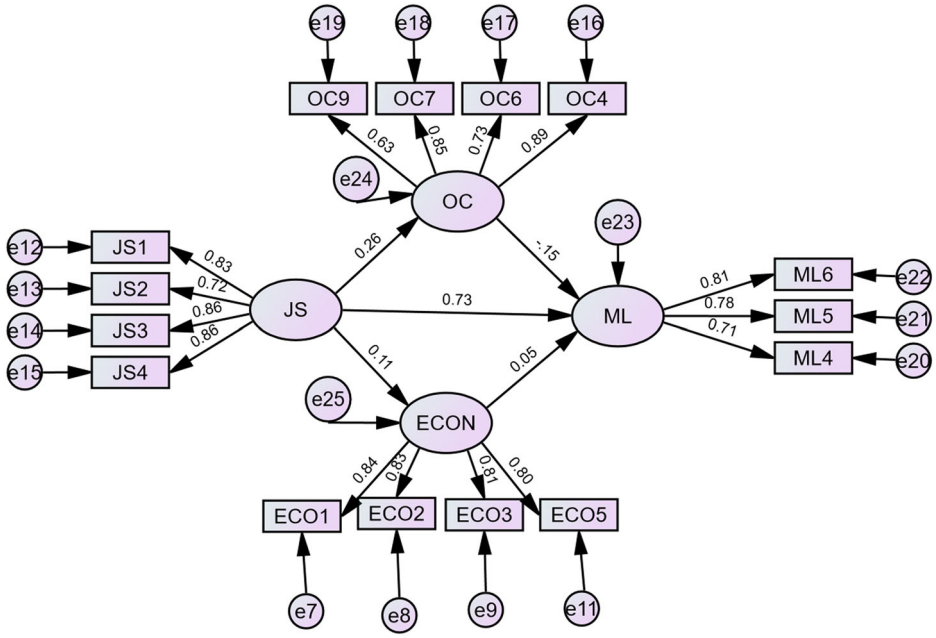

Fig. 7 Moonlighting intentions—multiple mediation analysis. JS Job satisfaction, OC Organizational commitment, ML Moonlighting intentions, ECON Economic intentions.

Table 10 Mediation analysis summary.

Relationship	Direct effect	Indirect effect	Confidence Interval		*P* value	Conclusions
			Lower bound	Upper bound		
Job Satisfaction → Organizational Commitment → Moonlighting Intention	0.71 (0.000)	−0.040	−0.108	0.010	0.010	Partial mediation
Job Satisfaction → Economic intentions → Moonlighting Intention		0.038	−0.010	0.057	0.511	No mediation

Table 11 Moderation analysis summary.

Relationship	Beta	CR	*P*
Human Resource Practices → Moonlighting intentions	0.306	7.128	<0.01
Interactions between Job satisfaction * Human Resource Practices → Moonlighting intentions	0.052	3.178	<0.05

serving as a mediator. While job satisfaction has a very strong positive impact on organizational commitment, job satisfaction also has a mediating effect on the relationship between job satisfaction and intentions to moonlight. Furthermore, there is a noteworthy inverse relationship between Organizational Commitment and Moonlighting Intentions. Our results are in line with those of previous studies in which organizational commitment partially mediated employee-moonlighting intentions through job satisfaction, and the direct and indirect effects were statistically significant. However, the results reveal that economic intentions have no mediating role in the moonlighting intentions of employees through job satisfaction.

(Sai Manogna and Swamy, 2023) reported a negative correlation between aspects of organizational commitment and intentions to moonlight and that higher education institutions can lessen faculty members' intentions to moonlight by creating an environment that encourages organizational commitment. Remote work and the pandemic also enhanced the moonlighting intentions of employees, which affected human resource practices in organizations. The flexible working hours and remote working options offered by IT and IT-enabled companies are among the reasons for moonlighting. The economic well-being, professional advancement, and multitasking capabilities of employees influence their moonlighting intentions, in turn affecting their human resource practices and policies. Our results are in line with these studies, as evidenced by the outcomes reported. Our study reports that job satisfaction, human resource practices, and organizational commitment are statistically significant and influence the moonlighting intentions of IT-enabled employees. The mediating effect of organizational commitment through job satisfaction and moonlighting intentions is also statistically significant and influences the moonlighting intentions of IT-enabled industry employees. Our study revealed that the economic intentions of employees in an IT-enabled industry are a weak predictor of their moonlighting intentions. Furthermore, the COVID-19 pandemic has enhanced the moonlighting intentions of employees, particularly those working in information technology and information technology-enabled companies, where employees are asked to work remotely with flexible working hours.

Policy perspectives. The authors suggest that before allowing or stopping moonlighting practices, the impacts of such practices need to be examined, as moonlighting has both advantages and

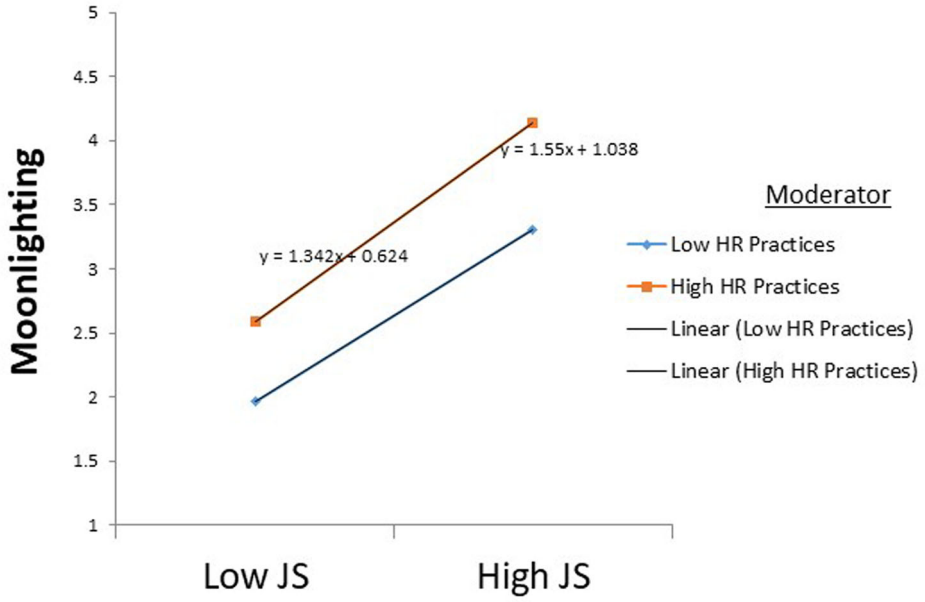

Fig. 8 Moderation-Slope Analysis.

disadvantages. Moonlighting by an employee can contribute to identifying an employee's multitasking capabilities and predicting employee well-being by helping him or her study whether a second job has an additive or interactive effect on employee well-being. Other useful aspects include identifying employee retention and turnover, employee job satisfaction, and, in some cases, employee conditions. It is important to consider the effects of factors such as organizational branding, which increase the risk of training and development. The cost factors of not employing gig workers for routine tasks, revenue losses for not allowing employees to moonlight, and employee turnover intentions need to be studied carefully. There is also a need to develop comprehensive human resource practices and policies to address moonlighting issues globally.

Indian scenario. In India, there is no legal definition or regulation of moonlighting. Legal action may be taken since this action is viewed as a breach of trust. Workers in India are required to work a minimum of eight hours a day under labor laws. Any further work is considered over time and needs to be compensated accordingly. There is no explicit law in India that addresses moonlighting. However, it might be subject to legal repercussions under many statutes, including the Employment Contract Act, the Shops and Establishments Act, and the Industrial Disputes Act. The Industrial Employment (Standing Orders) Act of 1946 permits dual employment. However, under the Factories Act of 1948, dual employment was prohibited. According to the Factories Act of 1948, an employer cannot require or let an adult employee work in the factory on days when they have already worked in another workplace. The prohibition provided by the Occupational Safety, Health, and Working Conditions (OSH) Code is restricted to simultaneous employment in a mine or factory and is largely equivalent to that outlined in the Factories Act. However, now the scenario is different.

In India, during the pandemic, many workers who were working from home took on-site jobs without receiving permission from their parent company. Some IT companies, such as InfoSys, Wipro, and TCS, are considering framing policies on moonlighting. The authors suggest that the policy should consider moonlighting by their respective employees, who do not directly conflict with their main employment and hinder the respective employees' companies. The policy could include employees preferring moonlighting, possibly during weekends. However, the work must adhere to the terms of the service agreement and not be done by competitors. Before moonlighting, employees should provide written consent. One must be forthright about it. It is acceptable to obtain written authorization; however, some procedures must be followed.

Developed countries. The employee doing a side job should consider the tax perspectives of the host countries because the second job alters an employee's tax status. The companies permitting moonlighting should expressly note to the payroll department the first employer and the second employer. Employees are encouraged to voluntarily disclose and report their second income while moonlighting. Certain tools and techniques should be developed and deployed to detect and mitigate the risks associated with employees having more than one job, such as data leakage, behavioral issues, and the abuse of intellectual property. Policies should be framed to address issues such as conflicts of interest, impact on primary job performance, misuse of primary company resources, fatigue, and absenteeism.

The findings of this study have implications for organizations, as they suggest that increasing employees' affective and normative commitments decreases their intentions to engage in moonlighting. Additionally, the study highlights the importance of understanding the antecedents of moonlighting intentions, as it can help organizations implement policies and practices that reduce the likelihood of employee moonlighting. The authors suggest encouraging employee moonlighting if it does not impede the routine work of the employee. The multitasking capabilities of employees can be identified through moonlighting, which is useful for the organization. The study also suggested that IT-enabled companies should provide more opportunities within the organization for career advancement and fair compensation to reduce the need for employees to engage in moonlighting.

Limitations. This study was carried out by deploying a structured questionnaire measuring five factors—human resource practices, job satisfaction, organizational commitment, employee economic

intentions, and moonlighting intentions. The model maintained a good fit and supported 6 hypotheses. Although the results can be generalized to some extent, they must be interpreted carefully before any generalizations can be made. More similar types of studies are needed with the inclusion of serial mediations and moderation for a better comprehension of the moonlighting intentions of employees. The other limitations are as follows:

- The study and related research will be limited to the IT companies in India.
- Confined by time and resource conditions, one cannot conduct research with larger sample pools/datasets, so the sample results cannot be generalized; however, the results may provide insight for further studies in similar industries.
- This study focused on examining the effect of job satisfaction on the moonlighting intentions of employees and the mediating effects of organizational commitment and employee economic intentions among information technology professionals. As a result, the findings may not necessarily apply to other industries that are relatively different, such as the manufacturing industry.
- The study included a sample of 311 employees.
- The study utilized questionnaires as survey instruments for data collection.carries the risk of personal bias and researcher constraints.
- The reliability and consistency of the data depend largely on the information provided by the respondents.

Data availability

The datasets generated during the research and analyzed during the current study are available and can be downloaded by clicking on the following link. The data was available on the online data repositories Figshare at https://figshare.com/articles/dataset/Moonlighting_dataset_for_HSSCOMMS/25358803.

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Author contributions

KP: study design, data analysis, and drafting of the manuscript; SK: overall manuscript editing, addressing the reviewers' concerns, formulation of the study; TD: Data collection, cleaning, and data analysis; VKSP: Theoretical framework, questionnaire development, and publishing of the questionnaire; KP, SK, TP, and VKSP conceptualized the contributions. All the authors contributed to the article and approved the submitted version.

Competing interests

The authors declare no competing interests.

Ethical approval

Ethical review and approval were not needed for the study, as the authors followed the following steps: Informed consent from participants. The purpose of the survey is clearly explained. Participants were fully informed about the purpose of the survey. They had a clear idea of how their data would be used and the extent of their involvement. This allowed the participants to agree and voluntarily participate and provide honest feedback. The participants fully ensured the confidentiality and anonymity of the responses. The questions were framed carefully to avoid causing distress or discomfort to the participants.

Informed consent

This article does not contain any studies with human participants performed by any of the authors. All the respondents to the survey questionnaire were asked to complete the questionnaire online. The participants' participation was voluntary. Before participation, all the participants were informed about the aim of the research and the anonymity of their data. After providing informed consent for the study, the questionnaire was activated. Participation was voluntary, and participants did not receive any compensation for their participation in the study.

Additional information

Supplementary information The online version contains supplementary material available at https://doi.org/10.1057/s41599-024-02974-x.

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