

Empirical validation of marginalisation thesis on the participation in the informal economy in Goa



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ABSTRACT

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This paper investigates the global increase in informal labor, focusing on two primary theoretical perspectives: the marginalization thesis and the reinforcement thesis. Previous empirical studies across various contexts have not definitively settled this debate. The current study, conducted in Goa, India, offers distinctive insights. Data from 200 informally employed individuals in both the formal and informal sectors was collected using snowball sampling. The findings of the binary logistic regression model reveal that the marginalisation thesis holds true, as individuals who are marginalised in terms of gender, age, education, and household employment in the informal sector are more likely to engage in informal employment. Conversely, the reinforcement thesis is supported when workplace characteristics such as flexible work timing and employment in construction services are considered. Therefore, the study concludes that a combination of marginalisation and reinforcement factors explains the reasons behind participation in the informal economy. Therefore, analysing labour market dynamics can offer valuable insights into informal employment.

Contribution/ Originality: The study is unique as it employed binary logistic regression using social security as a novel dependent variable, which was not previously explored in similar studies in explaining the validation of marginalization thesis.

1. INTRODUCTION

Informal employment refers to work arrangements that lack legal protection, social security benefits, and employment benefits that are typically associated with formal employment. Informal employment stands out as a salient feature in both developed and developing nations, making a substantial contribution to employment rates and economic vitality across a wide spectrum of countries. According to the ILO (2018) report, an estimated two billion individuals, or roughly 61.2% of the global workforce, comprised of individuals aged 15 years and older, are actively involved in informal employment. Employment informality has a detrimental impact on productivity and growth because it reduces government revenue from taxes and social security, fosters unfair business rivalry, and denies workers access to social security and health insurance benefits (Angel-Urdinola & Tanabe, 2012).

Globally, the number of individuals without access to social protection as of 2020 was expected to be 4.1 billion (WSPR¹, 2020-22). Since they lack access to the legal system and insurance, informal workers suffer from worse

¹ World Social Protection Report.

working circumstances (ILO, 2015). The main causes of the increase in informal employment were a heavy tax and labour burden, bureaucracy, a lack of labour market inspections, and a lack of confidence in the government.

The predominance of informal work has become a crucial component of the labour market environment in India. 90% of the population reportedly participates in the informal economy. Ministry of Labor & Employment Bureau (2013) reveals that more than 415 million workers in the informal economy experience job and income insecurity. Since the government's liberalisation measures in the early 1990s, there has been concern over the informalization of employment. An informal economy has emerged due to increasing market opportunities, greater competition, and scarce resources. Traditionally, informal employment was regarded as a temporary phenomenon and was concentrated among marginalized individuals such as women, youth, those with few years of education, and individuals living in single-person households (Williams & Horodnic, 2017). However, recent studies have revealed that firm-level characteristics are influential for individuals to undertake informal employment, such as a flexible working environment, and in some sectors such as construction, the hospitality and restaurant industry, and household services (Williams & Horodnic, 2017). In this context, it is pertinent to unravel the factors responsible for the growth of informal employment, say marginalization, reinforcement forces, or a combination of these two resulting in informal employment. Also, it is intriguing to look at whether these factors are responsible for informal employment in a small, progressive state in a developing country like India.

Goa, a relatively small state in India with an approximate population of 1.5 million as of the Census (2011) boasts relatively higher socioeconomic indicators and living standards. Renowned as a popular tourist destination, Goa has also emerged as one of the nation's swiftest-growing industrial and commercial hubs. However, despite experiencing substantial economic growth over recent decades, the informal economy remains the predominant source of employment in Goa. Ministry of Labor & Employment Bureau (2013) this is predominantly attributed to the limited availability of secure formal sector jobs, compelling a significant portion of the workforce to seek opportunities in the informal sector. The proliferation of informal employment within the formal sector can be largely attributed to the utilization of contractual labor and the outsourcing of production.

Given this context, it becomes imperative to investigate the factors responsible for the upsurge in informal employment in Goa and identify the theoretical perspectives that elucidate this phenomenon within the state. The second section of this paper delves into a comprehensive review of the existing literature. The third section outlines the study's design, the variables considered, and the methodology employed in the research. The fourth section provides a theoretical framework for understanding this phenomenon. Following the research findings in the fifth section are model estimations. Finally, the paper concludes with a discussion of the results and their implications.

2. REVIEW OF LITERATURE

The marginalization thesis of informal employment argues that the informal sector, characterized by unregulated and often low-paying work, leads to poverty and underdevelopment in both developing and developed economies. This view is based on the belief that those engaged in informal employment are often marginalized populations who have limited access to formal job opportunities. The reinforcement thesis challenges the marginalization thesis, arguing that informal employment is prevalent among formal businesses and individuals in higher-income areas. The marginalization thesis holds the view that there is an exclusion perspective that depicts participation in informal employment and that individuals participate in informal employment out of necessity and as a last resort due to the few choices available to them. Hence, this particular demographic is commonly known as the marginalised population, encompassing women, youth, low educational attainment, and primary earners. Conversely, another perspective is referred to as the 'reinforcement thesis', which contrasts with the marginalisation thesis. The reinforcement thesis argues that engagement in undeclared employment is not driven by need, but rather by personal choice.

There are many empirical studies done to check the validation of 'marginalization thesis across different regions of the world. Through the study of Nordic countries, the researchers discovered that the marginalisation thesis applies

to some groups of marginalised populations, whereas the reinforcement thesis is applicable to disadvantaged individuals in affluent Nordic countries.

These two contrasting viewpoints regarding informal employment were put to the test in a 2013 study that examined variations in the prevalence of informal work across 28 different countries, each characterized by diverse economic and social traits. Williams and Windebank (2015) conducted this study and found that informal employment tends to be less common in affluent, developed societies with higher levels of social protection expenditure, more efficient social welfare systems, and reduced instances of severe material hardship.

In another study, Williams and Horodnic (2015) explored the connection between marginalization and undeclared work in Denmark, Finland, and Sweden, drawing upon data from the 2013 Eurobarometer survey. Their multilevel mixed-effects logistic regression analysis showed that people from disadvantaged groups, like those struggling to pay their bills, younger age groups, the working class, and people who don't follow the rules, values, or beliefs about paying taxes, were more likely to do work that wasn't reported. However, other marginalized populations, such as the unemployed, individuals residing in rural areas, and those with lower levels of formal education, exhibited a greater propensity for undeclared work compared to employed individuals, urban residents, and those with a higher level of education.

El Bakly (2002) utilized data from the ILO School-to-Work Transition Survey to underscore the factors influencing the decisions of young individuals to enter either the formal or informal labor markets in Egypt. The study identified education, place of residence, age at first marriage, parents' educational achievements, and primary employment status as the key determinants for participation in the unregulated labor market.

In a different context, Williams and Efendic (2021) investigated the competing hypotheses regarding the relationship between marginalization and involvement in undeclared work in Bosnia and Herzegovina, drawing upon data from a survey conducted in 2015. The marginal effects derived from a probity regression analysis indicated that marginalized groups, including the unemployed, younger individuals, those with limited formal education, economically vulnerable individuals, rural residents, and people from economically disadvantaged regions, were more inclined to participate in undeclared work.

To examine the hypothesis regarding whether the informal sector serves as an attractive employment option or a last-resort strategy, Günther and Launov (2012) empirically tested this idea within the urban labor market of Côte d'Ivoire. Their study revealed that the informal sector encompasses both individuals for whom informality is a last-resort strategy to escape unemployment and individuals who possess a comparative advantage in the informal sector.

Additionally, Jha and Bag (2019) delved into the characteristics of workers in the informal economy, explored the reasons behind their choice to work in the informal sector, and examined whether such work is considered temporary or transitional before transitioning to the formal sector. Their findings indicated that the marginalization thesis is only partially accurate, as some migrants voluntarily enter this sector while others do so out of necessity.

There are studies that look into the prevalence of marginalisation among the marginalised informal entrepreneurs. Adom (2014) has examined the motivations of informal entrepreneurs in Ghana, arguing that some informal entrepreneurs are motivated by necessity and others by a desire for independence, a sense of achievement, or the opportunity to make a profit. The study also showed that women are more driven by necessity than men since they encounter more barriers to obtaining formal employment. The influence of the National Minimum Wage (NMW) on small business owners operating in the UK informal economy was studied by Jones, Ram, and Edwards (2006). The significant observation of the study is that the informal labor market is heterogeneous with significant variation even in a narrow market segment, and state regulations constitute one, and not necessarily the most important, influence on the informal economy. The results of the study have implications for both approaches, namely marginalisation and the neoliberal approach.

Beręsewicz and Nikulin (2018) used data from the Human Capital Balance 2010-2014 to highlight the working-age population's propensity for informal work and determine whether these activities are typical for the marginalised

group in an effort to close the gaps in the regional analysis of informal employment in Poland. The study's conclusions indicate that there is a substantial relationship between age, gender, and status in the labour force and the likelihood of engaging in unpaid employment. Elgin and Elveren (2021) used two novel datasets to examine the extent of the informal sector and income inequality in order to provide evidence for the relationship between informality and inequality, paying particular emphasis to how closely linked it is to the informalization of the labour market. The study's conclusions, which were based on annual cross-country panel data from 125 nations, showed that income disparity and the informal sector are more likely to have negative effects in wealthy countries and favourable effects in poorer ones. Higher female labour force participation is linked to lower income disparity, although the existence of the informal economy cancels out this negative correlation.

The prevalence and distribution of unregistered employment are subject to studies in the literature (Gashi & Williams, 2019). Probit regression results from the household survey from Kosova showed that 34.6 percent of employees do not have employment contracts and are informally employed. Unregistered employment is widespread among men, younger people, single people, the less educated, people living in rural areas, working in construction and services, part-time workers, and those on low incomes. The characteristics of employees working without a written contract were studied using a 2013 Eurobarometer survey. The study found that less socio-demographic and socio-economic aspects, as well as business size, institutional environment, and spatial factors, are important factors behind employment without a signed contract.

Williams and Krasniqi (2021) investigated the factors influencing the occurrence of quasi-formal employment at both individual and country levels. The outcomes of a multi-level logistic regression analysis indicated that individuals who are female, youth, and those with limited educational backgrounds are at a greater likelihood of engaging in quasi-formal employment. Furthermore, at the country level, factors contributing to higher rates of quasi-formal employment encompass lower levels of economic development, less advanced state bureaucracies, reduced taxation, and social protection levels.

The above studies have revealed that the relationship between marginalisation thesis and undeclared work is complex and difficult to understand. Some marginalised populations are more likely to engage in undeclared work, while others are not. Again, this debate continues, and it varies from country to country. Until recently, no studies have been conducted to test the validity of the marginalisation thesis in a developed State like Goa. Therefore, this study aims to fill this gap by analyzing factors contributing to the rise of informal employment in Goa and determining which of the two thesis holds true.

3. METHODS

3.1. Study Design and Data

The data for the study is collected using a structured interview schedule from informally employed individuals, either in the formal or informal sector of the service industry in Goa. The state's economy is being increasingly driven by the service sector, which comprises the economic activity of trade establishments, hotels and restaurants, financial services, etc. (The Navhind Times, 29/03/2023). Therefore, this sector is considered for the study. The study used purposive and snowball sampling techniques to identify 200 respondents, as there is a lack of a comprehensive database on the informal employment of workers in the state. The survey was carried out from October 2021 to March 2022.

3.2. Measures and Variables

A Binary logistic regression model was used to examine the main reasons for informal employment growth in Goa and validate the two related theses. The study validates the hypothesis that individuals who participate in informal employment are the marginalised population. Informal employment is defined as those who are not eligible for social security, given by National Commission for Enterprises in the Unorganised Sector (NCEUS). The

dependent variable 'Eligibility for Social Security' takes the value one if the respondent is not eligible for social security and zero otherwise. Individuals eligible for social security are treated as formal employees, and those not eligible for social security are treated as informal employees. As the dependent variable is dichotomous, the binary logit model is used in the study. The likelihood ratio in the binary logit model tested the null hypothesis that the marginalised population is not likely to take up informal employment. This approach differs from similar models used in the area, where they inquired about carrying out any undeclared paid activity in the past 12 months. However, this study is unique because it asks whether people who work for certain organizations qualify for social security benefits.

The Independent variables used in the model are Gender, Age, Residential Status, Years of education, Primary breadwinner in the family, Sector of employment of the head of the household, Job characteristics, and the Type of industry the respondent works in. Gender is a binary variable that takes one value if the respondent is female and zero otherwise. Age is a continuous variable expressed in years. Residential status indicates whether the respondent is a migrant or a non-migrant. It takes the value of one if the respondent is a migrant and zero otherwise. The number of years of education is expressed in terms of the years of formal schooling. Whether the individual is the primary breadwinner in the family is taken as a binary variable, which takes the value one if the respondent is the primary breadwinner in the family and zero otherwise.

The sector of employment of the head of the household is a binary variable which takes the value one if the head of the household is employed in the informal sector and zero otherwise.

The logistic model for Model 1 is expressed as follows:

$$\begin{aligned} L: Pr (SOCIAL SECURITY = 1) \\ = \beta_0 + \beta_1 GENDER + \beta_2 AGE + \beta_3 AGESQ + \beta_4 RESIDENTIAL STATUS \\ + \beta_5 YRS OF EDU + \beta_6 PRIMARY BREAD WINNER + \beta_7 HH EMPSECTOR + u \end{aligned}$$

Job characteristics indicate whether an individual has fixed or flexible schedules at the workplace. It takes the value of one if the individual has flexible working conditions and zero otherwise. The service industry is a nominal variable classified according to the National Accounts classification.

The logistic model for Model 2 is expressed as follows:

$$\begin{aligned} L: Pr (SOCIAL SECURITY = 1) \\ = \beta_0 + \beta_1 GENDER + \beta_2 AGE + \beta_3 AGESQ + \beta_4 RESIDENTIAL STATUS \\ + \beta_5 YRS OF EDU + \beta_6 PRIMARY BREAD WINNER + \beta_7 HH EMPSECTOR \\ + \beta_8 JOB CHARACTERISITCS + \beta_9 INDUSTRY + u \end{aligned}$$

3.3. Research Methods

The data collected for the study to explore the objectives is analysed using the software Stata version 14. Descriptive statistical tools such as frequency and percentages are used to explain the attributes of informal employment. Nested binary logistic regression models are used to delineate the factors responsible for individuals taking up informal employment. Model 1 represents the marginalisation thesis, which holds that participation in the informal economy is disproportionately high among the marginalised group, and Model 2 represents the reinforcement thesis, which believes that participation in the informal economy is due to work-related factors. Hence, this study has been undertaken to identify the factors and test the validity of the marginalisation thesis.

4. THEORETICAL BACKGROUND

4.1. Marginalisation Thesis

In recent years, there has been a growing realization that the informal economy continues to represent a substantial share of the global economic landscape. It is estimated that out of nearly three billion workers worldwide, approximately two-thirds engage in informal economic activities. For a sizable amount of time, the general belief was that marginalized groups who found themselves denied access to formal employment opportunities because of their

race, ethnicity, gender, social class, or lack of formal education were the main beneficiaries of unreported labor. These individuals were compelled to turn to the informal economy out of sheer necessity. This phenomenon was prevalent in many developing countries, where the informal sector served as the sole recourse for those lacking educational and skill resources, or social connections, to access formal employment. **Because** the informal economy operates independently of the formal sector's regulatory framework, it facilitates employers exploiting workers through meagre wages, substandard working conditions, and the denial of fundamental rights and protections.

In such situations, individuals who are marginalized and excluded from formal arrangements often find themselves compelled to embrace informal employment as their sole recourse, given the absence of viable alternatives. The marginalization thesis highlights that individuals from marginalized backgrounds are often compelled to engage in informal employment primarily due to necessity rather than a voluntary choice. This thesis serves as the core concept underpinning two prominent theories of undeclared work: modernization theory and political economy theory.

According to modernization theory, undeclared work is seen as a vestige of earlier production modes and is prevalent in peripheral regions that have not yet undergone the process of modernization and economic development. On the other hand, political economy theory posits that undeclared work emerges as a direct consequence of the deregulated, open global economy.

Dell'Anno (2022) as a result of diminishing social protection and the economic intrusion stemming from deregulation, marginalized populations find themselves marginalized even further within the formal economy. Consequently, they are compelled to resort to undeclared work as a means of basic survival. From the political economy perspective, undeclared work is perceived as an imperative, primarily undertaken by marginalized groups who are excluded from the formal labor market and social security systems due to necessity (Williams & Round, 2009).

4.2. Reinforcement Thesis

However, as time has progressed, numerous studies have unveiled that hardship is not the sole driving force propelling individuals into undeclared work. In other words, it's not only marginalized population groups that engage in undeclared work. In fact, several studies have indicated that undeclared work is more prevalent among men. Williams (2011) in declared jobs; Williams (2013) in wealthy regions and localities; and also on account of firm-related characteristics. As a response to this, another contrasting thesis emerged, known as the reinforcement thesis. This perspective posits that individuals engage in undeclared work voluntarily rather than out of sheer necessity. The reinforcement thesis, therefore, derives from two action-oriented theories.

On one hand, the perspective of a rational economic agent proposes that individuals opt for undeclared work when the perceived benefits surpass the associated costs. According to this viewpoint, onerous regulations, elevated taxes, and corruption within the public sector augment the expenses of adhering to the legal framework, prompting individuals to willingly shift to the informal economy. Conversely, within the context of institutional theory, another agency-oriented perspective adopts a social actor approach. In cases where formal institutions do not harmonize with the norms, values, and beliefs upheld by informal institutions, undeclared work is perceived as an activity that is illegal in a formal sense but socially acceptable in practice (Windebank & Martinez-Perez, 2018). When formal and informal institutions are aligned, undeclared work may inadvertently occur due to a lack of understanding of laws and regulations. However, when disparities exist between these institutions, undeclared work ensues. The greater the asymmetry between them, the more widespread undeclared work becomes (Williams, Martinez-Perez, & Kedir, 2017).

These two conflicting theories elucidate the connection between informal employment and marginalization. According to dominant opinion (Neymotin, 2021; Welter & Smallbone, 2008), the marginalization thesis contends that participation in the informal economy is primarily associated with marginalized groups and frequently driven by

necessity. However, in recent times, an increasing body of research has emerged, challenging this thesis, and it reveals that participation in the informal economy is not confined to a specific demographic but is observed among a diverse group of individuals with a range of motivations (Williams & Round, 2009).

Both the marginalization thesis and the reinforcement thesis represent significant viewpoints on informal employment. With these two contrasting perspectives on who participates in informal employment in Goa, this paper seeks to pinpoint the factors responsible for the surge in informal employment and offers an evidence-based evaluation to assess the validity of the marginalization thesis.

5. RESULTS

5.1. Descriptive Statistics

Socio-demographic and workplace characteristics are presented in Table 1. Of the 200 respondents surveyed, 64.5 % were female and 37% were male. The average Age of the respondents was 38.25 years. 50 % of the respondents were migrants, and 50 % were non-migrants. The average duration of training was 11.69 years. 42.5% of the respondents were the main breadwinners in the family, and 57.5% of the respondents were not the primary family breadwinners. 59.5 % of the respondents were heads of households who worked in the formal sector, and 40.5% of the heads of households surveyed worked in the informal sector.

62.5% of respondents who work informally have flexible work schedules, while 37.5% of respondents have fixed work schedules. 15.5% of the respondents work in trade, hotels, and restaurants; 24% work in transport, storage, and communication; 18.5% work in financial, insurance, real estate, and business services; 15% work in community, social, and personal services; and 39% work in other services such as construction.

Table 1. Socio-demographic and workplace characteristics of the respondent.

Variables	N	Percentage	Eligibility for social security		
			Yes	No	
Gender	Male	71	35.5	27	44
	Female	129	64.5	17	112
Age (Mean)	38.25 years				
Residential status	Non-migrants	100	50	26	74
	Migrants	100	50	18	82
Years of education	11.69 years				
Primary bread winner in the family	Yes	84	42	10	75
	No	116	58	34	81
The sector of employment of the head of the household	Formal	119	59.5	40	79
	Informal	81	40.5	04	77
Job characteristics	Fixed working condition	75	37.5	38	37
	Flexible working conditions	125	62.5	06	119
Industry	Trade, hotels and restaurants	31	15.5	15	16
	Transport, storage and communication	24	12	06	18
	Finance, insurance, real estate and business services	37	18.5	16	21
	Community, social, and personal services	30	15	06	35
	Other services -construction	78	39	02	76

6. BINARY LOGISTIC REGRESSION MODEL ESTIMATION

A binomial logistic regression is used to identify the micro determinants of informal employment in the service industry in Goa. The dependent variable, social security, is a dummy variable taking the value of 1 if the respondent is not eligible for social security and 0 otherwise. The factors that influence whether an individual takes up informal employment are represented in Table 2.

Table 2. Results of binary logistic regression.

Variables	Model 1	
	B	Dy/Dx
Gender (Reference category: Male)		
Female	3.005 (0.011) ^b	0.1330 (0.006)
Age	0.540 (0.007) ^a	-0.075 (0.004)
Age sq.	1.009 (0.005) ^a	0.001 (0.003)
Residential status (Reference category: Non-migrant)		
Migrant	0.857 (0.726)	-0.019 (0.726)
No. of years of education	0.843 (0.030) ^b	-0.021 (0.022)
Primary bread winner in the family (Reference category: No)		
Yes	2.159 (0.092) ^c	0.093 (0.083)
HH empsector (Reference category: Formal)		
Informal	7.995 (0.000) ^a	0.251 (0.000)

Note: a<0.01, b<0.05, c<0.10.

Model 1 includes the demographic profile and household characteristics of the respondents. Demographic profiles consist of Gender, Age, status of residence, number of years of education, and whether the individual is the primary breadwinner in the family. Household characteristics include the sector of employment in which the head of the household is employed. Gender, Age, number of years of education, primary breadwinner in the family, and sector of employment of the head of household prove to be significant. At the 5% significance level, a woman is, on average, 13.3% more likely to be in informal employment, holding all other variables constant. At a 1% significance level, as an individual grows older by one year, he/she is, on average, 7.45% less likely to take up informal employment, holding all other variables constant.

Similarly, at a 5% significance level, with every additional year of education, the individual is, on average, 2.07% less likely to take up informal employment, holding all other variables constant. At the 10% significance level, a person who is the primary breadwinner in the family is, on average, 9.30% more likely to take up informal employment, holding all other variables constant. The sector of employment of the head of household also influences individuals' decisions to engage in informal employment. At the 1% significance level, a person whose head of household works in the informal sector is, on average, 25.13% more likely to be in informal employment, holding other variables constant.

Table 3 represents the results of the summation of both models.

Model 2 includes respondent demographic, household, and workplace characteristics. Job characteristics include the person's employment status and the type of service industry in which the person works. Gender, Age, number of years of education, head of the household's employment sector, flexible working arrangements, and employment in the construction industry are found to be significant variables in determining whether or not a person engages in informal employment.

At the 5% significance level, a woman is, on average, 11.9% more likely to be in informal employment, holding all other variables constant. Similarly, as an individual grows older by one year, he/she is, on average, 5.27% less likely to take up informal employment, holding all other variables constant. At a 10% significance level, with every additional year of education, the individual is, on average, 1.39% less likely to take up informal employment, holding all other variables constant.

Table 3. Results of binary logistic regression.

Variables	Model 1		Model 2	
	B	Dy/Dx	B	Dy/Dx
Gender (Reference category: Male)				
Female	3.005 (0.011) ^b	0.133 (0.006)	4.858 (0.012) ^b	0.119 (0.007)
Age	0.540 (0.007) ^a	-0.075 (0.004)	0.497 (0.014) ^b	-0.053 (0.007)
Age sq.	1.009 (0.005) ^a	0.001 (0.003)	1.010 (0.011) ^b	0.001 (0.005)
Residential status (Reference category: Non-migrant)				
Migrant	0.857 (0.726)	-0.019 (0.726)	0.875 (0.826)	-0.010 (0.826)
No. of years of education	0.843 (0.030) ^b	-0.021 (0.022)	0.831 (0.063) ^c	-0.014 (0.052)
Primary bread winner in the family (Reference category: No)				
Yes	2.159 (0.092) ^c	0.093 (0.083)	2.694 (0.115)	0.075 (0.105)
HH empsector (Reference category: Formal)				
Informal	7.995 (0.000) ^a	0.251 (0.000)	7.532 (0.006) ^a	0.152 (0.003)
Job characteristics (reference category: Fixed working timings)				
Flexible working timings			14.59 (0.000) ^a	0.202 (0.000)
Service industry classification (Reference category: Trade, hotels and restaurants)				
Transport, storage and communication			3.375 (0.164)	0.108 (0.157)
Finance, insurance, real estate and business services			1.040 (0.957)	0.004 (0.957)
Community, social, and personal services			1.377 (0.715)	0.031 (0.718)
Other services -construction			11.719 (0.019) ^b	0.187 (0.014)

Note: a<0.01, b<0.05, c<0.10.

Table 4. Comparison of models.

Criteria	Model1	Model2
No. of observations	200	200
LR chi ²	33.56	38.67
Pseudo R ²	0.2792	0.5436
Prob> Chi ²	0.0000	0.0000

Flexible working arrangements also determine whether or not a person engages in informal employment. At a 1% significance level, a person with flexible working arrangements is, on average, 20.2% more likely to accept informal employment; all other variables are held constant. At the 5% significance level, a person working in the construction industry is, on average, 18.73% more likely to enter into informal employment, holding all other variables constant.

Table 4 presents a comparison of model 1 and model 2. In model 1 Pseudo R² is 0.2792. The likelihood ratio chi-square, LR chi² (6), has a value of 33.56. The value of the prob>chi² is 0.0000. This implies that the effect of at least one of the independent variables likely differs from zero. This shows that the model fits significantly. Thus, the overall model is statistically significant. For model 2, Pseudo R² is 0.5436. The likelihood ratio chi-square, LR chi² (8), has a value of 38.67. The value of the prob>chi² is 0.0000. This implies that the effect of at least one of the independent variables likely differs from zero. This shows that the model fits significantly. Thus, the overall model is statistically significant.

7. DISCUSSION

The unorganised or informal economy employs about 90% of the country's workers, and almost 50% of national income comes from this sector. Since the liberalisation policies of the early 1990s, informalization jobs have been a concern.

Table 3 shows that the marginalization thesis applies to various socio-demographic variables. Compared to men, women are more likely to work in informal jobs. The women are only asked to do housework and look after young and old people. Income from women is generally considered to be ancillary income. Because of the burden of household and family responsibilities, women typically prefer to work in informal jobs.

Women are more likely to engage in informal employment than their male counterparts. Women are expected only to do household chores and look after the children and elders. Income from women is generally treated as ancillary income. Women generally prefer to engage in informal jobs because of the pressure of household work and family responsibilities. Similar results have been observed in other studies (Aikaeli & Mkenda, 2014; Bonnet, Vanek, & Chen, 2019; Chauhan, 2021; Dell'Anno, 2016).

Younger age groups are significantly more likely to be in informal employment than older ones. Similar results can also be found in other studies. Age is also negatively correlated with informal employment. When young people are typically entering the labour market for the first time, employers may be reluctant to hire them on a permanent or full-time basis due to the lack of previous experience that signals potential employers of their productivity potential. Therefore, these young people are faced with the choice between taking up informal employment and becoming permanently unemployed. But as an individual, he acquires the distinguished experience required for a full-time position. Therefore, there is a greater likelihood that he will be accepted into the formal sector. Similar results were also seen in other studies (Bălan, 2014).

As the level of education increases, the level of informality decreases worldwide. The number of years of formal education is a key factor in participation in informal employment. The share of informal employment decreases with the increasing educational level of the individual (ILO, 2018). The individual's educational background has a positive impact on the types of jobs available to them. Returns to education have shown that investment in education yields a positive wage return. A higher level of education makes people more productive and, thus, more attractive in the labour market. There are studies with similar results in the literature (Ahmed, 2015; Jiménez, Palmero-Cámara, González-Santos, González-Bernal, & Jiménez-Eguizábal, 2015; Sparreboom & Staneva, 2014).

Being the main breadwinner in the family also influences whether or not a person should engage in informal employment. Since there is intense competition for formal jobs in the labour market and there is no other source of income to support their families financially, the main breadwinner has to take any job available in the market to support their families (Williams & Horodnic, 2017).

The employment sector of the household is a key indicator of whether a person is in informal employment. If a person's household head is employed in the informal sector, then there are possibilities for the person to be engaged in informal employment (Koto, 2015). The main reasons could be that when the household head works in the informal sector, he would not be earning enough income to support his family, and in the absence of a formal job, the individuals residing within the household may be forced to take up informal employment to support their family income.

When analyzing the residence status of the respondent, no evidence for the marginalisation thesis could be found. When job characteristics were added to Model 1, there was a significant change in the individuals' socio-demographic and work characteristics. Females, youth, number of years of education, employment status of the head of household, flexible working conditions, and the type of service industry, were considered important determinants of informal employment. Flexible working conditions encourage people to take up informal employment (ILO, 2022). Individuals may prefer informal employment due to flexible working hours for a variety of reasons. Informal work can allow them to have more control over their work schedule, which can benefit those with other commitments, such as work. This is especially true for women who want to work alongside household chores. Besides, it can also be attractive to people

who value autonomy and independence in their work since they can set their own schedules and choose the projects they want to work on (García-Andrés, Aguayo-Téllez, & Martínez, 2019).

Finally, low-skilled industries such as construction are more likely to attract people into informal employment as they find it difficult to get a formal sector job due to a lack of skill, training, and education. Hence, they have no other choice but to be employed in an industry that attracts low-skilled workers (Williams & Horodnic, 2017).

8. CONCLUSION

The significant prevalence of informality presents a considerable challenge in the pursuit of universal decent work within the framework of sustainable and inclusive development. Informality can serve as a hindrance to attaining the Sustainable Development Goals (SDGs), often resulting in poverty, inequality, and social exclusion. The conventional belief that informal employment primarily affects marginalized groups does not always hold true. As a result, the study's findings emphasize the necessity of targeting specific marginalized populations rather than all individuals engaged in the informal sector when formulating policies aimed at facilitating their transition from informal to formal employment or self-employment. Furthermore, it is crucial to incorporate these marginalized populations, working informally, into social security schemes to ensure their dignified work.

However, it's important to note that this study has some limitations. Firstly, it focuses solely on individuals employed informally in either Goa's formal or informal sectors.

Hence, the findings derived from this study cannot be extrapolated to individuals engaged in informal work beyond the borders of Goa. The study had constraints due to a lack of data, as not all informal workers were included in the interviews. Given that this study employed cross-sectional data over a specific timeframe, it is not suited to determining long-term trends. Nonetheless, this research offers a unique perspective as it explores the attributes of both individuals and workplaces that encourage participation in the informal economy in Goa. This insight may prove valuable for policymakers in tailoring effective policies towards achieving the Millennium Development Goals.

In summary, this study introduces a nuanced approach to the marginalization thesis. While the thesis holds true when certain socio-demographic and household characteristics are considered, it loses validity when occupational characteristics are considered. Therefore, the article suggests that expanding the range of variables in the models is necessary to thoroughly assess the validity of the marginalization thesis.

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REFERENCES

- Adom, K. (2014). Beyond the marginalization thesis: An examination of the motivations of informal entrepreneurs in Sub-Saharan Africa: Insights from Ghana. *The International Journal of Entrepreneurship and Innovation*, 15(2), 113-125. <https://doi.org/10.5367/ijei.2014.0144>
- Ahmed, T. (2015). U-shaped curve for job search duration and level of education in India. *The Indian Journal of Labour Economics*, 58(3), 433-449. <https://doi.org/10.1007/s41027-016-0028-1>
- Aikaeli, J., & Mkenda, B. K. (2014). Determinants of informal employment: A case of Tanzania's construction industry. *Botswana Journal of Economics*, 12(2), 51-73.

- Angel-Urdinola, D., & Tanabe, K. (2012). Micro-determinants of informal employment in the Middle East and North Africa region, SP Discussion Paper No. 1201, World Bank, Washington. <https://doi.org/10.1596/26828>
- Bălan, M. (2014). Youth labor market vulnerabilities: Characteristics, dimensions and costs. *Procedia Economics and Finance*, 8, 66–72. [https://doi.org/10.1016/s2212-5671\(14\)00064-1](https://doi.org/10.1016/s2212-5671(14)00064-1)
- Beręsewicz, M., & Nikulin, D. (2018). Informal employment in Poland: An empirical spatial analysis. *Spatial Economic Analysis*, 13(3), 338–355. <https://doi.org/10.1080/17421772.2018.1438648>
- Bonnet, F., Vanek, J., & Chen, M. (2019). *Women and men in the informal economy: A statistical brief* (Vol. 20). Geneva: International Labour Office.
- Census. (2011). Primary census abstracts. *Ministry of Home Affairs, Registrar General of India. Government of India.*
- Chauhan, P. (2021). Gendering COVID-19: Impact of the pandemic on women's burden of unpaid work in India. *Gender Issues*, 38(4), 395–419. <https://doi.org/10.1007/s12147-020-09269-w>
- Dell'Anno, R. (2022). Theories and definitions of the informal economy: A survey. *Journal of Economic Surveys*, 36(5), 1610–1643.
- Dell'Anno, R. (2016). Analyzing the determinants of the shadow economy with a “Separate approach”. An application of the relationship between inequality and the shadow economy. *World Development*, 84, 342–356. <https://doi.org/10.1016/j.worlddev.2015.08.026>
- El Bakly, A. (2002). Socio-economic characteristics of informal vs formal sector labor in Egypt. *The Egyptian Population and Family Planning Review*, 35(2), 43–67.
- Elgin, C., & Elveren, A. Y. (2021). Informality, inequality, and feminization of labor. *Women's Studies International Forum*, 88, 1–9. <https://doi.org/10.1016/j.wsif.2021.102505>
- García-Andrés, A., Aguayo-Téllez, E., & Martínez, J. N. (2019). Is formal employment sector hereditary? Determinants of informal/informal sector choice for male Mexican workers. *Economic Studies*, 34(1), 91–121.
- Gashi, A., & Williams, C. C. (2019). Evaluating the prevalence and distribution of unregistered employment in Kosovo: Lessons from a 2017 survey. *South East European Journal of Economics and Business*, 14(1), 7–20. <https://doi.org/10.2478/jeb-2019-0001>
- Günther, I., & Launov, A. (2012). Informal employment in developing countries: Opportunity or last resort? *Journal of Development Economics*, 97(1), 88–98. <https://doi.org/10.1016/j.jdeveco.2011.01.001>
- ILO. (2015). World employment and social outlook 2015 – The changing nature of jobs. In (pp. 17–154). Geneva: International Labour Office.
- ILO. (2018). World employment and social outlook – trends 2018. In (pp. 5–79). Geneva: International Labour Office.
- ILO. (2022). World employment and social outlook: Trends. In (pp. 3–128). Geneva: International Labour Office.
- Jha, S., & Bag, D. (2019). The service sector: Migration, technology and productivity. *International Journal of Sociology and Social Policy*, 39(1–2), 2–21. <https://doi.org/10.1108/IJSSP-10-2017-0141>
- Jiménez, A., Palmero-Cámara, C., González-Santos, M. J., González-Bernal, J., & Jiménez-Eguizábal, J. A. (2015). The impact of educational levels on formal and informal entrepreneurship. *Business Research Quarterly*, 18(3), 204–212. <https://doi.org/10.1016/j.brq.2015.02.002>
- Jones, T., Ram, M., & Edwards, P. (2006). Shades of grey in the informal economy. *International Journal of Sociology and Social Policy*, 26(9/10), 357–373. <https://doi.org/10.1108/01443330610690514>
- Koto, P. S. (2015). An empirical analysis of the informal sector in Ghana. *The Journal of Developing Areas*, 49(2), 93–108. <https://doi.org/10.1353/jda.2015.0038>
- Ministry of Labor & Employment Bureau. (2013). Report on Employment in Informal Sector and Conditions of Informal Employment (2013-14). 2015, IV, 1–60.
- Neymotin, F. (2021). Necessity and opportunity entrepreneurship in Canada. *Review of Economic Analysis*, 13(2), 235–251. <https://doi.org/10.15353/rea.v13i2.1841>
- Sparreboom, T., & Staneva, A. (2014). Is education the solution to decent work for youth in developing economies. *Work4Youth Publication Series*, 23(1), 1–60.

- Welter, F., & Smallbone, D. (2008). Women's entrepreneurship from an institutional perspective: The case of Uzbekistan. *International Entrepreneurship and Management Journal*, 4(4), 505-520. <https://doi.org/10.1007/s11365-008-0087-y>
- Williams, C. (2011). Reconceptualizing women's and men's undeclared work: Some results from a European union survey. *Gender, Work and Organization*, 18(4), 415-437. <https://doi.org/10.1111/j.1468-0432.2009.00466.x>
- Williams, C. C. (2013). Beyond the formal economy: Evaluating the level of employment in informal sector enterprises in global perspective. *Journal of Developmental Entrepreneurship*, 18(04), 1350027. <https://doi.org/10.1142/s1084946713500271>
- Williams, C. C., & Efendic, A. (2021). Evaluating the relationship between marginalization and participation in undeclared work: Lessons from Bosnia and Herzegovina. *Southeast European and Black Sea Studies*, 21(3), 481-499. <https://doi.org/10.1080/14683857.2021.1928419>
- Williams, C. C., & Horodnic, I. (2015). Marginalisation and participation in the informal economy in Central and Eastern European nations. *Post-Communist Economies*, 27(2), 153-169. <https://doi.org/10.1080/14631377.2015.1026686>
- Williams, C. C., & Horodnic, I. A. (2017). Evaluating the relationship between social exclusion and participation in the informal sector in the European Union. *International Journal of Manpower*, 38(3), 489-503. <https://doi.org/10.1108/ijm-10-2015-0179>
- Williams, C. C., & Krasniqi, B. (2021). Beyond the formal/informal employment dualism: Evaluating individual-and country-level variations in the commonality of quasi-formal employment. *International Journal of Social Economics*, 48(9), 1290-1308.
- Williams, C. C., Martinez-Perez, A., & Kedir, A. M. (2017). Informal entrepreneurship in developing economies: The impacts of starting up unregistered on firm performance. *Entrepreneurship Theory and Practice*, 41(5), 773-799.
- Williams, C. C., & Round, J. (2009). Evaluating informal entrepreneurs' motives: Evidence from Moscow. *International Journal of Entrepreneurial Behavior & Research*, 15(1), 94-107.
- Williams, C. C., & Windebank, J. (2015). Evaluating competing theories of informal employment: Some lessons from a 28-nation European survey. *International Journal of Business and Globalisation*, 15(1), 45-62.
- Windebank, J., & Martinez-Perez, A. (2018). Gender divisions of domestic labour and paid domestic services. *The Service Industries Journal*, 38(11-12), 875-895.

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