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An Examination Of Factors Influencing The Provision Of Microcredits And Informality Of Microenterprises In Balochistan: Exploring Informal Economy Dynamics

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Abstract
This research addresses the informal economy by investigating the labor markets of Balochistan to identify the determinants causing informality and credit constraints on a variety of grounds, such as individual, firm-level, industrial, and economic. Using quantitative methods ordinal logistics regression, it is based on exhaustive survey data that traces the intricate interrelationships of small firm operations with informal economy engagement. The results showed that the determinants of informality and credit inclusion highly depend on an individual's profile in several aspects (age, gender, income & education). Real estate and household services are more prone to being informal due to regulatory frictions and economic imperatives in these sectors. The research concluded that critical economic and governmental factors strongly influenced informality, with broad implications for tax rates and regulatory measures. Finally, the results offer new insights into how informal employment pervades the Balochistan labor market and help us understand those traditionally ignored by mainstream economic lenses. This comprehensive grasp of the minimally explained reasons for informality creates a strong foundation for policymakers to devise a targeted policy that effectively addresses these complexities. The implications of these findings are far-reaching, given their direct relevance for forging policies to increase formalization, ease access to credit, and develop a more inclusive and regulated labor market in Balochistan. This study can contribute towards formal interventions that propose alleviating the problems of the informal economy by enriching existing knowledge.

Keywords: Informal Economy, Microenterprises, Micro creditors, Determinants of Informal Economy.

1. Introduction

Informal employment generally refers to economic activities beyond or outside legal regulations and safety nets absent for occupational risks (Bhuiyan, 2018). One of the themes common to developing countries has been informal employment, which researchers have increasingly focused on in these past two decades (Charmes 2012; Ja & Yadav 2017). Formalization Challenge Most employment-generating capabilities in many emerging economies have not been formalized within the sector (Elgin & Erturk, 2018). Need-based motivation is also common for informal work or when individuals turn to independent jobs because there are few formal job options available (Sharma et al., 2020; Sirisankanan, 2017). This lack of a formal employment structure could have consequences and be precarious for workers in the informal economy. Such as insufficient income, poor working conditions for safety and health, and lack of social protection (Darbi et al., 2016; Lehmann, 2015).

Enable access to financial services for small and informal businesses designed explicitly to their need on the other hand (Ullah & Khan, 2017). In this regard, these efforts are critical in identifying the possibilities of growth and empowerment from those sectors that have largely been socially excluded (Bhattacharya, 2019). Entrepreneurship promotion skill development and training assistance are crucial for sustaining the informal economy (Alam et al., 2016; Madueme & Okafor, 2021). "It is evident that this drives overall effectiveness and competitiveness in addition to compliance with regulations and benchmarks" (Igwe & Ochinanwata, 2021).

On similar notes, research highlights a change in Pakistani policy objectives, given that most formalization programs have failed to produce desirable outcomes (Ali & Yawar, 2017; Nassar & Malik, 2021; Williams & Shahid, 2014). The informal sector's contribution to Pakistan's economy could not be unnoted, as it accounted for 70% of total employment in 2012 and a significant share of the workforce (Mughal & Schneider, 2020). Even though efforts have been made to reduce costs while enhancing benefits, most of Pakistan's informal sector enterprises are working in the same traditional manner they were used to (Hayat & Rashid, 2020; Ishengoma & Kappel, 2006). The above examples illustrate that informality and formal tax evasion do not necessarily lead to a low level of entrepreneurial activism; however, their persistence calls for a more balanced understanding of how the informal sector dynamics are shaped with policies developed to meet regulatory requirements (Ilyas et al., 2021; Sabato et al., 2020)

Meanwhile, the research in determining either formalization between entrepreneurs or those characteristics significantly associated with varying levels of formalization (Gómez et al., 2019; Raza et al., 2019) remains a significant gap. Instead, most literature on informal entrepreneurship is concerned with counting the amount and sheer number of entrepreneurs associated with such activity (Williams et al., 2014). In contrast, previous work has primarily focused on the dichotomy between informal and formal strategies; this research considers variation in levels of informality across businesses as related to core country-level characteristics (Shahid et al., 2020; Li et al., 2018). This research significantly contributes to the knowledge of informal economy dynamics, particularly Balochistan, Pakistan.

The effects of individual-level attributes and firm and industry characteristics on the informality in firms' operations; how business cycle conditions related to economic factors impacting credit constraints of microenterprises (Hoxhaj & Kruja 2020). Such understating of the informal economy in this region provides insights to policymakers, scholars, and practitioners working for development (Abid et al. 2022). It supports the generation and implementation of specific policies and measures, aiming to reduce informality, expand formalization, and increase social security benefits for particular groups. Joining the Informal Economy may minimize tax obligations and compliance costs (Andersson 2019; Bujang 2021).

2. Literature Review

The informal sector enters an axis with organized markets and regulated systems, becoming a dynamic factor as it becomes very fugitive within the intricate economic system (Andersson 2019; Gómez et al. 2019; D'Souza 2020). By understanding what and why individuals are doing in the informal economy, more can be learned about human behavior inside these off-the-books economic settings (Darbi et al., 2016; Bonnet & Venkatesh, 2019). The historical origins of contemporary manifestations of the informal economy provide fruitful ground for inquiry. It pushes us to consider further the divide between formal and informal elements in economic nature (Horodnic et al., 2022; Duque et al., 2017; Anwar et al., 1996).

The informal sector includes economic activities to avoid rules, taxes, and legal structures (Ulyssea, 2020). They typically prevent formal regulations and tend to be flexible, cash-based, and relationship-dependent (Elgin & Erturk, 2018). Informal economy micro-enterprises are small: they are usually small, with few or no employees, limited investment capital, and a localized, often specific product (Polese 2021).

The Informal Sector in economies poses a challenge and an opportunity for policymakers, researchers, and businesses. Informality refers to the activities and transactions undertaken outside formal regulations and institutions (Bonnet & Venkatesh, 2019; Anwar et al., 2015).

Micro Credit

Even though microfinance provides little support and is often inadequate to drive substantial growth or nurture a transition into formal entrepreneurship (Onuka, 2021; Enyia et al., 2018), although it is more expensive to start a business, formally registering the company can offer significant benefits (Joy, 2021; Campos et al., 2018). Nonetheless, the question remains whether informality causes limited financial access. The difficulty in getting formal finance is, however, fueling the bid by some firms to stay informal (Bernhardt et al., 2019; Chaudhuri et al., 2018); critically, it is also essential to understand how this connection works. In locations with poor institutional frameworks, entrepreneurs' human capital (e.g., gender, experience) is vital to finance access. As a result, employment and education status have been found to either positively (Ramprasad 2018; Dimitrova-Grajzl et al. 2018) or negatively affect credit availability (Hakim et al. 2018; O'Brien & Kiviat 2018). Research has also illustrated the different ways age impacts access to credit compared with other socio-demographic indicators (Arora & Singh, 2017).

Hypothesis Development

Individual Level

The age of entrepreneurship significantly affects the propensity to participate in informal entrepreneurship. Informal entrepreneurship is often seen by youth as short-term while seen by older respondents as long-term) and welcomed (Alnahedh & Alsanousi, 2020). The evidence indicates that younger and older entrepreneurs have more informal behavior (Eijaz et al., 2018). Informal work is a widespread phenomenon among youth and senior workers (Fedotova et al., 2020; Schneider, 2015); about 77.1% of the young labor force participate in informal employment, and so do almost the same share of seniors worldwide: 77/9%. The sheer availability of formal funding options certainly contributes to the difficulties that younger business owners might encounter (Boudreaux et al., 2021).

Research in Pakistan shows that people with higher education and training are more likely to progress from unskilled apprentices to skilled master artisans and self-employed business owners (Shahid et al., 2020; Bhuiyan, 2018). Education levels typically correlate with a higher likelihood of involvement in formal entrepreneurship (Ali et al., 2021), but the situation is more complicated in Pakistan due to its large informal economy (Idrees & Hassan, 2019; Ullah et al., 2017). In other countries, such as India, research indicates that informal entrepreneurs are generally more educated than those in formal employment (Ahmed et al., 2019).

A low proportion of women serve as family breadwinners for men in the informal sector (Rashid, 2016; Mustafa et al., 2018). It could be related to the possibility of women earning a living and simultaneously carrying out domestic work in informal employment, resembling some studies (Mmereki et al., 2020; Mahmood, 2015). In addition, female entrepreneurs tend to establish informal sector startups and face more difficulty operating since male entrepreneurs are fewer contractors (Alnahedh & Alsanousi, 2020). Like the rest of the regions, entrepreneurship in Pakistan also reflects gender segregation, which is more apparent in some sectors than others (Kuncoro et al., 2021). It suggests that the cultural, social, and economic factors may present different challenges and benefits for female entrepreneurs engaging in the informal sector.

The high level of informal employment is strongly determined by the education level of developing and emerging nations (Núñez et al., 2018). Acknowledging that the relationship between education and the informal economy is complex and mediated by context-specificities (Chacaltana et al., 2022; Baral, 2020) is crucial. Higher education equips individuals with the knowledge and skills to navigate complex regulations (Eijaz et al., 2018), leverage formal contacts, and access investment (Perry, 2023). Formal Entrepreneurship: In Pakistan, people with Higher education may go into informal entrepreneurship the main reason is that there are so many opportunities in the informal sector (Khan et al., 2020)

Informal entrepreneurship may affect different income brackets differently. Others argue that informal entrepreneurship mainly occurs within lower-income groups, although these same lower-income segments are more likely than ever to be a part of informal enterprises (Achua & Lussier, 2014; Bureau & Fendt, 2011). That is why policymakers and scholars must keep studying the inner workings of informal entrepreneurship, especially the impact on different income classes, which have revealed less from male and female ownership arrangements. It will allow the formulation of effective policies, and hence, it should be a prime concern for policymakers and researchers to explore in more detail the saga unraveling behind informal businesses and their impact on each income group, especially women. It will help create better policies and programs to promote economic empowerment and reduce inequalities. Addressing individual-level attributes of the informal economy and creating opportunities for women to participate in formal employment and entrepreneurship are crucial in today's rapidly changing world.

H_1: Individual-level attributes are significantly associated with the informality constraints of microenterprises in Balochistan.

H_2: Individual-level attributes are significantly associated with the credit constraints of microenterprises in Balochistan.

Firm and Industry Level

In taking up that challenge, entrepreneurs, particularly those operating under resource constraints or lacking access to formal sources of finance, choose to start in the informal sector in which they test their business ideas, get some hands-on working experience, and build a client base before converting formality into their businesses (see, Manzoor et al., 2021; Asiamah et al., 2017; Darbi et al., 2016). Industry is crucial in fostering entrepreneurship and economic development, providing avenues to market participation through business opportunities with minimal initial investment and risk (Anguera et al., 2018). As these enterprises expand and evolve, some might opt for formal incorporation, while others may prefer to operate informally due to regulatory constraints (Khan et al., 2020), availability of formal financing, and business objectives (Khan & Haider, 2021). The existence of enabling institutional systems facilitates this, as well as the availability of formal financial services, opportunities for education and training, and prevailing market conditions.

Resentment and disillusionment towards the government prevent people from formalizing their economic activities (Etim & Daramola 2018; Truong et al. 2017). Some evidence from even more distanced empirical research suggests that it leads to more significant informal economic engagements (Ilyas et al., 2021; Duque et al., 2017). Moreover, factors beyond weak governance, such as corruption and misapplication of tax revenues, may also lead to a higher level of informality (Alam et al., 2016). The formal sector is considered insufficient to meet their needs or give them fair treatment; they may instead decide to opt for informal channels and practices of having a base economy (Amankwaa et al., 2021; Tarupiwa, 2020). Reform can involve more straightforward tax collection or encourage a fair share of public resources and a sense of accountability and responsiveness among government institutions (Khan & Haider, 2021).

Informal economic activities are more dominant in some territories, and less dominance is concerning informality in a few sectors (Khươ̛ng et al., 2020; Darbi et al., 2016), as seen explicitly in multiple developing countries. The time nature of this area and its dependence on decent work drive casualization higher (Baral, 2020; Devkar et al., 2019). Related trends in Pakistan show that informal work is increasing in several sectors, such as distribution, transport, and construction (Mubarak et al., 20119). There are many reasons why this is the case; where examples include ease of entry into these industries due to their nature, flexible work arrangements, and abundant subcontracting and informal employment practices (Núñez et al., 2018).

The relationship between tax rates and the informal economy's size is nuanced, varying from one case to another (Etim & Daramola, 2020; Ulyssea, 2020). In addition, it can be argued that higher tax rates cause growth in informal business activity, but recent studies conducted in developed economies have not established clear evidence of a direct correlation between the level of taxation and the growing informal economy (Barroga et al., 2023; Elgin & Erturk, 2018). Polese (2021) explained that in countries where the public does not trust their government, higher taxes could lead to the growth of a shadow economy because people might believe that those taxes are unfair or inefficient. Religious beliefs in cultural contexts, for example, religious affiliations, also shape views on taxation and informal practices (Blum et al., 2015; Anguera et al., 2018; Asiamah et al., 2017). The relationship between tax rates, trust in government, religious beliefs, and business behavior outside the law is complex but requires a deeper examination of context and cultural influence (Baloyi, 2019; Karki., 2020; Claude et al., 2020).

For example, informal entrepreneurs (Cling et al., 2012; Gulistan et al., 2020; Ajekwe & Ibiamke., 2013) have highlighted the insufficient grasp of registration processes and regulatory obligations. Awareness of the registration procedure could be part of the solution to informality (Etim & Daramola, 2020). High illiteracy in Pakistan remains a monumental challenge that results in a low understanding of complex tax issues and benefits formalization (Khan & Akhtar, 2021). However, evidence shows this may not necessarily result in a higher formalization. Yet, empirical evidence has shown that reducing registration steps does not necessarily foster more formalization (Xheneti et al., 2019). Even with more accessible registration criteria, some Entrepreneurs may prefer to keep operating informally since there are also more barriers or perceived advantages. The formalization process is so complex and time-consuming that entrepreneurs do not register their businesses (Ohnsorge & Yu, 2022), which helps explain the high levels of informal entrepreneurship in the country.

In Pakistan, most informal sector businesses are sole-proprietorship, and unique challenges are related to their extension and diversification, as the owner (sole proprietor) is responsible for decision-making towards resource allocation (Nazir & Malik, 2021). The advantages of joint ownership are that it benefits from better access to resources and competence, the opportunity

for collaborative decision-making among different levels of value chain agents, and aligned market risks (Rajasekharaiah et al. 2020; Vésteinsdóttir et al. 2018).

H_3: Firm and Industry level attributes are significantly associated with Balochistan's informality constraints of microenterprises.

H_4: Firm and industry-level attributes are significantly associated with the credit constraints of microenterprises in Balochistan.

Economic and Government Level

According to some scholar's, informal entrepreneurship may be most prevalent among necessity-driven entrepreneurs who are pushed into these activities as their last resort due to exclusion from the formal sector and lack of other sources of income (Afreh et al., 2013). From this viewpoint, informal entrepreneurship is seen as an intentional choice made by individuals to evade the obligations associated with formal regulations (Achua & Lussier, 2014), tax obligations, and administrative red tape (Jacolin et al., 2019).

It is expected to think of entrepreneurs in developed or more advanced economies as status groups that are marginalized (Bhattacharya, 2019), and thus resorting to entrepreneurship reluctantly as a last option after being effectively excluded from the formal economy (Aregawi & Patnaik, 2023). The same holds for Pakistan; a large part of informality in the economy is due to the low probability of detection and even less likelihood that they will be fined or jailed if caught. Hence, entrepreneurs in Pakistan might also find it economically viable to work outside the formal since their expected gains are much higher than their expected costs (also given the low level of enforcement and risk), essentially at public expense (Hayat & Rashid, 2020; Saini & Sighania, 2011).

The working cost of formality is too high in comparison to informality (additional tax on post-tax earnings from the formal job), or otherwise, individuals might participate more in unregulated economic activities rather than regulated and taxed economic activities (Khan et al., 2020; Karki, 2020). However, the eventual increase in the overall tax burden later leads workers to choose informal rather than formal work (Wibowo et al., 2019). The presence and expansion of informal economic activities are strongly influenced by regulations, particularly those regulating the labor markets, e.g., minimum wages, employment and termination laws, licensing requirements, and trade barriers (Janssens et al., 2018; Mughal et al., 2020).

It is challenging to estimate the precise count of microenterprises owned by households in Pakistan and their effect on overall employment (Shahid et al., 2020; Mughal & Schneider, 2020; Zafar & Mustafa, 2017). Contributing to employment and economic activities, the non-formal sector organized with the setup of Pakistani households holds a real place in the economy (Amir et al., 2020). Entrepreneurs and households significantly contribute to economic activities by offering employment (Alam et al., 2016). As has been seen, these firms indeed have much higher levels of informal, and at least within this sub-group of society, there are chances to lure them into formalization (Shahid et al., 2020). The concept of being informal in entrepreneurship is multi-faceted and varies with factors. Among these are daunting requirements, long-winded registration procedures, and top-down scrutiny characteristics that could deter many would-be entrepreneurs from going above board. Additionally, informal entrepreneurship could lack formal financial services and limited chances for skills enhancement and business growth.

H_5: Economic and Government-level attributes are significantly associated with Balochistan's informality constraints of microenterprises.

H_6: Economic and Government level attributes are significantly associated with the credit constraints of microenterprises in Balochistan.

3. Method

A quantitative research design was employed to examine the informal economy in Quetta, Balochistan. It concentrated more on labor markets and their determinants but at the individual, firm, industry, and economy levels. A total of 278 microenterprises were generated through purposive sampling using a cross-sectional approach covering both registered and unregistered enterprises in the informal sector within the sample size (Hassan & Khairuldin, 2020; Baloyi, 2019). The study's statistical power was high based on a sample size calculated with G*Power Analysis (Kuncoro et al., 2021; Zatsu, 2019). The primary data collection tool was a structured questionnaire with diversified constraints influencing the informal economy. The research used STATA to analyze the data, with ordinal logistic regression being performed to investigate the associations.

Measures

The items in the survey were altered as per the literature from which the questionnaire was derived (Shahid et al., 2013), which assesses informality. World Bank and the International Labor Organization to other international and national surveys where similar questions were used to collect information on informal economic activities. All questions were phrased with the use of plain English language after pre-testing to avoid any potential confusion for all participants while being straightforwardly placed by the researcher (Elangovan & Sundaravel, 2021). The survey was created using plain language in the wording to ensure that respondents could comprehend and fill out their survey mail surveys as best as possible and increase study participation (Vésteinsdóttir et al., 2018; Yu & Cooper, 2017). A preliminary assessment was also carried out to check the reliability and validity of the questionnaire.

In this, we are preprocessing data; the first step is to conduct initial data analysis, including creating a dataset and preparing, altering, and handling the data. Then, it is trained for normal distribution, considering distinct tests described in the next section (Taherdoost, 2016). A statistical breakdown of respondent characteristics is also included to comprehensively view the dataset (Source: Harrell, 2015; Smith et al., 2016). A single-factor test was conducted; the combined covariance only accounts for 39.67%, less than 50% (MacKenzie & Podsakoff, 2012). The Brant test is applied as a statistical technique to evaluate the assumption of parallel regression in proportional odds models (Branscum et al., 2007). It was a result of it that the calculated value under the Brant test came out ($\chi2 = 95.96$, $P > \chi2 = 0.00$), degrees of freedom (32) show that the assumption's parallel regression is significant or acceptability and supportable by null hypothesis (Yan et al., 2016; Fuks & Salazar, 2008).

4. Results

The results of the survey were conducted on 278 businesses in Quetta City. Table 1 shows the informality index measured using a 4-point scale index from three variables: business registration, tax payment, and maintenance of a record of full formal accounts. Those outcomes were then broken down into wholly informal, high informality, low informality, and formal in 12 sectors. The categorical scale used numbers to represent responses (1 for Yes and 2 for No), resulting in a total index score of 6.

The determinants of informality and factors include the characteristics of the individual, attributes of the firm within an industry, and economic attributes. The results show that most (66.5%) of the people who answered our survey are males and are in the informal sector (table 2). The respondents' age indicates that most small business operators are between 30 and 45 years old (36%), although significant numbers below this range engage primarily in informal settings. Income levels tend to be concentrated in the Rs 30,000-40,000 category, and 25.2% of survey respondents fall in this range, meaning that most microenterprise owners belong to the lower-middle income category. The sector-wise analysis shows that 14.4% are in retail/wholesale, 18% are in manufacturing, and 14% are in the service sector. Starting a business is usually different, and there are better employment options with a salary of (21.6%) and experience with family business ownership, which is 25.2% of the sample.

Table 1 ***Level of Informality Matrix***

Category	*Registered*	*Tax Pays*	*Formal Accounts*	*Percentage by Option*	*Scores*
Fully Informal	Non-compliant	Non-compliant	Non-compliant	49.82%	6
High Level of Informality				13.27%	
Registered Only	Compliant	Non-compliant	Non-compliant	7.27%	5
Tax-Compliant Only	Non-compliant	Compliant	Non-compliant	1.80%	5
Accounting Only	Non-compliant	Non-compliant	Compliant	4.18%	5
Low Level of Informality				24.91%	
Registered & Tax-Compliant	Compliant	Compliant	Non-compliant	0.55%	4
Registered & Accounting	Compliant	Non-compliant	Compliant	23.36%	4
Tax & Accounting	Non-compliant	Compliant	Compliant	(not specified)	4
Fully Formal	Compliant	Compliant	Compliant	12%	3

Note: Provides a comprehensive breakdown of the level of informality among microenterprises based on their compliance with three critical criteria: registration, tax payment, and formal accounts. The table categorizes these enterprises into various levels of informality and assigns scores to reflect the degree of compliance.

As for access to credit, the data reveals that 32.4% of small businesses have attempted to access credit and been successful, 22.7% applied yet found the request declined, and 45% did not try. These numbers indicate that the demand for credit might face barriers or a lack of knowledge about the process.

Table 2 ***Descriptive Statistics of Microenterprise Attributes in Balochistan***

Variable	Category	Frequency	Percentage (%)
Micro Creditors			
Applied for and Accepted Credit		90	32.4
Applied for and Denied Credit		63	22.7
Did Not Apply for Credit		125	45.0
Individual level Attributes			
Age	Less than 20 years	5	1.8
	21 to 35 years	90	32.4
	36 to 50 years	100	36.0
	51 to 65 years	60	21.6
	Above 65 years	23	8.3
Gender	Male	185	66.5
	Female	93	33.5
Income	Less than Rs 25000	30	10.8
	Rs 26000 to 35000	50	18.0
	Rs 36000 to 45000	70	25.2
	Rs 46000 to 56000	60	21.6
	Above Rs 56000	68	24.5
Education	No Education	25	9.0
	Primary	60	21.6
	Secondary	80	28.8
	Diploma/Graduation	60	21.6
	University	53	19.1
Firm and Industry-Level Attributes			
Sector	Retail & Wholesale	40	14.4
	Manufacturing	50	18.0
	Household	30	10.8
	Construction	20	7.2
	Transport	25	9.0
	Water supply, Sewerage/Waste	15	5.4
	Food/Accommodation	30	10.8

	Real Estate	10	3.6
	Health	20	7.2
	Education	15	5.4
	Technicians/Professional	8	2.9
	Services	15	5.4
Reason for Starting Business	Not get a salaried job	50	18.0
	It is more profitable than a job	60	21.6
	I preferred to be a boss	40	14.4
	It is a family business	70	25.2
	I need additional money	35	12.6
	Other	23	8.3

Table 3 shows the results from ordered logistic regression considering determinants of informality and credit constraints. Individual-level characteristics such as gender, age, education level, and income impact the volume of informality and microcredit. Gender has a significant relationship with informality, being under-represented in ownership of businesses (0.699**, $p < 0.05$ in Model 1 and 0.942***, $p < 0.01$ in Model 2). It suggests that women entrepreneurs have more formalization and access to credit difficulties than men. Second, age plays a marginal role in influencing informal business practices within different age groups.

The younger entrepreneurs (21 to 35 years) have more significant coefficients (0.447***, $p < 0.01$ in Model 1) and (0.358**, $p<0.05$ in model 2). This pattern also holds for 30–45-year-olds, where the model one effect size estimates are equal to or larger than (0.510***, $p < 0.01$ in Model 1) and (0.455**, $p<0.05$ in Model 2). In comparison, other categories have a marginal lower significant effect, with model two suggesting attenuated but still statistically significant effects. Furthermore, Education levels and informality have a complex link. Higher education initially appears to considerably impact reducing secondary level informality (0.309**, $p < 0.05$ in Model 1). This effect of education becomes less important as we introduce more controls, subsequently showing that additional factors are moderating the influence of education on informatization. For example, university education has an estimated coefficient of (0.245*, $p<0.10$ in Model 1 and 0.760***, $p < 0.01$ in Model 2), indicating that overall higher level of education protects against constraints to credit but not necessarily against informal employment.

Lastly, the level of formalization in business activities is closely linked to the income level of individuals. The individuals earning more than 50,000 Rs employ less significant and informal business activities (0.059*, $p<0.10$ in Model 1 and 0.202*, $p<0.10$ in Model 2). The income levels, i.e., Rs 46,000 and above, are also associated with formality (0.271*; $p <0.10$ in Model 1). On the other hand, lower income brackets like Rs 25,000 to 35,000 are significantly related to informality (1.719***, $P<0.001$ in Mode 1 and 1.313***, $P<0.001$ in model 2).

In addition, the results indicate that the extent of informality differs across sectors when looking at firms and industries. The most informal sectors include retail, wholesale, household services, and food/accommodation. For example, households show significantly different coefficients of (2.584***, $p < 0.001$ in Model 1 and 2.813***, $p <0.001$ in Model 2).

Table 3 ***Ordered Logistic Regression Analysis Results for Microenterprises***

Attributes	Variable	Category	Model 1 (Informality)	Model 2 (Credit Constraints)
Individual-Level Attributes	Gender: Base (Male)	Female	0.699**	0.942***
	Age: Base (<21 years)	21 to 35 years	0.447***	0.358**
		36 to 50 Years	0.510***	0.455**
		51 to 65 Years	0.469**	0.507***
		Above 65 Years	0.320**	0.304*
	Education: Base (No Education)	Primary	0.352*	0.770***
		Secondary	0.309**	0.693***
		Diploma/Graduation	0.167*	0.591**
		University	0.245*	0.760***
	Income: Base (<Rs 25,000)	Rs 25000 to 35000	1.719***	1.313***
		Rs 36000 to 45000	0.599**	0.708***
		Rs 46000 to 55000	0.271*	0.424*
		Above Rs 56000	0.059*	0.202*
Firm & Industry Level Attributes	Sector: Base (Retail & Wholesale)	Manufacturing	0.986*	1.088**
		Household	2.584***	2.813***
		Construction	0.103*	0.196*
		Transport	0.388*	0.749*
		Water Supply, Sewerage/Waste	1.058*	6.450***
		Food/Accommodation	3.299***	1.094*
		Real Estate	36.351***	4.125***
		Health	1.776**	1.072*
		Education	0.462*	0.223*
		Technicians/ Professional	0.634**	0.671*

		Services	1.336**	2.560***
Economic & Government Attributes	Tax Rates: High	High	1.284***	1.185***
	Registration is too complicated	Yes	70.121***	
	Similar businesses are unregistered	Yes	196.350***	
	Registration system is corrupt	Yes	281.271***	
	Non-Registration in Family	Yes	160.8***	
	The state is not helping	Yes	73.875***	
Observations			278	278
χ^2			145.834	259.379
Prob > χ^2			0.000***	0.000***
Pseudo R^2			0.268	0.427

*Note: The table shows regression coefficients for three different models. The coefficients suggest the likelihood ratios for categories compared to their base categories. The coefficients reflect the strength and direction of the association. Significance is indicated by *** (p < 0.001), ** (p < 0.01), and * (p < 0.05).*

On the other hand, more structured sectors like manufacturing (0.986*, p<0.10 in Model 1 and 1.088**, p<0.05 in Model 2), education, and services show lower but significant levels of informality. Model 2 has a very high coefficient for the Real Estate industry (36.351***, p < 0.001 in model 1 and 4.125***, p<0.001 in model 2), demonstrating significant informality and credit access constraints.

Economic, political, and governmental traits additionally focus on the effect of economic and governmental aspects concerning informal and excess credit only for the high tax rate category. The high tax rates and complex registration procedures play a significant role in causing businesses to stay informal. Such as the high tax rate, Although the results show a coefficient of (1.284***, p <0.001 in Model 1 and 1,185***, p <0.001 in Model 2). Significant coefficients ranging (281.271***, p < 0.001) show the common perception among potential business owners that there is corruption in registering new businesses, which presents an environment where it is difficult for firms to get formalized.

5. Discussion

Overall, a large proportion of microenterprises in Balochistan were predominantly informal operations, and only a few satisfied the full criteria for formal businesses, as indicated by the descriptive statistics from this study. These insights were complemented by this study's findings of ordinal logistic regressions assessing what influences this informality. This study's results help better understand the relationship between informality and credit constraints (Islam & Meza, 2023; Malkova & Peter, 2023; Elgin & Uras, 2014). Mainly due to this higher perceived risk and their lack of access to formal financial records (Ondabu, 2019; Prado & Anastacio, 2018), microenterprises relying heavily on the informal sector find it harder to get credit finance (D'Souza, 2017; Singh & Wasdani, 2016). The results highlight the most informal activities, in addition to real estate (usually considered not formal) and credit constraints (Rabaiotti, 2023). This further emphasizes the overwhelming impact of sectorial-specific drivers and pressures on business practices (Unit, 2021; Wandiga et al., 2017).

Additionally, macro-level dimensions like economic situation, statutory directives, and available credit resulted in a highly interconnected relationship and immensely affected microenterprise financing (Fayyaz & Khan 2021). These results imply that increasing financial literacy, making credit accessible, and generating a favorable economic environment are potent means of motivating formalization (Ahmed et al. 2020; Raza et al. 2019; Ripain et al. 2017). The findings show an association between the retention of banking accounts and formality (Harraf et al., 2020), therefore alluding to a positive relationship and determinants of credit constraints and informality are essentially down (Malkova & Peter, 2023; Serrao et al., 2012). The economic and governmental practices find that high tax rates, registration requirements, and corruption are the factors that affect entrepreneurs in informal business (Ulyssea, 2020; Campos et al.,2018; Núñez et al.,2018). This is a system-wide barrier, and laws can also strengthen visa requirements to reduce regulatory and corrupt practices and encourage formalization (Harlin, 2022; Boogaard, 2020).

6. Recommendations, Future Directions, and Limitations

Subsequent studies could use longitudinal methods to examine the informal business practices and monetary constraints that emerge over time. Comparative evaluations of small firms in diverse economic and policy environments from other global regions would extend understanding. Furthermore, the psychological and behavioral factors that predispose microenterprise owners to opt for a status of informality or formality are essential. Including various data sources, such as financial reports or government databases, might improve the validity of outcomes. Local microfinance organizations and governmental agencies could consider partnerships to gain access to broader datasets; experimental or quasi-experimental methodologies could be used to improve the establishment of causation.

In addition, using a cross-sectional design limits the ability to infer causation or relationship changes over time. For example, because participants provided the data through self-reporting and not a random sample, this could lead to response biases. Limitations also existed in terms of generalizability to other regions or contexts. Although the official data was comprehensive, it might be constrained; some deep analysis and insight could not be done only with field surveys. Specific language barriers and cultural nuances could have influenced the interpretation of the results within the data and interaction with participants.

The nature of informality among microenterprises makes it challenging to develop a one-size-fits-all metric for defining informality.

7. Conclusion

This study has critically evaluated the intricacies surrounding microenterprises in Balochistan. This has revealed how individuals, firms, industries, and economic and governmental factors influence informal practices and constraints in getting credit. Small business dynamics are shaped by numerous factors, including personal attributes such as human capital and industry experience and contextual elements like business size or sector that interact with regulatory or economic conditions. The paper shows that these informal operations, conventionally considered an impediment to formalization, reflect a range of interrelated factors across different levels, necessitating a more comprehensive approach to policy intentions and interventions. This research's discussion adds to existing economic models, backing their argument for the importance of these multi-dimensional characteristics. This underscores the need for targeted interventions, tailor-made financial products, and enabling government frameworks to cater to the unique needs of microenterprises. The research catalyzes further investigation and innovation, calling microenterprise owners, policymakers, support organizations, and academics to catalyze economic empowerment and agility. Given the limitations of this research, future research needs to explore this critical issue more robustly using different methodologies so that we can understand better informal approaches and established measures to curb informality and promote sustainable development in developing nations.

8. References

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