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A DEMAND-SIDE THEORY OF LABOR INFORMALITY: WORKERS' TRUST AND  
STATES' CREDIBLE COMMITMENT

A Dissertation  
Presented in partial fulfillment of requirements  
for the degree of Doctor of Philosophy  
in the Department of Political Sciences  
The University of Mississippi

by

Julián A. Acevedo-Pardo

December 2023

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## ABSTRACT

Labor informality is a vexing issue across Latin America, with negative implications for policy areas from economic growth to social safety nets. Despite decades of efforts by national governments and international organizations, informality levels remain stubbornly high across the region. Insights from the extant literature suggest informality arises because creating formal sector jobs is too costly or the costs of formality for workers are too high. In contrast to most previous works on informality, this project steps back from standard materialistic assumptions and aims to uncover how the overall relationship between states and citizens impacts workers' incentives to work formally. This work posits workers' resistance to formality, despite the stability and protections it promises, derives from a lack of trust and long-standing view that the state has repeatedly failed to provide credible and reliable benefits/services or improvements in their living standards. The empirical results from this dissertation support the contention. At the country level, across Latin American countries, aspects affecting the nature and quality of the state's relationship with citizens relate to higher levels of labor informality. In addition, these factors, particularly corruption, condition the effectiveness of mainstream labor reform policies – labor market flexibilization and businesses regulations– to reduce informality levels. Furthermore, primary and secondary data at the individual level in the Colombian context suggest first, individuals feel comfortable with the conditions of informality and choose informality voluntarily. And second, there is an empirical link between trust in the state and an individuals' decision to demand an informal job over a comparable formal job alternative. All in all, this dissertation suggests putting

the state and the quality of the relationship with its citizens as a central analytical element to understand the issue of informality is essential.

## DEDICATION

This dissertation is dedicated to all people present at different stages of this process. Particularly to my Mother, Father and Sister who have supported me unconditionally.

## ACKNOWLEDGEMENTS

I want to express my deepest appreciation to my advisor, Dr. Gregory Love, who have supported me since the beginning of this process. He has not just guided me to the completion of this dissertation, but in many other aspects of this academic journey.

In addition, I thank my committee members, other professors at the Department of Political Sciences, and fellow graduate students who contributed to my professional and personal growth, and to making these years of my life enriching and enjoyable.

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## **Chapter 1**

### **Introduction**

In Latin America, more than half of the workers work informally (Salazar-Xirinachs and Chacaltana 2018). Meaning they do not make social security contributions or have contracts stipulating legal protections and obligations such as job security protections (Gasparini and Tornarolli 2009). With many countries in the region having truncated welfare regimes excluding informal workers from key social services, labor informality constitutes a grave social issue for large numbers of Latin Americans. Higher barriers for informal workers to access key social services such as healthcare and retirement (Mesa-Lago 2009a; Tokman 2007) increase their economic and social vulnerability. Therefore, as many countries in the region have undesirably high labor informality, substantial portions of their populations remain unprotected and excluded from essential welfare services.

Furthermore, labor informality represents an issue for the economic health of nations. Workers who work informally contribute less to the state as they avoid paying taxes and contributions, which impedes governments from raising revenues valuable to provide key social services. And this, can push states to turn into more regressive and indirect sources of revenues such as value added taxes or taxes on other natural resources such as oil (Bergman 2019; G. A. Flores-Macías 2019; Monaldi 2019) . In this order of ideas, labor informality becomes a wicked problem where the nature of the truncated welfare system of many nations causes large portions of the population to remain unprotected, states to turn into regressive forms of taxation, and

ultimately governments become constrained and unable to collect sufficient resources to expand their public goods provisions to help reduce the vulnerabilities of the unprotected populations. Thus, the question of how to reduce informality levels becomes central to nations' social and economic health.

Extant literature agrees that informality emerges when formality costs are higher than benefits. Thus, factors such as labor market rigidities and excessive tax burdens on workers (Loayza 1996), alternative noncontributory social programs (Levy 2008), and high costs for starting a business (Djankov et al. 2002; de Soto 1989), among others, contribute to high levels of informality in the region by influencing the cost and benefits of business to supply formal jobs, and incentivizing workers to exit formality. Nevertheless, other scholars suggest labor informality goes beyond previous specificities and emerges from a broken or lacking social contract between the state and its citizens (Berens 2020; Perry et al. 2007; Saavedra and Tommasi 2007). Yet, little theoretical and empirical work has been done to advance this latter proposition. Accordingly, this project focuses on advancing this agenda, arguing that the issue of labor informality and why it has been so difficult to reduce informality levels across the region, has to be observed from a structural perspective where the general relationship between state and citizens impacts workers' incentives to work formally.

Overall, the argument developed in this chapter moves forward a new perspective to our understanding of labor informality from a demand perspective. Conventional explanations center principally on piecemeal policies (e.g., fewer regulations and taxation to the businesses and workers) that incentivize businesses to generate more formal jobs and decrease the cost of formality for workers. However, accounting for structural factors that affect the state's relationship with its citizens can influence whether citizens want to establish a formal relationship with the

state in the first place. Thus, governments' actions to reduce labor informality levels might be unfruitful if there is no a credible relationship between the state and its population.

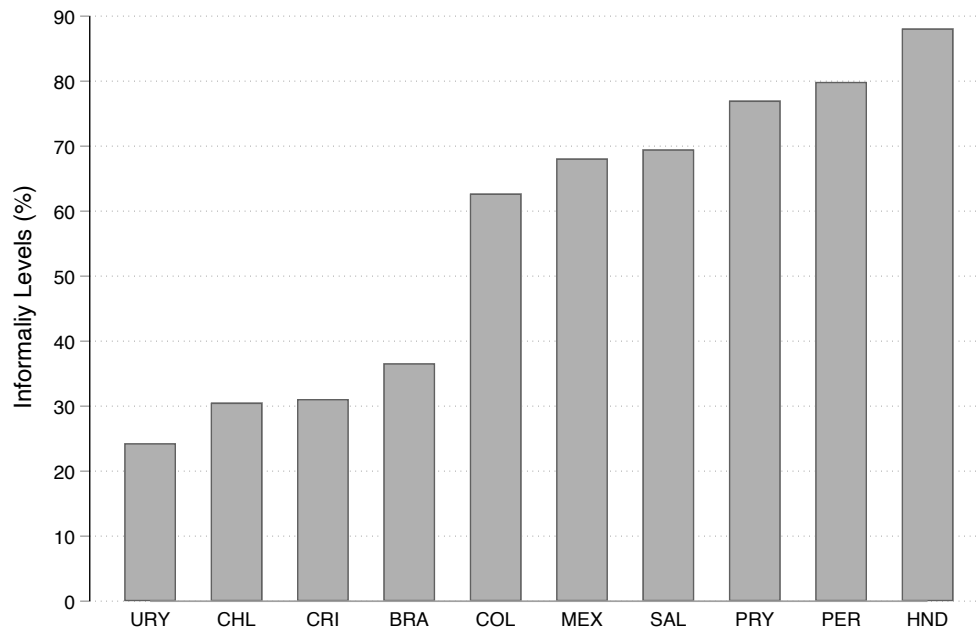
This chapter is structured as follows: first, I offer a review of the issue of labor informality in Latin America and examine previous works on the causes of labor informality. Second, I develop a theory based on the trust relationship between citizens and the state that sheds light on the causes of labor informality and why it has been so difficult to reduce informality levels in Latin America. Third, I describe the data and empirical strategy used to test the proposed theory. Fourth, I present an overview of the other chapters of this dissertation.

## **1.1 Labor Informality**

Labor informality can be defined in two ways. The productive definition which states "[that] an individual is considered informal worker if (s)he belongs to any of the following categories: (i) unskilled self-employed, (ii) salaried worker in a small private firm, (iii) zero-income worker" (Gasparini and Tornarolli 2009:19). And the legalistic or social protection definition which considers a worker informal if "(s)he does not have the right to a pension linked to employment when retired" (Gasparini and Tornarolli 2009:21). Yet, regardless of the specific definition, it remains true that labor informality levels are undesirably high in Latin America. In this work, I define labor informality based on the social protection's definition. More specifically, a worker is considered informal if such worker is not contributing towards the pension system. This work uses this definition because it focuses on a workers' demand of labor formality. Thus, their incentives to pay social security contributions and taxes, and the value they place on the



benefits and services they get from such payments are essential to understand their decision regarding formality and informality.



**Figure 1.1.** Informality levels of 2018 across 10 Latin American countries.  
Source: CEPAL Database

Labor informality is a pressing challenge across the world with just a few regions such as North America and Europe, with informality levels below 20 percent (ILO 2018:13). While informality is high in Latin America with more than 50 percent of workers being informal, there is a substantive variation across countries. As it can be observed in Figure 1.1 countries such as Uruguay and Chile have lower levels of labor informality and others, such as Peru or Honduras, have high levels close to or above 80 percent. A great deal of literature has focused on explaining the reasons behind labor informality and the variation of these levels across countries. Along with these previous works, this project also centers on answering the following questions: What are the

causes of informality and why these levels are so high in Latin America? Why is so much variation across countries? And, why, regardless of previous efforts from governments in the region, has it been so difficult to reduce informality levels effectively?

Scholars have understood the causes of labor informality principally in two ways. *Exclusion* refers to informal workers and businesses who cannot enter the desired formal sector because of the high costs of operating formally or other characteristics of workers and the labor market. And *exit* refers to those workers who choose to work informally because they see greater net benefits from informality than formality (Maloney 2004; Perry et al. 2007). Regardless of whether informality is product of an exclusionary system or a voluntary decision of workers, the material effects of certain policies on the costs of formality have been the principal source of analysis on the issue. For instance, the seminal work of de Soto (1989) and other academics (Djankov et al. 2002; Friedman et al. 2000; Ulyssea 2010) argue higher regulations for starting businesses expand the informal economy as it increases the costs for businesses to operate legally. Along the same line, labor market rigidities, such as increasing the costs of hiring or firing, heighten informality levels by making formal job creation costlier (Bosch and Esteban-Pretel 2012). Empirical evidence from emerging economies provides some support to the previous arguments. Mondragón-Vélez, Peña, and Wills (2010), for instance, find increases in minimum wages and nonwage costs (e.g., social security contributions) have a positive effect on labor informality in Colombia, particularly among low-skilled workers. Similarly, high minimum wages in Colombia explain high labor informality rate and subnational variations of informality (Arango and Flórez 2021).

Other policies can also influence the relative benefits of informality and formality by increasing workers' incentives to opt-out of formality. Levy (2008) argues that low valuation by

workers of formality (e.g., social security programs) and the existence of alternative noncontributory programs might lead workers to choose informality as the preferred working condition since they would get similar services without paying the costs of contributions. Empirical evidence supports the argument. For instance, Garganta and Gasparini (2015) found that subsidy transfers of the Universal Child Allowance Program in Argentina make unemployed parents or parents working in the informal sector decrease their incentives to work in the formal sector. Similarly, Gasparini, Haimovich, and Olivieri (2009) found that the Programa Jefes de Hogar in Argentina, which provided cash transfers to unemployed head of households to alleviate poverty, decreased beneficiaries' incentives to look for easy to monitor formal jobs as they could both obtain incomes from the cash transfers and keep working in unregistered and difficult to monitor informal jobs. Finally, Bosch and Campos-Vazquez (2014) suggest that parallel noncontributory services such as the Mexican Seguro Popular health scheme, decrease workers' incentives to make social security contributions. On the other hand, increasing and extending the benefits of social security contributions also increase the incentives of formality. For instance, Cruces and Bérigolo (2013) find evidence that extension of coverage to family members of health services in Uruguay increased incentives for labor formality.

Much of these works have centered on specific policy measures that affect the material cost and benefits of formality and informality without considering the broader context in which these policies are implemented. Nevertheless, some scholars argue the issue of informality goes beyond such specificities and informality levels are also impacted by the strength of the link between the state and its citizens (Perry et al. 2007:215-248). In other words, the quality of the relationship between the state and workers can generate social norms of reciprocity with the state (Saavedra and Tommasi 2007). When such social norms of reciprocity are weak, informality

becomes a mechanism to punish the state for its poor performance (Berens 2020). Therefore, labor informality in these accounts can be seen beyond the materialistic perspectives largely portrayed by previous literature, and structural elements dealing with the social contract and trust relationship between the state and its citizens become relevant.

While few works have made strides to advance a new perspective of labor informality based on state-citizens relations, there is still much to progress in this research agenda. First, these works do not offer a general unified theory outlying and testing the specific mechanisms that lead workers to decrease their incentives to work formally based on their relationship with the state. This work develops such a theory, clearly outlying workers' distrust toward the state as the specific mechanism at play, allowing more precise theoretical expectations. Second, unlike previous efforts, this work theorizes and tests how this trust perspective of labor informality relates to mainstream explanations focusing on specific labor policies. In other words, how the nature of the relationship between the state and workers influences the effectiveness of piecemeal policies that attempt to decrease informality levels by altering the costs and benefits of formality.

Now that I have evaluated what labor informality is, the variation of informality levels across the region, and previous works assessing the determinants of labor informality, I discuss my theoretical proposition in detail.

## **1.2 The Argument**

The argument of this work posits that lack of trust in the state, leading to low expectations towards it, is a crucial factor impeding efforts to reduce stubbornly high levels of informality across Latin America. When state actors repeatedly fail to provide solutions to the economic risk and

overall vulnerability of citizens, they become uninterested in establishing formal relationships with the state. In these circumstances, a culture of informality emerges, manifesting in workers' weak desire for labor formality. Below, I develop a review of the factors affecting the trust relationship between citizens and the state, how this affects the demand of formality, and the effectiveness of policies that decrease informality.

### *1.2.1 Citizens' Trust in the State and a Culture of Informality*

Across Latin America, state trust is a common issue potentially affecting individuals' choices around labor formality and other forms of formal relationships. According to AmericasBarometer data for the year 2018, around 51 percent of individuals in 17 Latin American countries<sup>1</sup> distrusted congress. Of more concern, about 68 percent of Latin Americans in the same countries distrusted political parties, central actors with direct influence in many state institutions<sup>2</sup>. What is the source of this distrust relation in Latin America? Hardin (1998) argues that for trust between two actors to occur, an actor must have in its interest fulfilling the trust provided by another actor. Therefore, a trusting relationship between two actors takes place when each actor believes such relationship can generate some benefit. In addition, an actor considers a potential trustee trustworthy, in part, based on the previous experiences such actor has had with the potential trustee since it signals on the credibility of the potential trustee.

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<sup>1</sup> The 17 Latin American countries used to draw this percentage are Mexico, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, Colombia, Ecuador, Bolivia, Peru, Paraguay, Chile, Uruguay, Brazil, Argentina, and Dominican Republic.

<sup>2</sup> The measures of trust in congress and trust in political parties are originally scales from 1 to 7. Yet, I trichotomize these variables so 1 to 3 is low trust, 4 is medium level of trust, and 5 to 7 is high trust.

A trust relation between a state and its citizens is beneficial for both parties. For the state it is beneficial to credibly commit with citizens so citizens will be more prone to comply with the state's demands, rules, and regulations (Levi 1998). For citizens, on the other hand, entrusting to the state will yield some benefits regarding provisions of public goods such as security, and other basic social services such as education or health services, among others. Since citizens consider a state trustworthy when it "keeps its promises..., is relatively fair in its decision making and enforces processes, and delivers goods and services" (Levi 2019:362). Citizens' previous experiences with the state in relation to its capacity to deliver services and keep its promises, determine the level of trust citizens have towards the state (Espinal, Hartlyn, and Kelly 2006; Mishler and Rose 2001; Stoyan et al. 2016).

In Latin America, citizens' relationship and experiences with the state have been complex affecting the quality of the citizens' experiences – or lack of – with the state. One of the reasons for this complexity is the very nature of welfare regimes. Countries in the region are characterized by truncated welfare regimes (Holland 2018:556). Meaning, welfare services offered by the state are principally tied to formal working relationships. Therefore, services that protect the economic and social risks of the population have been mostly offered to formal workers, excluding informal workers and other vulnerable segments of the population. Scholars have traced back the origins and variations of these welfare regimes to the political incorporation of organized labor, where political actors created coalitions with labor in order to obtain political support (Collier and Collier 2002; Pribble 2011). Since organized labor predominantly participated in industrial sectors, protected and subsidized by the Import Substitution Industrialization (ISI) economic model common in Latin America for much of the twentieth century, workers in other economic sectors were largely excluded from many welfare benefits (Haggard and Kaufman 2008).

The debt crises of the 1980s and the fiscal constraints it put on governments' spending allowed a greater role for private market actors in the provision of welfare services. However, the entrance of private market actors as providers of services did not substantively increase coverage as the exclusionary structures of welfare regimes across the region persisted. The commodities boom of the 2000s and high inequality across the region encouraged governments to expand spending welfare coverage. Yet, this expansion occurred through inexpensive policies which required low institutional capacity – e.g., such as cash transfers and other noncontributory programs (Holland and Schneider 2017).

The existence of these noncontributory programs is insufficient to alleviate the needs of vulnerable populations as they offer limited benefits, and have difficulty reaching the totality of their target population (Bértola and Ocampo 2022:274; Holland and Schneider 2017; Robles, Rubio, and Stampini 2019). Hence, while the nature of the truncated welfare system benefits mainly formal workers, the creation and expansion of noncontributory programs directed to assist vulnerable populations – among those informal workers – have been insufficient to alleviate their social and economic risks and overall vulnerability.

Beyond the truncated nature of welfare regimes in Latin American countries, other factors contribute to the state's incapacity and/or inefficiency in decreasing social and economic risks and vulnerabilities for large segments of their populations. For instance, Mazzuca and Munck (2020) argue that the nature of the relationship between the state-building and the democratic processes generated virtuous or vicious cycles affecting current levels of state capacity across Latin America. Furthermore, Soifer (2015) suggests state building efforts succeed or failed depending on the strategy of administration of state building efforts across Latin American countries. When the efforts were unified and centrally managed, these succeed, and when these efforts were

delegated to local elites, these failed. On the other hand, García-Montoya (2020) shows politically cohesive economic elites can prevent a country to escape inequality traps even if such a country has the state capacity to redistribute economic gains. It, because it is not in the elites' interest to redistribute wealth, and when they are politically cohesive, they can influence governments against redistributive policy efforts which could imply higher taxation and other threats to their wealth.

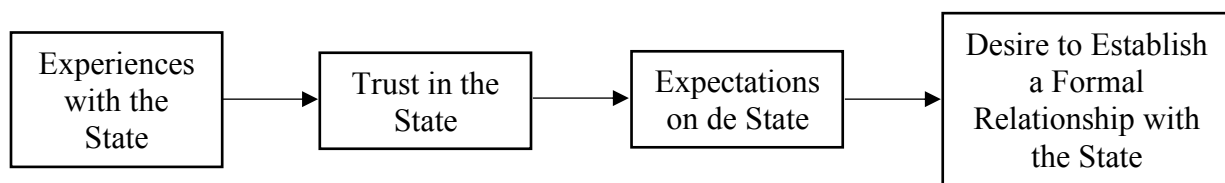
Furthermore, the capacity of states to supply provision of services to their populations vary too at the subnational-level. Scholars have pointed out several reasons to explain the subnational variation dynamics of state capacity. Acemoglu, García-Jimeno, and Robinson (2015), for instance, argue historical dynamics have implications for variation in local-state capacity causing divergent provision of public goods and services at the local level. Pribble (2015) suggest political stability, more concretely, mayor's length of tenure increases institutional effectiveness and better provision of public goods. In addition, Otero-Bahamon (2020) argues policies organizing the provision of social services in a country often do not consider subnational realities in their design. It, together with a lack of central mechanism for oversight over subnational social provisions (Giraudy and Pribble 2020), leads to variation in subnational social outcomes in areas such as education, health, or sanitation across territories and the urban-rural divide. In addition, other important attributes such as race, ethnic characteristics, or gender can influence these subnational variations (Otero-bahamón 2021).

Finally, Corruption is another endemic factor in the region potentially affecting both, the expectations of citizens in the state (Timmons 2005; Timmons and Garfias 2015) and the capacity of states to effectively address citizens' demands (della Porta 2000). Corruption affects the economic health of states (Aghion et al. 2016; Hodge et al. 2011; Mauro 1995; Uberti 2022),



generating inequalities traps (Uslaner 2008), and an overall lack of pessimism affecting compliance dynamics from citizens (Timmons and Garfias 2015; Torgler 2005).

The dynamics outlined above signal a problematic relationship between the state and citizens in Latin America which manifests in various citizens' attitudes and behaviors. And ultimately, in a *culture of informality* where "social norms of noncompliance with taxes and regulations" (Perry et al. 2007:215) arise. Thus, the relationship between citizens and the state often develop beyond formal frameworks. In more concrete terms, this work defines *culture of informality* as the lack of desire of individuals to establish formal relationships with the state and state institutions because their distrust towards it. The process of the emergence of a culture of informality can be observed in Figure 1.2. In short, the process for the emergence of a culture of informality begins from the expectations citizens place on the state based on their previous experiences with it. If the state has been absent and has failed in deliver effectively what it is supposed to deliver to citizens, they will trust it less and place lower expectations on the state. Where there is low trust there are low expectations regarding the commitment of the state to comply with its promises. Thus, low trust in the state causes that citizens choose not to establish formal relations with it as they do not trust it to effectively deliver its part of the agreement.



**Figure 1.2.** Emergence of Culture of Informality.

It is important to mention the process portrayed in Figure 1.2. is not linear but more an iterative process causing individuals to update their trust levels and expectations on the state. In

other words, through life, individuals update their beliefs on the state based on the various experiences they have with it. Thus, as conditions of individuals change, and/or states improve their performance or implement effective policies improving the conditions of individuals, individuals can positively update their perceptions towards the state increasing their desire to establish formal relationships with it. Still, current levels of trust decreasing the degree of engagement individuals decide to have with the state can reinforce and strengthen the lack of desire of individual to relate with the state. In other words, lack of trust in the state causes individuals to lower their incentives to link with the state. This in turn, shapes the new experiences (or lack of new experiences) individuals have with the state. Lowering future levels of trust and expectations on the state.

All in all, external factors such as improvements in state performance can provide individuals with new positive experiences with the state positively affecting future levels of trust and expectations on the state. Yet, in the absence of such external factors, current lack of trust and expectations on the state can become a reinforcement mechanism lowering even more future trust and expectations on the state. It making it more difficult for individual to want to change and increase their levels of engagement with the state.

This culture of informality process presented above extends to various areas of relationship – labor relationships and others – influencing many citizens' political attitudes and behaviors. For instance, because welfare regimes across Latin America have generally failed to provide social services to those who most need them, vulnerable segments of the population – among those informal workers – hold diminished expectations regarding their possibility of benefiting from redistributive policies. This lowers their preferences for redistribution and expansion of public services (Altamirano, Berens, and Deeg 2022; Holland 2018). In addition, informal workers have

a lower affinity to political parties because of the limited expectations regarding political parties' capacity to improve their livelihood (Altamirano 2019). Similarly, the diminished expectations can decrease informal workers' likelihood to vote (Baker et al. 2020; Baker and Dorr 2022).

Scholars have further argued that informal workers' lower likelihood of political participation, such as voting, varies across countries depending on factors such as the size of the informal sector and organizational capacity and incentives (Baker and Dorr 2022; Hummel 2017). Yet, when organized, informal workers and vulnerable excluded groups mobilize looking for forbearance<sup>3</sup> instead of demanding legal forms of redistribution or other legal connections with the state. And, because political actors – more specifically political parties and elected officials – have repeatedly failed to provide formal welfare alternatives to informal workers and vulnerable populations, they seek to gain their electoral support by relying on not enforcing legal violations of these groups to signal their redistributive commitment (Feierherd 2020; Holland 2017).

Altogether, the nature of the welfare systems across Latin America, the barriers to accessing key social services, and the absence of substitute policies that help decrease economic risks and vulnerabilities show the tenuous link between the state, citizens across the region, and informal workers more specifically. This tenuous link formed by bad experiences of citizens with the state diminish citizens' expectations and trust in the state. This lack of trust becomes a relevant factor in decreasing the desire of vulnerable citizens to establish formal relationships with the state, for instance, demand for redistributive welfare services or voting. In the next section I evaluate how a culture of informality affects another form of formal relationship with the state, labor formality.

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<sup>3</sup> Holland (2017) uses the term “forbearance” to refer to the no enforcement of legal violations in cases when elected officials have the capacity of enforcement.

### *1.2.2 Trust and Demand for Formality*

While a culture of informality mediates many citizen-state relations, how does this culture of informality translate to workers' demand for formal jobs? Labor formality is another form through which a culture of informality is expressed. When workers are formal, they establish a formal link with the state as they are required by law to pay social security contributions in exchange for certain welfare services – which can be provided by the state or/and privates depending on the specific country's rules. In this order of ideas, the state becomes either a provider of services or a guarantor of the delivery of those services when provided by privates. In addition, by working formally individuals might be subject to paying income taxes, which they could avoid by working informally. Based on this relationship, job formality can be understood under the theoretical framework of the fiscal contract.

The fiscal contract literature suggests "[that] giving away a say over policy, providing [citizens] directly with benefits, and/or investing in ideology..." are strategies to secure the compliance of citizens and show credible commitment by the state (Timmons 2005:535). Credible commitments need to be self-reinforcing, meaning the sides must have an interest or be coerced into upholding the terms of the agreement over time (Shepsle in North 1993:13). Similarly, a lack of credible commitment is self-enforcing, too, in the sense that the state and political actors repeatedly fail to abide by its commitments generating reputational costs.

The formal relationship between workers and the state relates to the logic of the fiscal contract outlined above. Workers get services – e.g., health insurance and retirement – that benefit them in exchange for their social security contributions. Consequently, the relationship of formal workers with the state is of reciprocity and materializes in the exchange of taxes and contributions

for services from the state or the guarantee of the state of that provision of such services. As the labor market is not purely segmented and workers often decide whether they work formally or opt-out (Alcaraz, Chiquiar, and Salcedo 2015; Berens 2020; García 2017), trust in the state becomes a relevant factor in many workers' decision to work formally or self-select into informality. Thus, if citizens have had good experiences with the state throughout their life, they will have greater expectations and trust in it, leading to an increase in their desire to work formally as they trust the state will guarantee the benefits formality imply. On the other hand, if the state has been absent in the life of citizens, they will hold low expectations of the state and its capacity and willingness to keep its promises, which leads to workers' lack of desire to establish a formal relationship with the state – an expression of a culture of informality.

In other words, when workers are faced with the decision of paying the contributions and additional taxes inherent to labor formality, they consider both, the benefits they will get in exchange for taxes and contributions, and their previous experiences with the state to evaluate the state's commitment to deliver and/or guarantee the benefits of formality. If such workers have had positive experiences in previous interactions with the state they will consider it trustworthy to commit to the supply of the benefits of formality. Nevertheless, if workers have had negative experiences with the state, the state will suffer reputational costs, and workers will not trust it to fulfill the benefits that formality implies, avoiding establishing a formal relationship with it.

Following this argument, I contend that the lack of desire of large segments of the workforce to engage in formal labor is, in many cases, the manifestation of the distrust workers have towards the state and state actors – political parties and elected officials – and its commitment to improve their vulnerability and ultimately deliver the benefits and protections formality would imply.

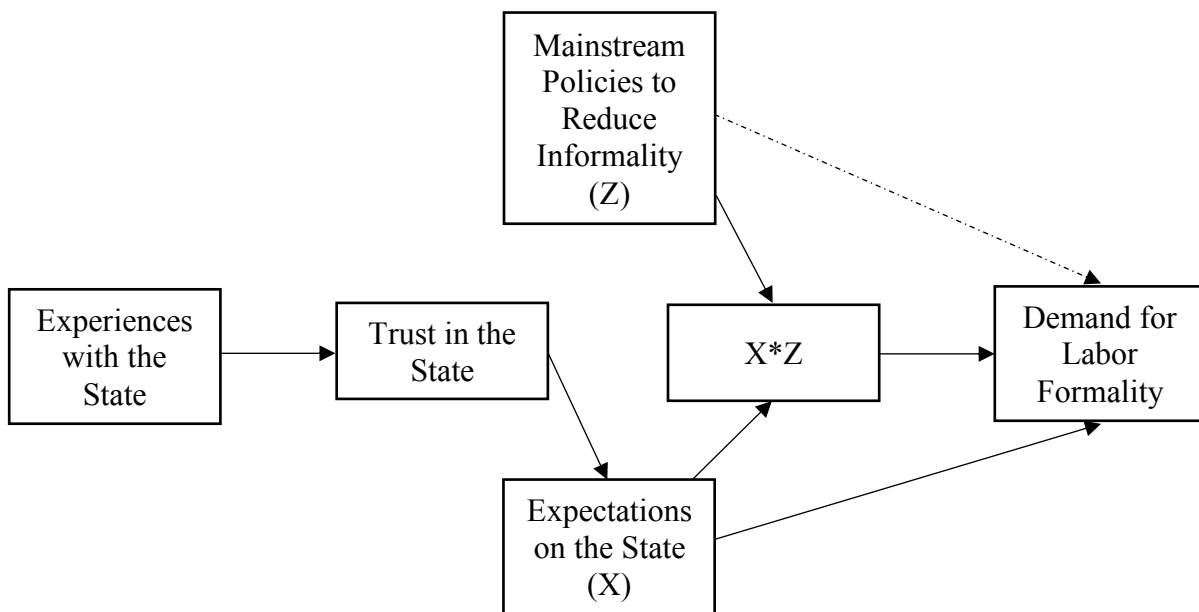
### *1.2.3 Trust, Mainstream Policies to Reduce Informality, and Demand for Formality*

Given the previous discussion, in a context where workers have low trust and expectations on the state, do mainstream government policies, directed to decrease informality levels, work in influencing the incentive of workers to enter the formal sector? I argue in such contexts mainstream policies are ineffective in increasing the incentives of informal workers to pay the financial contributions that formality implies.

Mainstream policies looking to reduce informality levels predominantly focus on decreasing material costs and increasing net benefits of formality. Nevertheless, academic works analyzing these common policies often do not consider this decision-making process of workers to decide between formality or informality, or assume workers only focus on material costs and benefits of policy interventions. Instead, I argue that the decision of workers to actually make a transition from informality to formality not just depends on net increases in the benefits of formality but is an interactive process between such benefits and the trust workers have in the state.

Figure 1.3 makes a graphic representation of different causal pathways for demand for labor formality, including the interactive pathway proposed in this section. The trust pathway works as argued in the previous section, where trust becomes a sufficient factor causally influencing demand for labor formality. On the other hand, for the policy interventions pathway, the dashed line that causally connects mainstream policies to reduce informality to demand of labor formality suggests there is a limited direct effect of these policies on demand for labor formality. I contend this limited direct effect is due to the conditioning role that trust in the state, and the expectations derived from it, play in the effectiveness of these mainstream policies (represented by  $X*Z$  in Figure 1.3.). The argument of this interactive pathway is that, regardless

of increases in the net benefits of formality that mainstream policies pretend, these policies are not a sufficient factor influencing demand for labor informality, and individuals still consider how much they trust the state and the expectations they place on it when deciding whether to make a transition to formality. Thus, while in theory, by implementing policies decreasing the costs of formality the demand for formality will increase, trust in the state becomes a necessary factor for the effectiveness of policy interventions, as workers still consider how much they trust the state and its commitment to deliver or guarantee the promised higher net benefits of formality given the changes in labor policies.



**Figure 1.3.** Causal pathways and interactive effect between trust in the state and mainstream policies to reduce informality on demand for labor informality.

All in all, and based on this interactive argument, the worse the experiences that workers have had with the state, the less workers trust it and the warier they will be to make a transition from informality to formality regardless of the policy interventions implemented. Thus, when

workers trust the state less, the lower the effectiveness of policy interventions directed to decrease the costs and increase workers' demand for formality. All else equal, the higher the level of trust of a worker in the state, the higher the effectiveness of policy interventions directed to decrease the costs and increase workers' demand for formality.

### **1.3 Empirical Strategy**

This dissertation makes an argument around how trust in the state shape workers' choices around labor informality – whether they self-select into informality voluntarily. The empirical implications surrounding this argument are several, going from macro-effects producing country to country differences regarding levels of labor informality and effectiveness of policies intended to decrease such levels; to more individual-level empirical implications related to the specific decisions and preferences of individuals. As Latin America is one of the regions of the world with stubbornly high levels of labor informality and important variation regarding state capacity (Mazucca and Munck 2020; Soifer 2015) – potentially producing variations regarding state trust. This region becomes useful to test the argument in a comparative fashion. Furthermore, available household survey data in Colombia and possibility to field an original online survey in this country make this a good case to test the proposed argument.

The empirical purpose of this dissertation, then, is to, first, identify how factors affecting trust in the state can both influence in the informality levels rate across countries in the region and identify how trust in the state affects individuals' demand for labor formality. To achieve such purposes this dissertation relies on a combination of country-level and individual-level data obtained from primary and secondary sources. As follow, it is presented a description of the data



used in the following empirical chapters and how these data help with the overall purpose to test the proposed argument.

### 1.3.1 *Data*

As mentioned previously the empirical efforts of this dissertation require a combination of country-level and individual-level data to test the proposed empirical expectations. Chapter 2 uses panel country-level data from 10 Latin American countries<sup>4</sup> from 2002 to 2019 coming from different sources. Labor informality levels measures are taken from the United Nations Economic Commission for Latin America and the Caribbean (CEPAL) statistical database. Furthermore, data on the costs of formality is used as proxy to measure policies that intend to decrease costs of formality and effectively informality levels. The data used for these measures comes from the Fraser Institute's Economic Freedom of the World index (Gwartney et al. 2021) and Alaimo et al. (2017). Furthermore, to identify factors influencing aggregate levels of state trust across countries Chapter 2 uses measure of state capacity perception and control of corruption perception from the World Wide Governance Indicators (Kaufmann, Kraay, and Mastruzzi 2011).

Individual-level data comes from secondary and primary sources. For Chapter 3, which tries to identify Colombian workers' attitudes and desire for informality, this dissertation relies on 2019 household survey data gathered by the Departamento Administrativo Nacional de Estadística (DANE). In addition, Chapter 4 data, which test the empirical link between state trust and demand for informality, uses original survey data of Colombian adults for the year 2023.

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<sup>4</sup> Brazil, Chile, Colombia, Costa Rica, El Salvador, Honduras, Mexico, Paraguay, Peru, and Uruguay.

## 1.4 Dissertation Outline and Contributions

Chapter 2 empirically approaches the argument from a country-level perspective testing how factors relating to the costs of formality – labor market and businesses regulations – and factors affecting citizens’ trust in the state – control of corruption perception and state capacity perception – affect independently and in interaction informality levels across Latin American countries. The empirical results show that factors related to the costs of formality have not independent effect on informality levels across the region. On the other hand, factors related to citizens’ trust in the state do have implications for informality levels across countries. Finally, the empirical results suggest that decreasing the costs of formality can be effective in reducing informality levels, but for countries under contexts with high control of corruption perception.

Chapter 3 transitions towards an individual-level analyzes using household survey data for Colombia. This chapter pretends to identify the plausibility of the *exit* explanation of labor informality – individuals self-select into informality voluntarily – in the Colombian context. In other words, identify how comfortable Colombian workers feel in the informal sector and the existence of workers’ desire to remain in informality, even if they were offer a comparable alternative in the formal sector. The empirical results suggest most informal workers feel satisfied with their current job conditions while working informally. And for independent informal workers, most of them would prefer to stay in their current job than transitioning to a comparable salaried formal job alternative. While the data used for this chapter does not allow to develop analyzes of the causal mechanisms behind the *exit* dynamics, it provides strong evidence that, at least for the Colombian context, many workers self-select into informality and they are satisfied with the conditions presented there.

Lastly, Chapter 4 continues developing individual-level analyses in the Colombian contexts, but this time, exploring the theoretical argument of this dissertation – the link between trust in the state and demand for labor informality. Using original survey data from Colombia, the empirical results suggest that individuals with higher levels of state trust are less likely to choose an informal job than a comparable formal job alternative. Furthermore, the higher individuals trust in the state is, the higher their willingness to pay for the costs of formality – the percentage from their salary individuals are willing to pay for social security contributions. Finally, Chapter 5 concludes, evaluates the main results from this dissertation, how they contribute to the bigger scholarship on informality, and what future avenues of research this work leaves open.

This dissertation provides several theoretical and empirical contributions to understand the issue of informality. First, the theoretical proposition of this dissertation provides a general theory of informality, extending beyond the particular issue of labor informality. Thus, this work provides a general framework to understand the willingness of individuals to establish – or not – formal relationships or linkages with the state. Suggesting, experiences with the state and the trust relationship deriving from such experiences, is the specific mechanism affecting individuals' attitudes towards informality.

Second, and related to the specific issue of workers' choices around labor informality, this work provides an analysis of how individuals' trust in the state mediates other more mainstream explanations of informality. In other words, how the effectiveness of policies intended to decrease informality levels by decreasing the costs of formality can be diminished by the lack of trust individuals have in the state. If individuals do not trust the state enough, changing the costs and benefits of formality and informality will not alter workers' calculations and choices, and they might still prefer to remain in informality.

Finally, empirically, this dissertation makes important contributions. First, this work tries to test the interactive argument which is the moderating role of state trust – using corruption perception and state capacity perception as proxies – on costs of formality and its incidence in informality levels across countries. While more precise tests can be done in the future, this, to my knowledge, is the first work making this empirical effort. Second, unlike other works trying to test the *exit* argument of informality, this work, relying on an original survey, includes precise measures regarding individuals' choices around labor informality. Therefore, beyond testing propensity of informality, this work precisely measures individuals' willingness to be or not in the informal sector. With these measures, this work precisely test the link between trust in the state and demand for labor informality.

## **Chapter 2**

### **Trust in the State, Costs of Formality, and Informality Levels:**

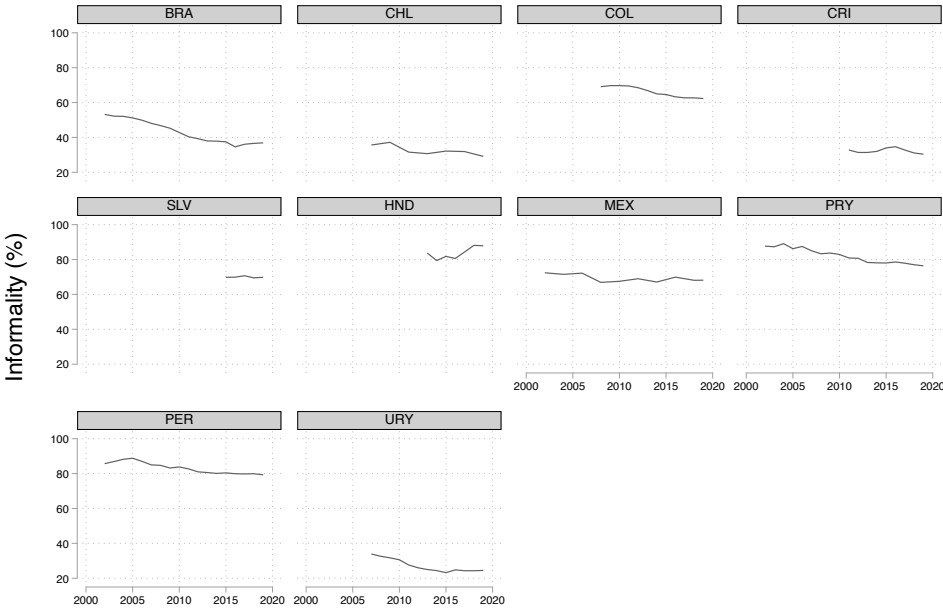
#### **A Country-Level Analysis in Latin America**

Countries in Latin America, to a higher or a lower extent, have tried to decrease informality levels using policy measures pretending to decrease the costs of formality. In Colombia, for instance, the law 1607 of 2012 pretended to help reduce labor informality by decreasing drastically payroll taxes. Thus, incentivizing the increase in the supply and demand of formal jobs. Empirical evidence supports the effect of this policy in reducing informality (Fernández et al. 2016; Garlati-Bertoldi 2020; Kugler, Kugler, and Herrera-Prada 2017). Nevertheless, in Colombia and many other countries in the region, as shown in Figure 2.1, these decreases have been either marginal, or not sufficient to decrease informality to tolerable levels.

While it is well known that the factors that influence labor informality are several, governments often try to tackle the issue using policies directed to reduce the costs or increase the benefits of formality - reducing payroll taxes, making the labor market more flexible, or increasing the benefits of services that derive from formality – as in the Colombian case. This work looks beyond these specific policy efforts and focuses on more structural factors and its direct and moderating role in influencing labor informality levels. More specifically, this dissertation proposes a demand-side theory of labor informality where trust in the state becomes a relevant factor affecting individuals' incentives to demand labor formality. In addition, this lack (or not) of

trust in the state affects the effectiveness of common policy measures that pretend to reduce informality levels by decreasing the costs of formality.

This proposition might explain cases such as that of Colombia and other countries in the region that cannot decrease informality levels effectively. On the other hand, can explain the success of reducing informality in countries such as Uruguay, where an expansion of social coverage and labor protections have taken place providing ambiguous incentives to workers to enter formality and employers to offer formal job opportunities (Amarante and Gómez 2016; Cruces and Bérigolo 2013). But still, this country, potentially supported in the credibility of the state, have been able to effectively reduce informality.



**Figure 2.1.** Labor Informality Across Time in 10 Latin American Countries.

This chapter develops a country-level analysis exploiting different measures to identify the relationship between labor market flexibilization and costs of formality with informality levels.

Furthermore, it evaluates the direct relationship of factors, such as state capacity and control of corruption, as indicators of trust in the state, with informality levels and how these factors condition the effect of labor market flexibilization.

## **2.1 State Capacity and Corruption**

If the lack of desire of workers to work formally is, in many cases, the product of the distrust workers have towards the state and its commitment to provide the services and guarantees inherent in labor formality, what factors contribute to increasing such distrust toward the state in Latin America? This Chapter argues two salient factors provide enough variation across countries in Latin America to test the argument: state capacity and corruption.

### *2.1.1 State Capacity*

The current argument suggests previous experiences with the state, the trust, and expectations workers have in the state influence workers' demand for formality. state capacity is one factor that influences the experiences citizens have with the state. The definition of state capacity in this work aligns with Mann's (1984) *infrastructural power* concept, that is, "... the capacity of the state to actually penetrate civil society, and to implement logistically political decisions through the realm." (p.189). In other words, state capacity relates to the state's bureaucratic ability to impose chosen policies over society and supply a basic set of public services to its citizens (Soifer 2012). Thus, a country with a weak state capacity will imply a government that cannot reach its citizenry, enforce rules, and provide basic public services efficiently and

evenly (Otero-Bahamon 2019, 2020; Otero-Bahamón, García-Montoya, and Fernández-Dusso 2022).

State capacity varies significantly across and within countries in Latin America. Scholars have pointed out to various reasons for these variations. Mazzuca and Munck (2020) argue that the nature of the relationship between the state-building and the democratic processes generated virtuous or vicious cycles affecting current levels of state capacity across Latin America. Furthermore, Soifer (2015) suggests state building efforts succeed or failed depending on the strategy of administration of state building efforts across Latin American countries. When the efforts were unified and centrally managed, these succeed, and when these efforts were delegated to local elites, these failed. On the other hand, subnational variation in state capacity can be given by factors such as historical roots such as colonial legacies (Acemoglu, García-Jimeno, and Robinson 2015), design of policies that do not consider subnational realities (Otero-Bahamon 2020), lack of central mechanism for oversight subnational provisions of services (Giraudy and Pribble 2020), political stability of local administrations (Pribble 2015), or the social predominance of social characteristics such as race, ethnicity, or gender within regions.

Data from the AmericasBarometer, 2018-2019, indicates that, across 17 Latin American countries, around 12 percent of the population did not have access to potable water in their household. However, Uruguay presents the best indicator across the region, where just around 2 percent of individuals reported that they did not have access to potable water. On the other end, Dominican Republic was the worst country regarding this indicator, as almost 33 percent of the interviewed people reported they did not have potable water in their households. Thus, indicators of state capacity and the variation of such indicators across the region should help us disentangle the argument proposed in this work.



### 2.1.2 *Corruption Perception*

Corruption perception is another highly salient factor with significant variation across Latin America that might influence the willingness of workers to establish a formal labor relationship with the state. Corruption may hinder “governmental performance, thus reducing trust in the government’s capacity to address citizens’ demands” (della Porta 2000:205). Corruption affects growth (Aghion et al. 2016; Hodge et al. 2011; Mauro 1995; Uberti 2022), damage the fiscal capacity of governments, increase states’ ineffectiveness, and ultimately generates an inequality trap (Uslaner 2008). Thus, corruption perception might affect tax morale and diminish tax compliance among citizens as they are not confident the government uses resources efficiently to provide services worth their contributions (Jahnke and Weisser 2019; Timmons and Garfias 2015; Torgler 2005). These dynamics of corruption can further decrease the demand for progressive social policies useful to reduce inequalities (Berens and Ruth-Lovell 2021). Thus, dynamics of corruption and clientelism and its detrimental effects on social policy can both, decrease compliance and demand for social policies. In the particular logic of labor informality, corruption perception can diminish workers’ desire to pay the financial contributions that formality implies, as it decreases their confidence that state actors will make good use of their contributions and efficiently supply the services and guarantees inherent in formality.

Corruption might be correlated with government performance, hence with state capacity. Yet, corruption normally happens away from the public eye, which makes it difficult to determine the actual correlation between real corruption and state capacity. Nevertheless, revealed corruption – e.g., corruption scandals – and its informational implications have actual effects on individuals’ attitudes and behaviors (Canache and Allison 2005; Timmons and Garfias 2015). Therefore, while

corruption might or might not have direct implications on state performance, individuals' corruption perception – even if it does not affect state performance significantly – can actually influence their trust in state actors and their desire to pay the financial contributions that formality implies.

While corruption is an endemic issue across the region, indicators of corruption are substantively higher in some countries than others. According to the Corruption Perception Index (CPI) 2020 by Transparency International, across Latin America, the country with a better score (or cleaner from corruption) is Uruguay, with a CPI score of 71<sup>5</sup>. The countries with the worse scores are Venezuela, Haiti, Nicaragua, Honduras, and Guatemala, all with scores equal to or lower than 25. Such variability may allow us to identify the effect corruption perception has on aggregate levels of labor informality and the desire for workers to work formally.

## **2.2 Hypotheses**

Thus, the proposed argument of this dissertation suggest trust in the state affects both the demand for labor formality, and the effectiveness of policies to decrease informality levels by decreasing the costs of formality. Thus, Given the previous discussion, I propose the following hypotheses:

**H1a:** Higher state capacity correlates with lower levels of labor informality across Latin American countries.

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<sup>5</sup> The CPI goes from 0 to 100 with higher numbers indicating less corruption perception and lower numbers indicating higher corruption perception.

**H1b:** Higher perceived levels of control of corruption correlate with lower levels of labor informality across Latin American countries.

**H2a:** Lower State capacity decreases the efficacy of mainstream policy interventions on reducing labor informality.

**H2b:** Lower perceived levels of control of corruption decrease the efficacy of mainstream policy interventions on reducing labor informality.

### 2.3 Data and Methods

This paper uses relevant panel cross-sectional data from 10 Latin American countries<sup>6</sup> to test the proposed hypotheses. The variables used to test the proposed argument are gathered from different sources. The dependent variable is *labor informality*, and measures the percentage of informal workers from the active working population. This paper uses the legalistic definition<sup>7</sup> (Gasparini and Tornarolli 2009:21) of labor informality. Nevertheless, while Gasparini and Tornarolli (2009) consider just salaried workers in this definition, this paper includes all workers contributing to the pension system. I gathered this data from the United Nations Economic Commission for Latin America and the Caribbean (CEPAL)<sup>8</sup> statistical database, which collects these data from countries' household surveys and other sources.

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<sup>6</sup> The countries studied in this paper are: Brazil, Chile, Colombia, Costa Rica, El Salvador, Honduras, Mexico, Paraguay, Peru, and Uruguay.

<sup>7</sup> The legalistic definition categorize an informal worker as such workers who "... [do] not have the right to a pension linked to employment when retired" (Gasparini and Tornarolli 2009:21).

<sup>8</sup> The data present the percentage of employed workers contributing towards the pension system. To obtain the informality level measure, I subtracted the percentage of workers contributing towards the pension system from 100. Thus, the values I obtained are from those who are employed but are not contributing towards the pension system.

To account for the effect of mainstream factors on labor informality, I use the variables *labor market regulation*, *regulations on business*, *non-wage costs of salaried labor (NWC)*, and *minimum costs of salaried labor (MCSL)*. The measure for *labor market flexibilization* and *regulations on business*<sup>9</sup> are taken from the Fraser Institute’s Economic Freedom of the World index (Gwartney et al. 2021). Each indicator is scaled from 0 to 10, where 0 indicates the country has less economic freedom, and 10 means more economic freedom. Thus, less economic freedom (lower numbers) – more regulations on the labor market and businesses – will increase the costs for businesses to generate formal jobs and hire formal workers, and increase the costs of workers to work formally.

In addition, the measures of NWC and MCSL are from 9<sup>10</sup> Latin American countries in the year 2014<sup>11</sup> and are taken from the work of Alaimo et al. (2017). The NWC measure is the percentage of non-wage costs on the average salary of a formal salaried worker in the country. On the other hand, MCSL measures the percentage of non-wage costs of the minimum salary “relative to the average labor productivity in a country” (p.4). In other words, the measure captures the percentage of non-wage of a minimum salary from the GDP per capita. This paper uses the NWC and MCSL to develop a descriptive analysis of the relationship between these variables with informality levels. This paper considers identifying the aforementioned descriptive relationships relevant because the NWC and MCSL measures more precisely capture the costs of formality for both employers and employees, influencing both the supply and demand of formal jobs according to mainstream literature. Hence, if those material costs of formality are highly relevant, there should be a strong positive correlation between the NWC and MCSL and informality levels.

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<sup>9</sup> The full description of the index can be found in Gwartney et al. (2021)

<sup>10</sup> This descriptive exercise does not include El Salvador as informality levels data is missing for the year 2014.

<sup>11</sup> I develop the analysis for the year 2014 because this is the year from when I have available data of nonwage labor costs on workers and employers.

To account for structural factors affecting the state-citizens relationship, I use the variables *corruption perception* and *state capacity perception*. For the variable *control of corruption perception*, I use data from the World Wide Governance Indicators (Kaufmann, Kraay, and Mastruzzi 2011). These variable measures public perception of control of corruption, understanding corruption as the extent to which “...public power is exercised for private gain”. This index variable goes from 0 to 5, where higher values indicate better control of corruption perception. The data for the variable *state capacity perception*<sup>12</sup> is taken from the World Wide Governance Indicators (WGI) (Kaufmann, Kraay, and Mastruzzi 2011). This variable is scaled from 0 to 5, where higher values indicate higher state capacity and capture public perceptions of the quality of public services, civil services, and the state’s independence from political pressure.

Finally, I control for factors such as *GDP per capita*, *education*, and the *share of workers working in the agricultural sector*. *GDP per capita* provides a proxy for a nation's economic environment, where a worse economic environment represents fewer opportunities for formal job creation. This measure is taken from CEPAL. *Education*, on the other hand, relates to the incapacity of individuals to find jobs in productive sectors given their low educational levels. The education measure is taken from CEPAL and indicates the ratio of enrolled students in secondary education from the population in the official secondary group age. Finally, the share of workers working in the agricultural sector indicates whether a significant number of workers work in the less developed and productive agricultural sector. This variable is taken from the Quality of Government Institute dataset of the University of Gothenburg (Teorell et al. 2022). Descriptive statistics of all the variables used in this paper can be found in Table 2.1A in the Appendix.

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<sup>12</sup> Both, the indexes for corruption and state capacity, are constructed using information from several public opinion, household, and firms’ surveys, “as well as expert assessments” (Kaufmann, Kraay, and Mastruzzi 2011). To more information regarding the data sources used to generate these indexes refer to the cited article and the WIG webpage.

The time frame of the panels goes from 2002 to 2019. Nevertheless, given data availability, some countries' panels have shorter time frames. In addition, there were some missing observations for informality and education variables. Therefore, I use a linear interpolation method to fill in the missing data. Lastly, given the panel cross-sectional nature of the data, I follow Beck and Katz's (1995) advice and use panel-corrected standard error models with AR(1) correction to solve problems of first-order serial correlation. In this way, the model accounts for the heterogeneity in the autocorrelation structure across panels.

## 2.4 Results

Before presenting the multivariate statistical models' results, I develop a descriptive analysis of the bivariate relationship between various variables of interest and informality levels across 9<sup>13</sup> Latin American countries in the year 2014<sup>14</sup>. First, I present descriptive results of the relationship between NWC and MCSL with labor informality levels. Then, I evaluate the relationship between control of corruption perception and state capacity perception with labor informality levels.

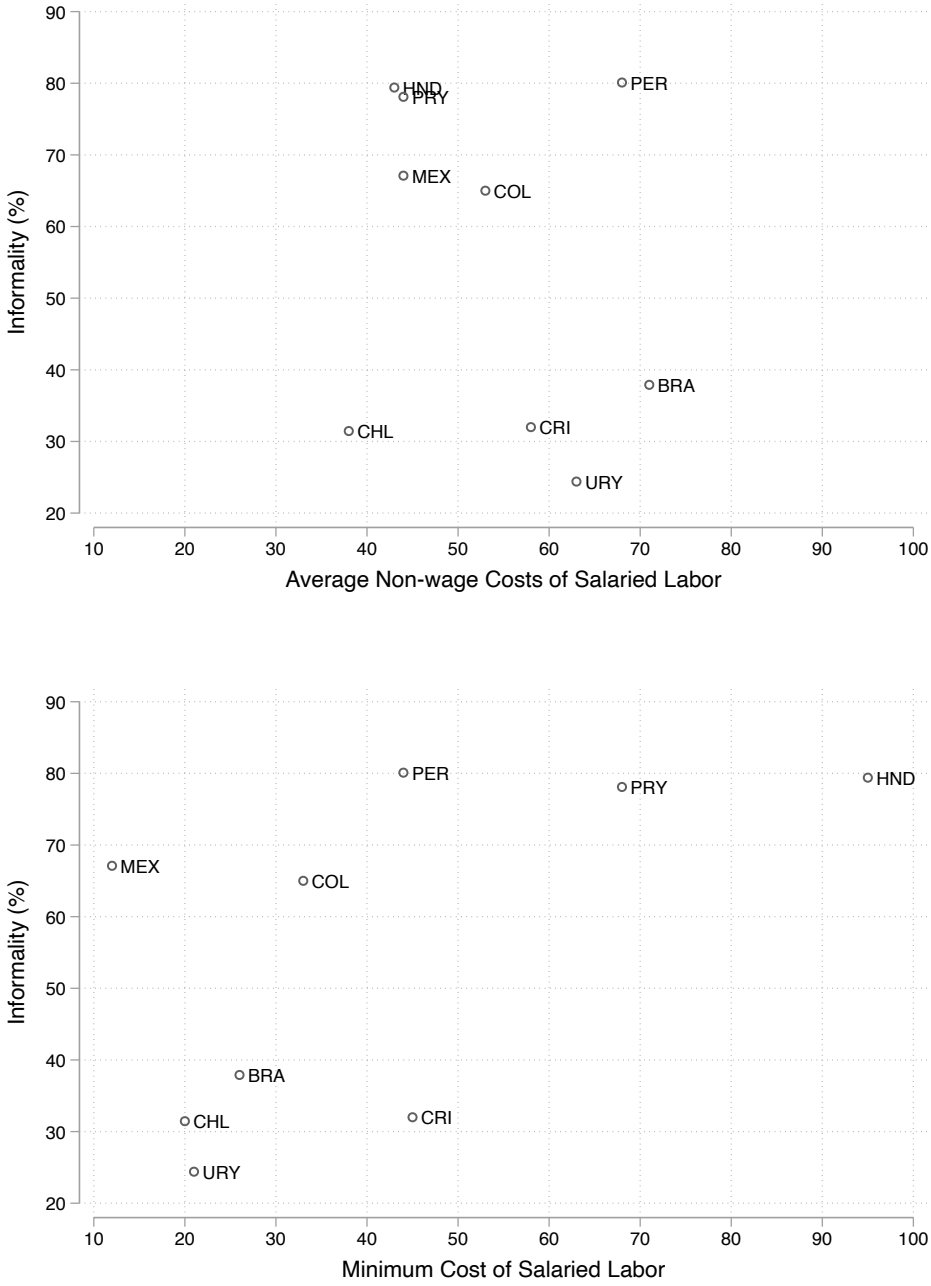
Mainstream accounts on labor informality suggest higher costs for businesses and workers affect the supply and demand of formal jobs. Thus, we should observe a positive relationship between NWC and MCSL and labor informality levels. Nevertheless, as we can observe in Figure 2.2, upper and lower panels, there is not a clear relationship between these two factors. Instead, we cannot observe a clear correlation, and countries with similar levels of labor informality present

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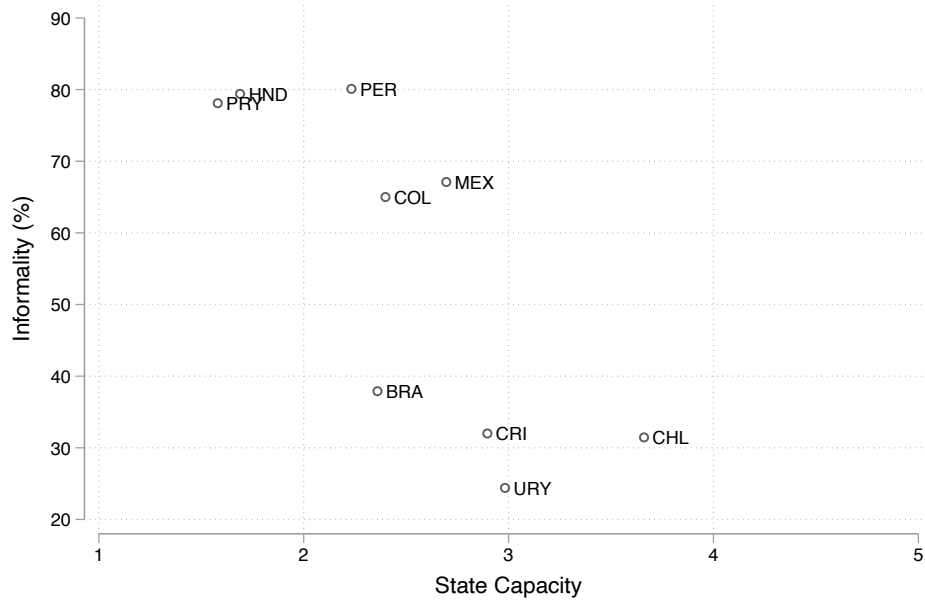
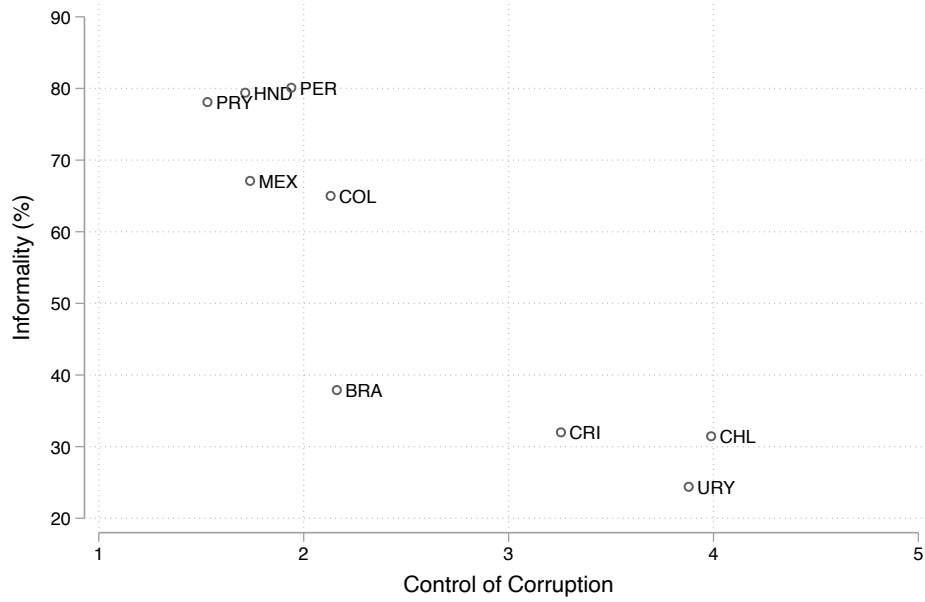
<sup>13</sup> This descriptive exercise does not include El Salvador as informality levels data is missing for the year 2014.

<sup>14</sup> I develop the analysis for the year 2014 because this is the year from when I have available data of nonwage labor costs on workers and employers.

an important variation in their NWC and MCSL. Thus, Figure 2.2 presents descriptive evidence against standard accounts suggesting higher costs for formality for workers and employers should influence higher levels of labor informality.



**Figure 2.2.** Bivariate Relationship Between NWC and MCSL and Labor Informality Levels.



**Figure 2.3.** Bivariate Relationship Between Control of Corruption Perception and State Capacity and Labor Informality Levels.



When evaluating the relationship between structural factors such as state capacity and control of corruption perception, which can affect the state-citizen relationship, and labor informality, we observe a strong correlation, as seen in Figure 2.3. The Pearson correlation between the state capacity indicator and labor informality is  $r = -.78$ , and the one for control of corruption and labor informality is  $r = -.88$ . This negative correlation indicates the higher the control of corruption, and the more state capacity, the lower are informality levels. Thus, descriptive statistics offer some support to hypotheses H1a and H1b. Still, it is important to make the clarity that based on Figure 2.3, we can observe that Brazil as an evident outlier with middle to low levels of State capacity and control of corruption perception but still low levels of informality, and a clearer relationship exists in the upper panel that evaluates control of corruption perception and labor informality. While this descriptive exercise provides some suggestion of the relevant role of structural factors – such as state capacity and corruption – on labor informality, and less so in favor of the effect of NWC and MCSL on labor informality, it does not allow us to control for contextual and other important factors that might vary across countries. In addition, descriptive analyses prevent me from determining the moderating effect of state capacity and control of corruption perception on mainstream factors suggested to influence informality levels. Therefore, I proceed to develop a multivariate analysis of panel cross-country data.

Table 2.1 presents the results of additive Models to identify the individual effects of the explanatory variables considered in this work. These models do not consider the variables control of corruption perception and state capacity together, as every time are included together, the variable state capacity becomes insignificant. The suspected reason is because of the strong correlation this variable has with corruption ( $r = .8$ ). Additive Models including control of corruption perception and state capacity together are included in Table 2.2A in the Appendix.

Across all Models, in Table 2.1, we can observe that the variables *labor market flexibilization* and *regulations on business* are not statistically significant. It suggests that factors such as more free or deregulated labor markets and a more amicable environment for the starting and functioning of businesses have no statistically significant effects on labor informality levels. These results go against mainstream explanations of labor informality which suggest decreasing the costs of businesses to create formal jobs and hire formal workers, and decreasing the costs of workers to work formally will effectively decrease labor informality levels. Yet, further cross-country studies using different measures are essential.

On the other hand, results in Table 2.1 indicate that the variables *control of corruption perception* and *state capacity* are negative and statistically significant at conventional levels. In other words, as values of control corruption increase, labor informality decreases, and as state capacity increases, labor informality levels decrease. Furthermore, the effects of control of corruption on labor informality seem to be substantively stronger compared to the effect of state capacity. Based on these results, I found empirical support for hypotheses H1a and H1b.

To identify whether the effect of mainstream policy interventions to reduce labor informality is conditioned by levels of control of corruption perception and/or state capacity I develop interactive models. Table 2.2 presents models interacting the variables *labor market flexibilization* and *regulations on business* with *control of corruption perception* and *state capacity*. As interactive terms are not easily interpretable by the interactive coefficients alone, I present various Figures on the effects of *labor market flexibilization* and *regulations on business* on labor informality levels, at different value percentiles of *control of corruption perception* and *state capacity* (10, 25, 75, and 90 percentiles). In addition, Tables with the coefficients of the variables *labor market flexibilization* and *regulations on business* at different value percentiles of

*control of corruption* and *state capacity* can be found in the Appendix (Table 2.3A and Table 2.4A).

**Table 2.1.** Effect of Explanatory variables on Labor Informality Levels.

	Model 1	Model 2	Model 3	Model 4
Labor Market Flexibilization	0.951 (0.609)	-0.120 (0.479)		
Business Regulation			0.283 (0.580)	0.376 (0.508)
Control of Corruption	-7.039*** (1.167)		-5.824*** (1.074)	
State Capacity		-2.511* (1.215)		-3.109* (1.208)
GDP per capita	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.003*** (0.000)
% Workers in Agriculture	0.823*** (0.122)	0.644*** (0.117)	0.793*** (0.124)	0.711*** (0.110)
Education	-0.128* (0.064)	-0.036 (0.051)	-0.104 (0.062)	-0.069 (0.056)
Constant	81.210*** (4.766)	76.424*** (6.678)	82.098*** (5.340)	77.466*** (5.772)
Observations	131	131	131	131
Number of Countries	10	10	10	10

Standard errors in parentheses  
 \*\*\* p<0.001, \*\* p<0.01, \* p<0.05

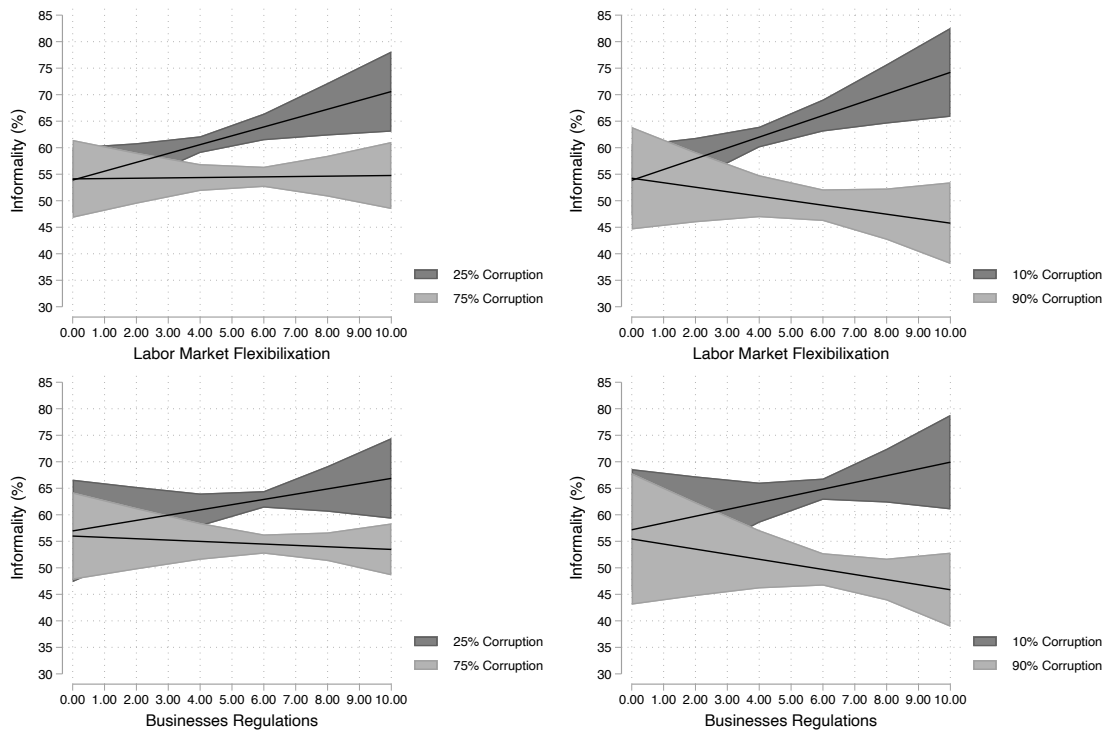
**Table 2.2.** Interactive Effect of Labor Market Flexibilization, Control of Corruption Perception, and State Capacity on Informality.

	Model 5	Model 6	Model 7	Model 8
Labor Market Flexibilization	4.294*** (1.298)		-0.229 (1.357)	
Business Regulation		3.022 (2.125)		2.221 (2.143)
Income and Payroll Taxes				
Control of Corruption	0.186 (2.523)	-0.821 (4.592)		
State Capacity			-3.424 (2.906)	0.865 (4.905)
Labor Market Flexibilization*Corruption	-1.360** (0.446)			
Business Regulation*Corruption		-1.053 (0.731)		
Labor Market Flexibilization*State Cap			0.077 (0.503)	
Business Regulation*State Cap				-0.753 (0.781)
GDP per capita	-0.002*** (0.000)	-0.002*** (0.000)	-0.003*** (0.000)	-0.002*** (0.000)
% Workers in Agriculture	0.811*** (0.120)	0.913*** (0.127)	0.714*** (0.112)	0.825*** (0.112)
Education	-0.126 (0.064)	-0.135* (0.065)	-0.071 (0.058)	-0.120 (0.063)
Constant	64.433*** (7.481)	65.736*** (14.682)	80.682*** (8.958)	68.705*** (14.613)
Observations	131	131	131	131
Number of Countries	10	10	10	10

Standard errors in parentheses  
 \*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Figure 2.4, upper left panel, graphs the effect of the variable *labor market flexibilization* on labor informality levels at the 25 and 75 percentile values of the variable control of corruption and the upper right panel graphs the effect of the same variable at the 10 and 90 percentiles of the variable control of corruption. Interestingly, the effect of labor market flexibilization on labor informality is positive and statistically significant at lower values of the variable control of corruption (10 and 25 percentile). Thus, more deregulated labor markets have a contrary effect to what mainstream explanations of labor informality suggest in context with low control of

corruption perception. When values of control of corruption increase (75 and 90 percentiles) – higher perception of control of corruption – the positive effect of *labor market flexibilization* on informality decreases and even becomes negative at the 90 percentiles of the variable corruption perception.

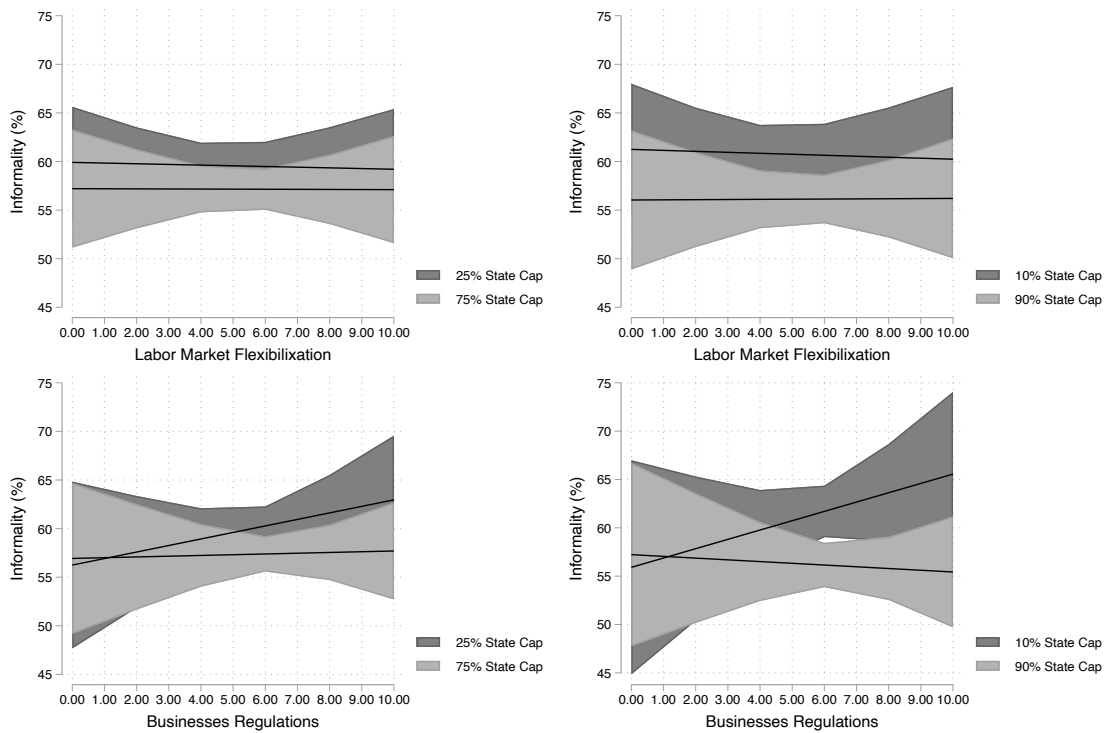


**Figure 2.4.** Moderating Role of Control of Corruption on the Effect of Labor Market Flexibilization and Business Regulation on Labor Informality.

The effect of the *business regulation* variable on informality at different levels of control of corruption perception (middle panels of Figure 2.4) follows a similar trend when compared to the effect of the *labor market flexibilization* variable (upper panels of Figure 2.4) at different values of control of corruption. In other words, the effect of the *business regulation* variable (higher values represent less regulation for businesses) on informality levels is positive in contexts with

lower control of corruption perception. In contexts with better control of corruption perception (75 and 90 percentiles), the effect of the *business regulation* variables on labor informality becomes negative, as expected.

The conditioning role of state capacity appears to be weaker than the one of corruption perception, as can be observed in Figure 2.5. In general, we observe in most cases almost flat slopes or insignificant differences in the effects of the variables labor market flexibilization and regulation of businesses at different levels of state capacity. Thus, considering Figure 2.4 and Figure 2.5 together, corruption perception appears to have a more relevant moderating role on the effect of the variables *labor market flexibilization* and *regulations on businesss* on labor informality levels. Overall, I found support for hypothesis H2b but not for hypothesis H2a.



**Figure 2.5.** Moderating Role of State Capacity on the Effect of Labor Market Flexibilization and Business Regulation on Labor Informality.

While the observed results provide support for some of the theoretical expectations of this paper, the evidence also shows possible unintended effects of mainstream policy interventions used to reduce informality levels. In general, labor market flexibilization policies are not significant in reducing informality levels by themselves, as observed in the additive models in Table 2.1. And, if anything, mainstream policy interventions such as fewer rigidities in the labor market and business regulation can influence increases in informality levels in countries with high corruption perception. One possible explanation is the decrease in labor protection product of labor market flexibilization policies and the workers' disinterest in taking formal jobs in corrupt environments. Lack of labor protections might decrease workers' expectations of job stability. It, especially in contexts with high corruption where workers, first, lack expectations of job stability given the flexibility of the job market, and second, expect little regarding the benefits they might obtain from formality as they distrust a corrupt state in actually delivering or guaranteeing the deliverance the welfare services promised by formality. Thus, workers will preferably avoid formal working relationships as such relationships provide little hope for job stability and the promise of social benefits derived from formality in corrupt contexts. Nevertheless, future works testing this proposition are needed to validate this suggestion.

Overall, control of corruption perception seems to be an important factor influencing labor informality levels, as suggested in hypothesis H1b. The empirical evidence supports the theoretical expectation, suggesting that control of corruption perception influences workers' trust in the state and increases their demand for labor formality. In contexts with low control of corruption perception, informality levels might be high as lack of control of corruption perception can diminish workers' desire to pay the financial contributions that formality implies. Relatedly, as control of corruption perception increases, workers' confidence that state actors will make good

use of their contributions and efficiently supply the services and guarantees inherent in formality increases. Accordingly, as Figure 2.4 lets us observe, increases in labor market flexibilization and businesses deregulation can decrease labor informality when control of corruption perception is high. Under these circumstances, when workers' trust the state will keep corruption under check, lowering the costs for formal job creation (through labor market flexibilization and less rigid business regulation policies) will meet workers' incentives to demand formality.

While the country-level analysis developed in this work provides some initial clues on whether the theoretical expectations are empirically supported, individual-level analyses are an essential next step to uncovering the specific theoretical mechanisms proposed in this paper. Thus, future efforts should concentrate on using public opinion data, including experiments, and semi-structured interviews with informal workers, to identify if the quality of their relationship with the state is a causal determinant shaping workers' incentives to remain or not in informality.

## **2.5 Conclusion**

Labor informality is a vexing issue across Latin America, with negative implications for policy areas from economic growth to social safety nets. And despite decades of efforts by national governments and international organizations, informality levels remain stubbornly high across the region. The extant literature agrees that informality emerges when the costs of formality are higher than its benefits. Thus, factors such as labor market rigidity, excessive tax burdens on workers, alternative noncontributory social programs, and high costs for starting a business, among others, contribute to high levels of informality in the region by influencing the cost and benefits for businesses to supply formal jobs, and workers to enter formality. A shortcoming of these works is



they often fail to consider the decision-making process of workers, or assume policies influencing material costs and benefits of formality and informality will affect short-run calculations of workers.

Unlike most previous works studying informality, this project steps back from standard materialistic assumptions regarding workers' incentives. Instead, the project aims to uncover how the overall relationship between state and citizens impacts workers' incentives to work formally. In other words, this project posits that when state actors repeatedly fail to offer basic public benefits and services to improve the situation of vulnerable populations, informal workers see no benefit in paying the financial contributions that labor formality often implies. This resistance to formality, despite the stability and protection it promises, derives from a long-standing view that the state has failed to provide credible and reliable benefits/services or improvements in their living standards affecting workers' trust in the state.

Empirical results in this Chapter support the proposed contention. First, unlike mainstream explanations of labor informality suggest, labor market flexibilization and fewer regulations on businesses by themselves do not have any significant effect on reducing informality levels. On the other hand, higher control of corruption perception and higher state capacity have direct effects on reducing labor informality levels as hypothesized. Furthermore, control of corruption perception appears to have a moderating role in the efficacy of labor market flexibilization and fewer regulations on businesses to decrease labor informality. The logical next step for this project is to develop analyses at the individual level to determine whether the theoretical mechanisms proposed in this paper are the ones guiding the observed results, and this is what Chapter 3 and 4 develop.

An important implication of this project is that mainstream efforts and piecemeal policies targeting specific costs and benefits of formality could fail to reduce intractably high levels of

labor informality in much of the region. Such policy reforms are unlikely to be efficacious as workers will continue to see formality having little expected utility from a lack of trust in the state and its commitment and capacity to guarantee the benefits of formality. Thus, more comprehensive structural approaches focusing on strengthening the relationship between the state and citizens could be vital for effective labor market reform.

## Chapter 3

### An Evaluation of Desire for Labor Informality in the Colombian Context

Chapter 2 develops a country-level evaluation of the effects that, on the one hand, labor market rigidities and business regulations, and on the other hand, state capacity and corruption, have on labor informality levels across Latin America. Overall, the empirical results of the previous chapter suggest little evidence to confidently assume that higher costs on formality – related to a more rigid labor market and more regulations on businesses – have a discernible and direct<sup>15</sup> effect on labor informality. Yet, the results indicate the possible relevance that trust in the state – measured with perception of state capacity and corruption – has on labor informality. This chapter transitions from a country to an individual-level analysis to more clearly identify the dynamics and motivations of people's choices and desire to work in the formal or informal sector.

Previous works suggest labor markets are not purely segmented (Alcaraz, Chiquiar, and Salcedo 2015; García 2017), and dynamics of *exclusion* and *exit* influence labor informality levels (Perry et al. 2007). This dissertation centers on exit dynamics, where workers consciously decide to work in the informal sector given certain motivations. Nevertheless, beyond the common cost-benefit considerations of formality and informality, this work focuses on trust in the state as a relevant factor for workers to demand labor formality. This chapter develops a descriptive analysis of the characteristics of informal workers in Colombia and the potential incentives of these workers

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<sup>15</sup> Empirical results of Chapter 2 allow the suggestion of an interactive dynamic where policies lowering the material costs of formality can be effective to reduce informality levels under context with high trust in the state. Yet, as such trust decreases, the effect of policies reducing the costs of formality diminishes.

to choose formality or informality. For this analysis I use Colombian household survey data from the Departamento Administrativo Nacional de Estadística (DANE) for 2019.

The descriptive analyses here are relevant for this work as they provide indications of the existence of a desire of workers to remain in informality, at least in the Colombian context. In other words, while this chapter does not develop a causal explanation for such desire, it provides support for the existence of such desire. Thus, while the known suboptimal conditions of informality compared to formality exist as previous work has suggested (Gasparini and Tornarolli 2009; Herrera-Idárraga, López-Bazo, and Motellón 2016; Mesa-Lago 2009; Tokman 2007), workers remain satisfied with the working conditions they face in the informal sector, and even if presented with the opportunity to switch to the formal sector, they would not do it.

This chapter provides a good introduction for the chapter to come, which deepens in the motivations of workers' labor choices – specifically desire to demand informality – and further implications on how lack of trust in the state might affect the desire to establish formal relations with it. Thus, unlike the previous chapter which develops a country-level analysis, from this point forward we enter to evaluate individuals, their desires, and motivations to remain in informality.

This chapter is divided into three parts. First, it assesses the Colombian labor market and develops a model to identify how relevant sociodemographic factors empirically link to individuals' propensity to informality. Second, assesses individuals' attitudes and desire toward informality. Finally, concludes.

### **3.1 Characterization of Informal Workers in Colombia**

Relative to other Latin American countries, Colombia has medium levels of labor informality (See Figure 1.1 in Chapter 1). Nevertheless, in 2019, close to 60 percent of workers were informal<sup>16</sup>. Thus, while Colombia places in the medium of distribution in Latin America regarding informality, these levels are concerningly high as more than half of the workers are informal. This shows not just how concerning labor informality is for Colombia, but for the region in general, since a country that places in the middle of the distribution in the region has more than half of the workers working informally.

Given such levels of labor informality, identifying the factors associated with such high informality becomes relevant. Hence, this chapter begins by evaluating individuals' sociodemographic characteristics and how these characteristics associate with their propensity to labor informality. To develop this analysis, it is used DANE data for the year 2019, presenting first some descriptive evaluation and then regression models. These descriptive analyses use the following variables: *informality*, *sex*, *education*, *age*, *urban*, *couple*, and *children*.

*Informality* is a binary variable where formal workers are coded as 0 and informal workers as 1. This variable of informality defines informal workers as those occupied individuals who do not contribute towards retirement. The variable *sex* is a binary variable where men are coded as 0 and females as 1. The variable *education* is an ordinal variable from 0 to 5, representing the highest educational level an individual has achieved<sup>17</sup>. The variable *age* is also continuous and represents the person's age when they were interviewed. The variable *urban* is a binary variable where 0 represents a person who lives in a rural area, and 1 means a person who lives in an urban area.

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<sup>16</sup> These results come from DANE data, where an informal worker is defined as an occupied worker who is not making contributions towards retirement.

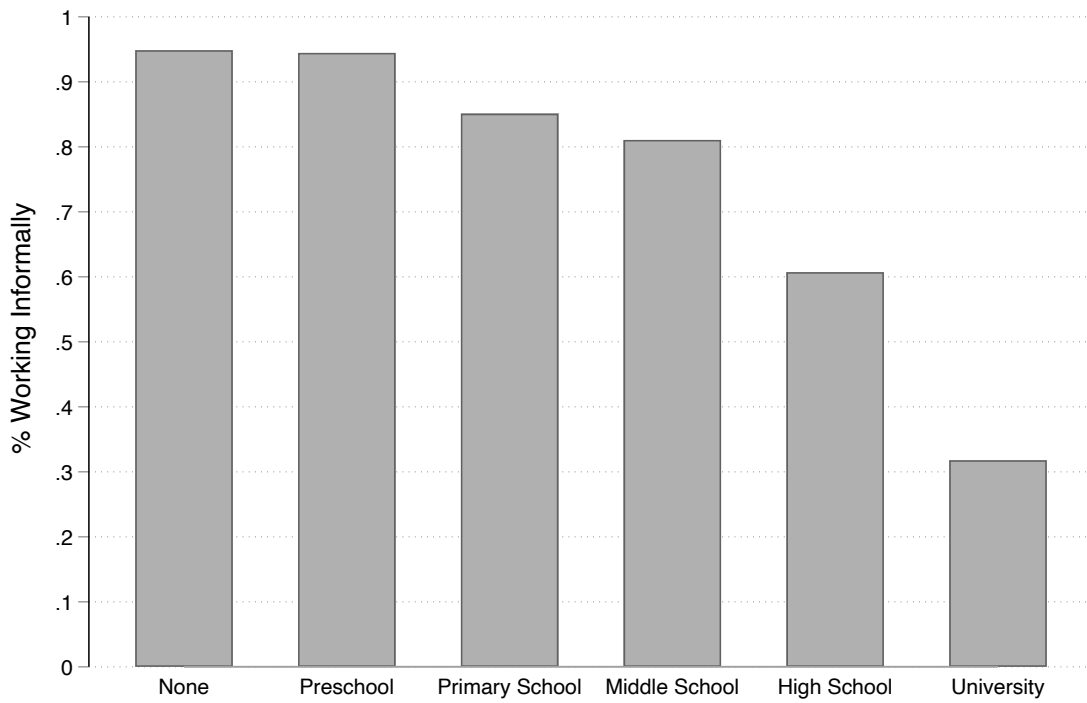
<sup>17</sup> In the variable education, 0 represents no education, 1 is preschool, 2 is elementary school, 3 is middle school, 4 is high school, and 5 is bachelors or higher degree.

*Couple*<sup>18</sup> is a binary variable where 0 represents a person who does not have a couple and 1 a person who has a couple. Finally, the variable *children* indicate whether, in the last week, an individual cared for a kid. As mentioned, all variables are taken from the household survey data of DANE for 2019. In addition, in the Appendix, Table 3.1A, can be found descriptive statistics of the variables used in this chapter.

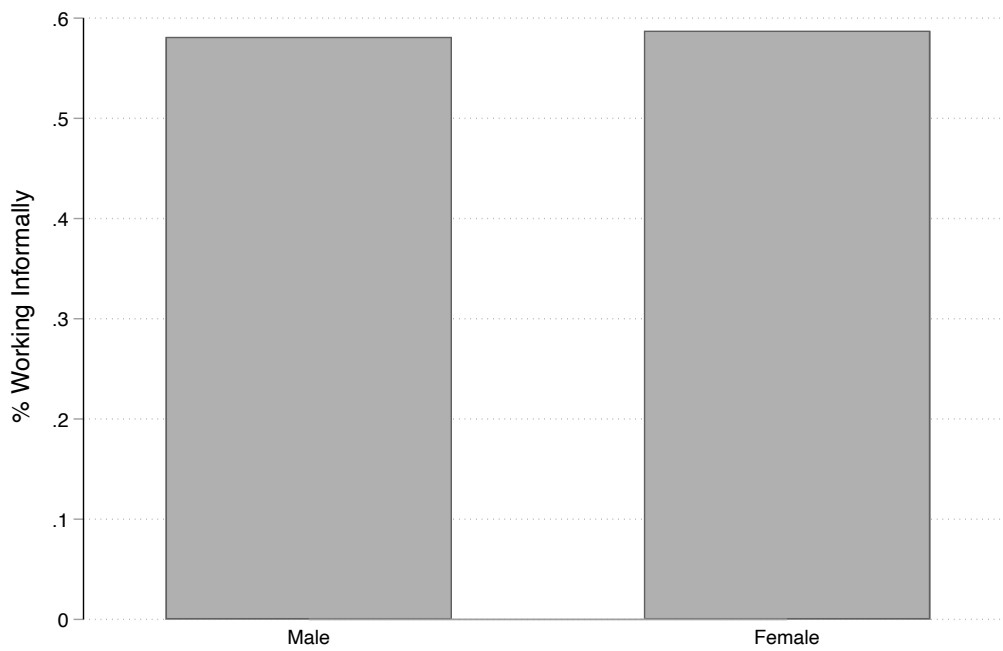
From the DANE data, we see the following results. First, as observed in Figure 3.1, individuals with lower education work in larger proportion informally. In other words, close to 95 percent of workers with no education work informally. This proportion reduces progressively as individuals get more educated to the point where, among individuals with a university education, about 32 percent work informally. We can observe no big differences when looking at informality levels among men and women. In Figure 3.2, we observe that among working men, about 58 percent are informal. And among working women, about 59 percent are informal. Furthermore, as observed in Figure 3.3, about 87 percent of workers in rural areas are informal, compared to about 56 percent of workers in urban areas. Finally, we cannot observe important differences in proportions of individuals working informally when looking to those people who have a couple or take care of children compared to those who do not have a couple or do not take care of children.

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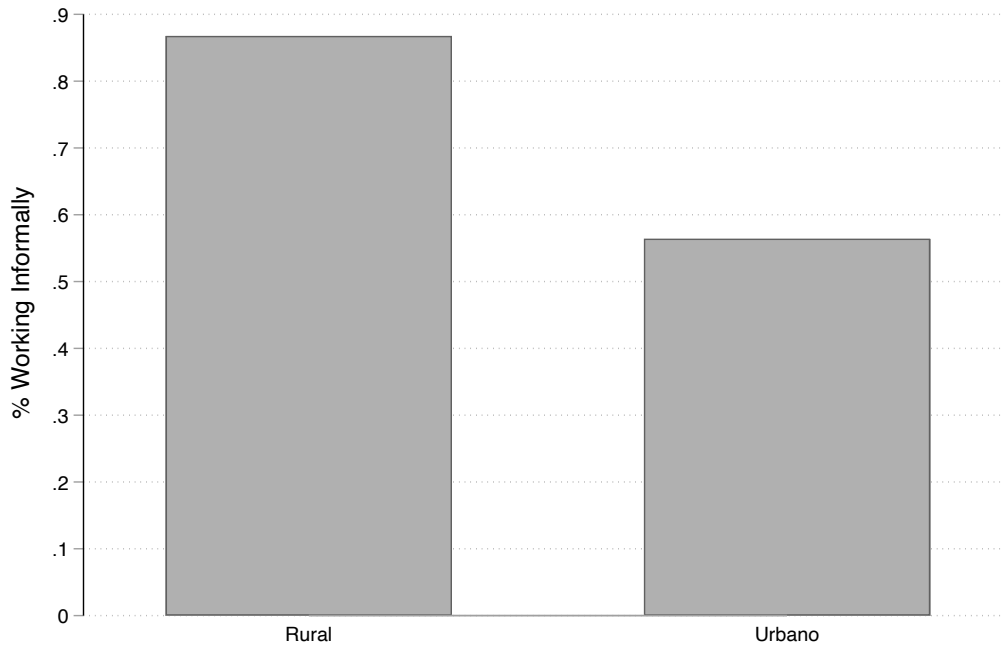
<sup>18</sup> The variable *couple* codes as 0 people who is separated, divorced, widow, or single. And codes as 1 people who is not married but lives with a couple, or is married.



**Figure 3.1.** Informality Levels Across Educational Levels.



**Figure 3.2.** Informality Levels Across Males and Females.



**Figure 3.3.** Informality Levels Across Workers Living in Rural and Urban Areas.

While the previous descriptive exercise indicates factors such as education and living in a rural area are associated with a higher propensity to being an informal worker, such descriptive analysis cannot reveal how each of the previously evaluated variables empirically links to the propensity of informality after controlling for the other variables. Thus, as follow, this chapter develops multivariate logistic regression models with that purpose, with the dependent variable being *informal*; and *sex*, *education*, *age*, *urban*, *couple*, and *children* as independent variables.

Table 3.1 displays the results of the models. In Model 1, the dependent variable *informal* includes both employed and independent workers. In Model 2, the dependent variable *informal* includes just employed workers<sup>19</sup>. And in Model 3, the dependent variable *informal* is composed

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<sup>19</sup> Individuals are coded as employed workers if they work as employed in a private or public company or organization.



just of independent workers<sup>20</sup>. The reason of developing this discrimination of dependent variables is because some employment conditions, such as workers' flexibility, vary across employed and independent workers. Hence, this might affect the effect some independent variables have over the dependent variable.

Overall, the results from Table 3.1 let us observe that, across all models, being a female, holding all other variables constant, significantly increases individuals' likelihood to be an informal worker across all models. On the other hand, holding all other variables constant, being more educated, being older, living in an urban area, and having a couple significantly decrease the likelihood of informality across models. Finally, taking care of children has different effects across models.

Most of these results are consistent with previous literature (Bernal 2009). For instance, scholars have already evaluated the effect gender has on different labor outcomes in Colombia. For instance, regardless of improvements in the labor market, women, especially those who lack higher education, do not experience improvements regarding informality. And heads of the household often have to accept informal jobs to escape unemployment (López-Castaño and Lasso 2016). In addition, women in the most fertile years, experience a higher probability of informality than women in less fertile years (Ramírez, N., Tribín, A. M. & Vargas 2016). Other studies also find evidence consistent with the previous results. The association between lower education and a higher likelihood of informality (Cardarelli et al. 2023; Quiroga-Martínez and Fernández-Vázquez 2021). And how policies directed to stimulate education enrollment can be a relevant alternative to reduce informality effectively (Albertini and Terriau 2019).

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<sup>20</sup> Individuals are coded as Independent workers if they work as domestic workers, self-employed, are employers, and unpaid family workers, among others.

**Table 3.1.** Sociodemographic Factors' Effects on Propensity to Labor Informality.

VARIABLES	Model 1 All workers	Model 2 Employed	Model 3 Independent
Female	0.262*** (0.007)	0.270*** (0.011)	0.162*** (0.013)
Education	-0.937*** (0.004)	-0.911*** (0.006)	-0.980*** (0.007)
Age	-0.007*** (0.000)	-0.045*** (0.001)	-0.019*** (0.000)
Urban	-0.769*** (0.019)	-0.404*** (0.031)	-0.400*** (0.034)
Couple	-0.228*** (0.007)	-0.393*** (0.012)	-0.134*** (0.013)
Children	0.098*** (0.008)	-0.079*** (0.013)	0.251*** (0.016)
Constant	5.026*** (0.027)	4.751*** (0.044)	6.748*** (0.050)
Observations	464,129	215,000	248,831

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

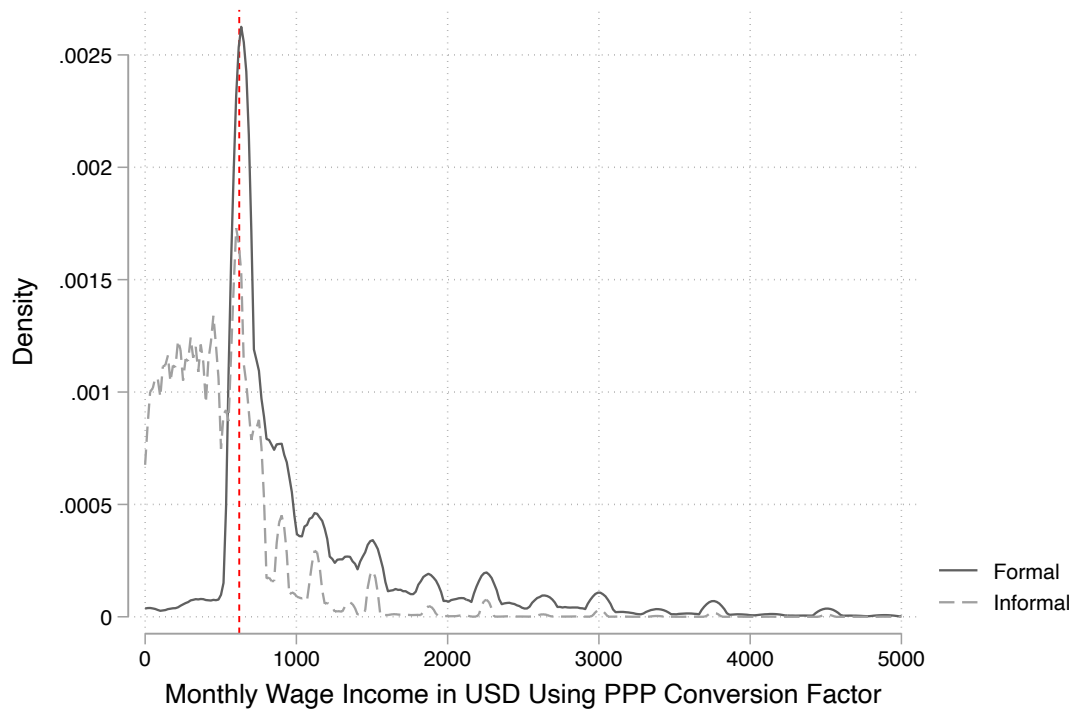
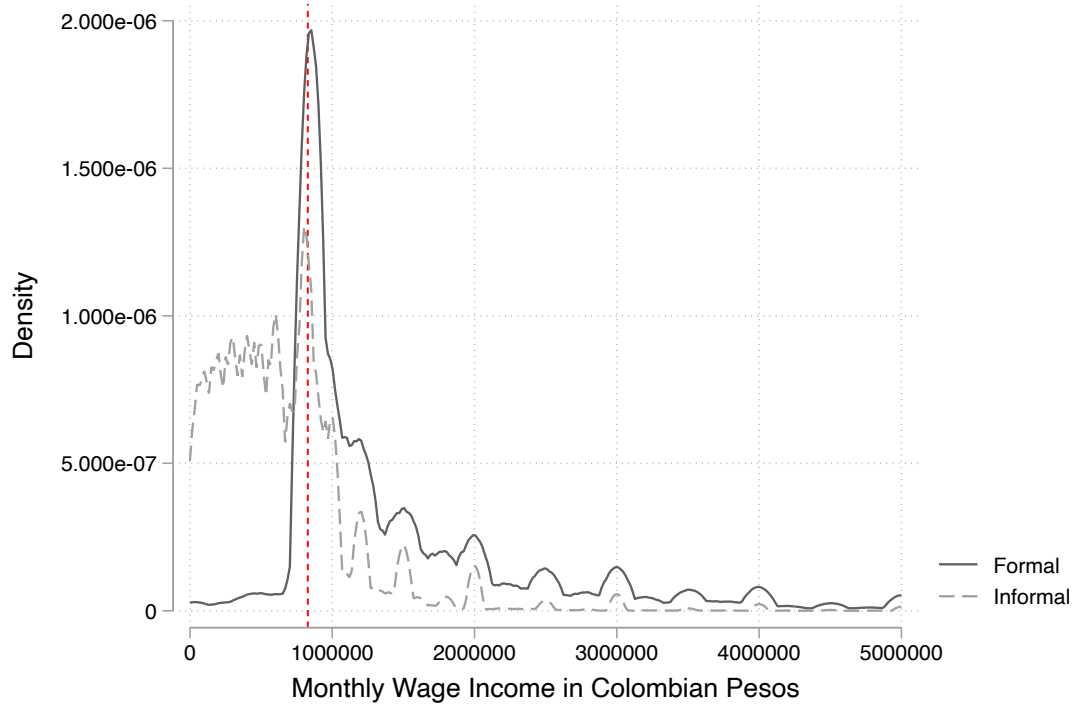
One might think the previous results support the *exclusion* explanation of informality, as characteristics such as being a woman or having lower education generate barriers for workers to work formally. For instance, firms might prefer not to hire women, especially those in the most fertile years, as it would generate higher costs because of factors such as maternity leave (Ramírez, N., Tribín, A. M. & Vargas 2016). Or on the other hand, less educated individuals cannot find desired formal jobs as they are not capacitated enough for those positions. Relatedly, informal workers' lower income levels than formal workers are consistent with the *exclusion* explanation of informality.

Figure 3.4 shows most informal workers have monthly incomes below the minimum legal salary (the red dashed line on the horizontal axis marks the legal minimum wage in Colombia for

2019, which was \$828.116 COP – about \$622 USD<sup>21</sup>). More concretely, according to household survey data from DANE, among all workers in Colombia for the year 2019, about 45 percent earn below the minimum legal wage with a median income of \$828.116 COP (~\$622 USD), right on the minimum wage income. This is very telling as at least half of the workers in Colombia do not earn more than the minimum wage. When looking at these aspects across formal and informal workers, we observe that 72 percent of informal workers earn below the minimum legal wage with a mean monthly income of \$673.933 COP (~\$506 USD) and a median monthly income of \$600.000 COP (~\$450 USD), all below the monthly minimum wage. On the other hand, just less than 10 percent of formal workers earn below the minimum legal wage with a mean income of \$1,661.766 COP (~\$1.248 USD) and a median income of \$1,100.000 COP (~ \$826 USD), representing better salaries compared to informal workers and logically, most of those salaries above the minimum wage.

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<sup>21</sup> This value and the following values in USD were obtained using PPP conversion factor.



**Figure 3.4.** Kernel Density of Monthly Wage Income for Formal and Informal Workers for the Year 2019.

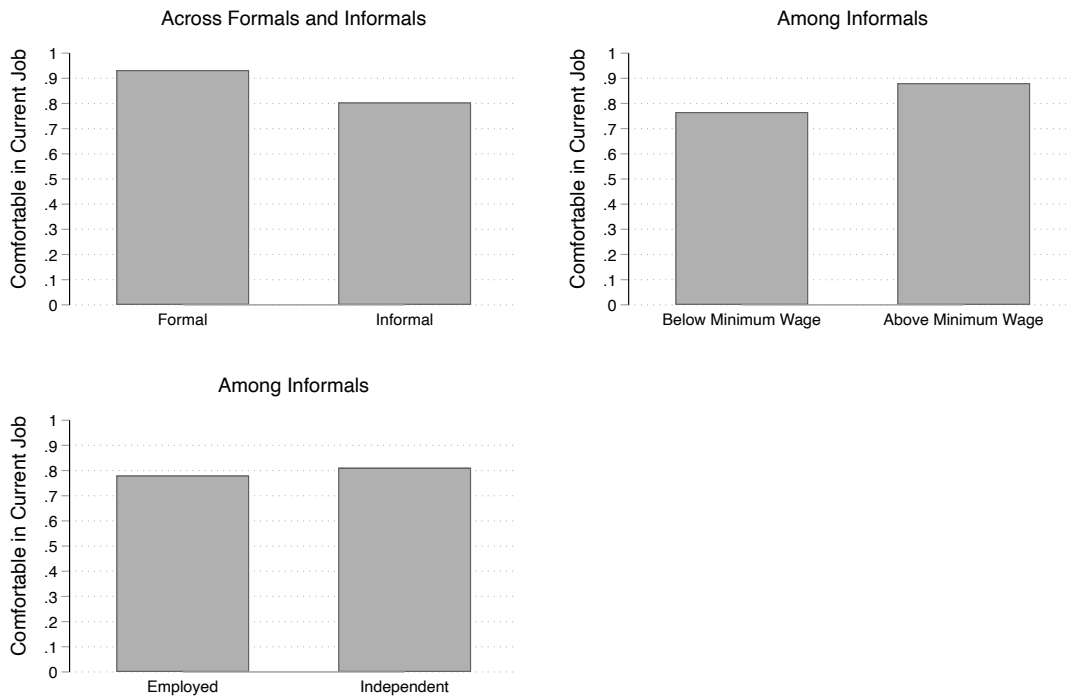
*Notes:* The red dashed line on the X axis marks the legal minimum monthly wage for the year 2019.

All in all, the general conditions of informal workers are suboptimal compared to formal workers. Besides the lack of job security protections and barriers to access key social services (Gasparini and Tornarolli 2009; Mesa-Lago 2009a; Tokman 2007), informal workers generally get much lower salaries and returns from education (Herrera-Idárraga, López-Bazo, and Motellón 2015). Thus, the idea of a predominantly segmented labor market where workers are excluded from the formal sector seems probable, and the *exit* explanation is less plausible. In other words, why would workers self-select in informality considering the suboptimal conditions of informality compared to formality? While the *exclusion* explanation seems compelling to explain the high levels of informality in Colombia and Latin America, DANE data reveals another different reality, where a substantial share of workers appear to be satisfied with the conditions of their informal jobs and choose them voluntarily, even when presented with other comparable alternatives in the formal sector.

### **3.2 Workers' Desire for (In)formality**

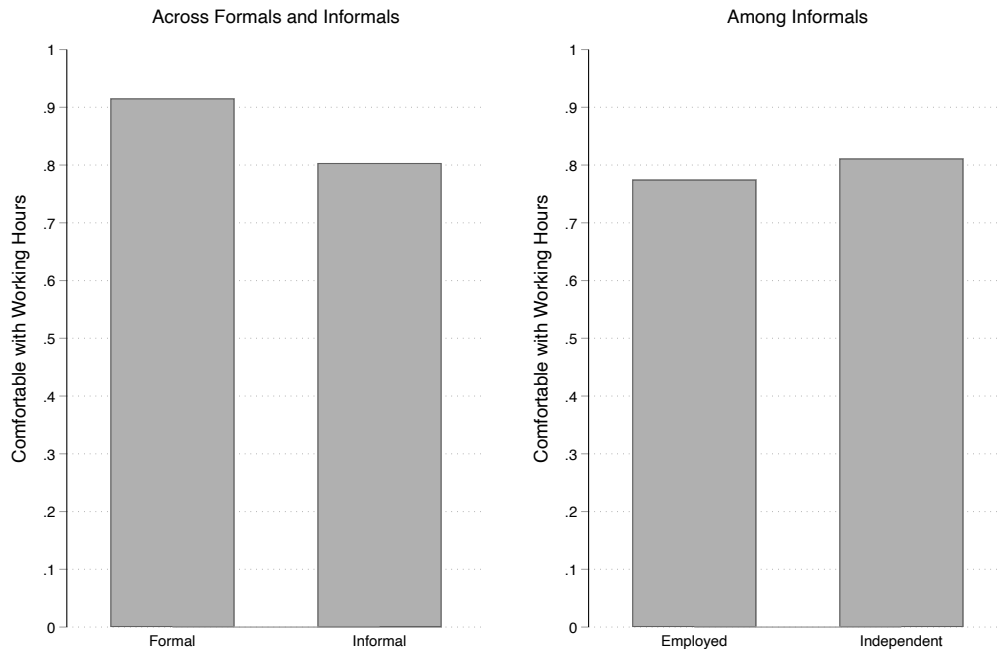
Perry et al. (2007) argue the informal sector is "tremendously heterogeneous...., then, there is a continuum in the relative importance of exclusion and exit among individual workers within a country" (p. 2). While some factors can impose barriers for workers to work formally, individuals often prefer informality and choose it voluntarily. This section uses DANE data to unveil workers' desire to choose informality or remain working informally. This chapter does not try to make a causal evaluation of the factors behind individuals' desires. Yet, it shows the plausibility of the *exit* explanation in the Colombian context.

When asked about how comfortable workers feel with their current jobs, as shown in Figure 3.5, in the top left panel, 93.27 percent of formal workers report they are comfortable compared to 80.43 percent of informal workers. While, as expected, these percentages indicate formal workers are more comfortable with their current jobs relative to informal workers, it is still remarkable that a large majority of informal workers report feeling comfortable. Furthermore, such feeling among informal workers does not vary much even when considering factors such as the nature of the informal work (e.g., employed or independent informal worker observed in the bottom left panel in Figure 3.5) or whether they are earning below the legal minimum wage (top right panel in Figure 3.5). In other words, close to 78 percent of employed informal workers report feeling comfortable with their current jobs, and close to 81 percent of the independent informal report the same. In addition, for those informal workers earning below minimum wage, 76.62 percent report feeling comfortable with their current job. These results are interesting as some labor conditions of some informal jobs, such as the lack of flexibility of the employed informal workers and wages below the minimum legal wage, might be factors generating some discontent among workers. Nevertheless, according with the previous results, these factors do not seem to affect the comfort of individuals with their current informal jobs.

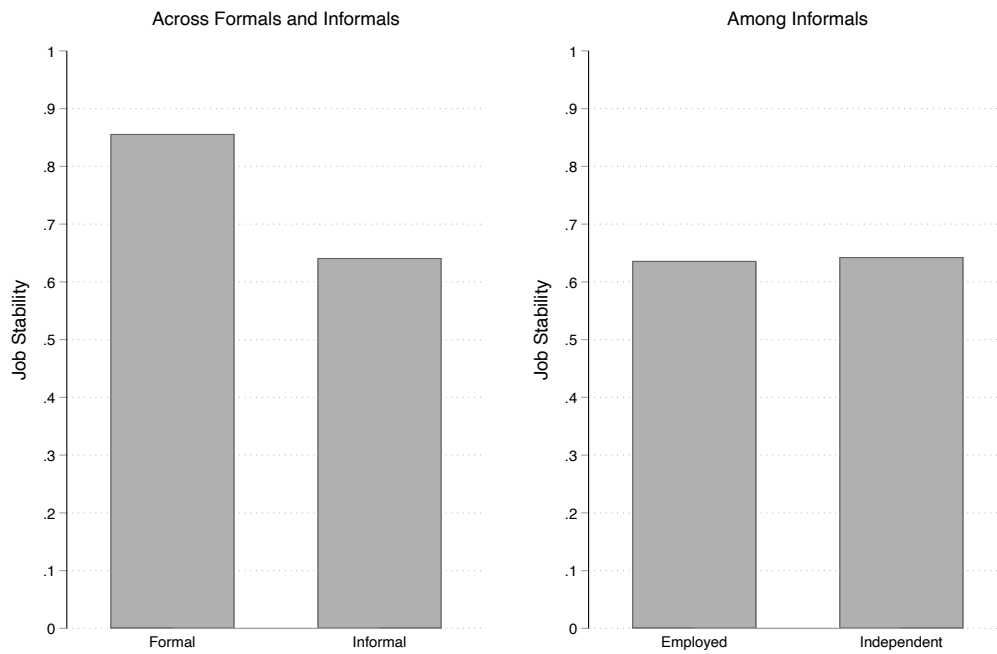


**Figure 3.5.** Proportion of Workers Comfortable in Current Job Across Formal and Informal Workers and Across Types of Informal Workers.

Similarly, when asked about how comfortable they are with their working hours or the stability of their jobs, more formal workers feel better than informal workers (see Figure 3.6 and Figure 3.7). Yet, among informal workers, a majority still report comfort. More specifically, 80 percent of informal workers are comfortable with their working hours, and 64.14 percent consider their current job stable. The results do not change much when looking at these percentages across independent and employed informal workers. Concretely, 77.47 percent of employed informal workers say they are comfortable with their working hours compared to 81.68 percent of independent informal workers. On the other hand, 63.64 percent of employed informal workers consider their current job stable, and 64.30 percent of independent informal workers consider the same.



**Figure 3.6.** Comfortable with Working Hours Across Formal and Informal Workers and Types of Informal Workers.



**Figure 3.7.** Comfortable with Job Stability Across Formal and Informal Workers and Types of Informal Workers.



Overall, the previous figures, as expected, suggest that indeed formal workers, compared to informal workers, are more comfortable with their current job conditions. Nevertheless, these figures also suggest that, among informal workers, a large majority of them seem comfortable with their job and job conditions. It poses an interesting puzzle with what we know about informality. That is, why would informal workers feel satisfied with their current labor conditions, given the lack of job security, social protections, and lower returns of informality? The data used in this chapter does not allow us to answer such a question. Nevertheless, it provides enough clues to suggest that an important portion of informal workers are satisfied with their current condition, and the prospects of changing it are not desirable. Thus, the data suggest the *exit* explanation of informality, where workers voluntarily self-select into informality, is plausible.

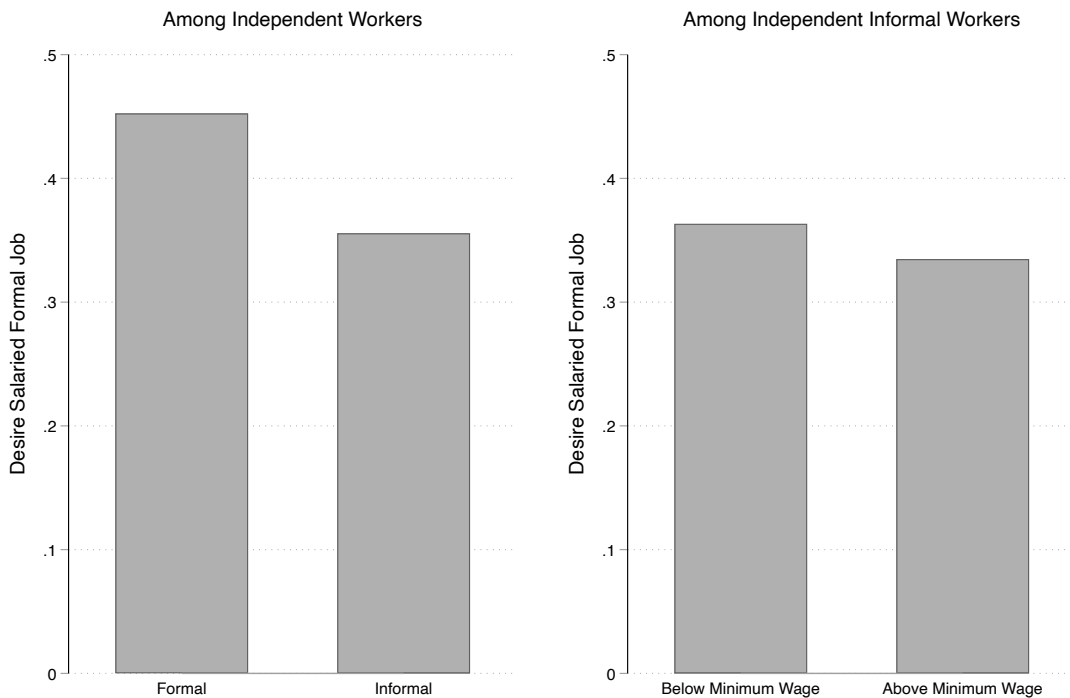
To evaluate more directly the desire of informal workers to transition towards a formal job, this work uses another question from the DANE's household survey. This question is asked just to independent workers, and inquire whether, if they were offered a salaried job where they would obtain the same salary as their current job but with social security benefits, would they take it? Looking at the raw percentages in Figure 3.8, more formal independent workers (45.25%) would accept a salaried formal job than informal independent workers (35.56%). In other words, formal independent workers who enjoy both the benefits of formality and the flexibility of working independently, would take the opportunity to transition towards a formal salaried job in higher proportion than independent informal workers, who do not have the benefits of formality as independent formal workers do. This result is unexpected as formal independent workers enjoy both the flexibility and the benefits of formality. Nevertheless, the costs of formality<sup>22</sup> are

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<sup>22</sup> In Colombia, independent workers assume the full amount of social security contribution, while for employed workers, the employer assumes more than half of the social security contributions.

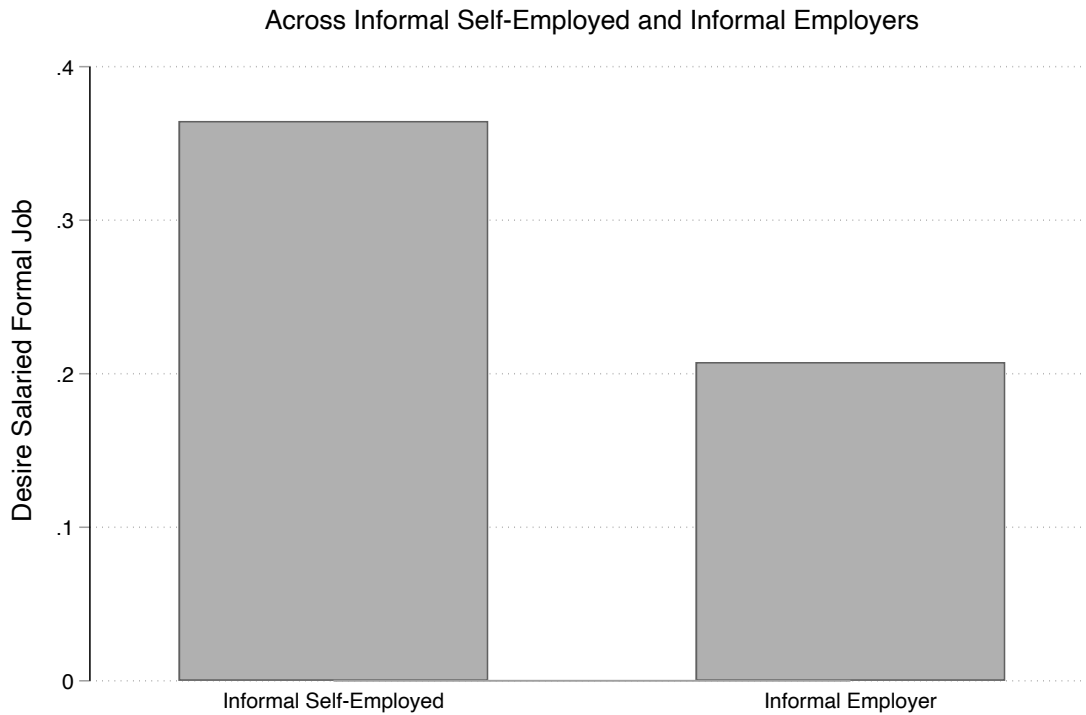
completely assumed by the worker, while when individuals are employed, the employer assumes part of such costs. This might be an explanation of this result.

Now, focusing only on independent informal workers and discriminating on whether they earn below or above the minimum legal wage, 36.33% of independent informal workers earning below the minimum wage would take a salaried job with social security benefits. Similarly, 33.48% of independent informal workers earning the same or above the legal minimum wage would take a salaried job with social security benefits. Thus, while more independent informal workers earning below the minimum legal wage would prefer to change towards a formal salaried job, these differences are not substantive – about three percentage points.



**Figure 3.8.** Desire to Switch Towards Salaried Formal Jobs Among Independent Workers.

The previous suggests the lack of value that an important portion of informal workers put on the benefits of formality – e.g., social services such as retirement. And their lack of desire to transition into formality. While these descriptive analyses generally allow us to observe this lack of desire among an important portion of independent informal workers, these do not allow us to identify what underlying factors relate to this lack of desire. Thus, I estimate a logit model including several factors that could influence independent informal workers' desire to transition or not into a formal salaried job. Among the factors included in this analysis are *sex*, *education*, *age*, *urban*, *couple*, and *children* coded the same as in the models of Table 3.1. In addition, these models include the variable *income*, a continuous variable of the monthly income of workers in Colombian Pesos. In the Table below this Chapter develops models for all independent informal workers (Model 4), for just informal self-employed (Model 5), and for just informal employers (Model 6). The decision to develop separate models for these groups is that they might contain very different type of workers with very different incentives, influencing their inherent desire to transition towards formality. The self-employed workers group can contain gig workers who would appreciate the stability of transitioning towards a salaried formal job. On the other hand, informal employers are business owners who might have less incentives to changing their current occupations and independence. Some dynamics supporting this suggestion can be observed in Figure 3.9 where we can see that a higher proportion of informal self-employed would want to make the transition towards a salaried formal job compared to informal employers. More specifically, 36.47 percent of informal self-employed would switch towards a salaried formal job, while 20.76 percent of informal employers would switch to the salaried formal job.



**Table 3.9.** Desire to Switch Towards a Salaried Formal Job Across Independent Self-Employed and Informal Employer.

Overall, the results of Table 3.2 suggest being a female, being older, and having a higher income, decreases the likelihood of independent informal workers to desire to transition towards a formal salaried job. On the other hand, living in an urban area and taking care of children increase the independent informal workers' likelihood to desire a formal salaried job. Furthermore, these results are consistent across models, meaning the factors similarly influence all independent informal workers (Model 4), self-employed informal workers (Model 5), and independent informal employers (Model 6). Finally, having a couple and being more educated are the only result that are not statistically significant across models. Having a couple has a negative effect across models but just have a significant effect for all independent informal workers and independent informal employers but not for self-employed informal workers. While this result is not statistically

significant for Informal self-employed, the negative effect observed across models makes sense as informal workers can be subsidiaries of their partners – who can be working formally – and receive social security benefits even if they do not contribute, decreasing their incentives to make social security contributions (Levy 2008). Additionally, being more educated has a positive effect across models, but is not statistically significant at conventional levels for informal employers. The logic of this can be that, as more educated workers are, they might feel more comfortable sticking with their own business even in condition of informality.

Deepening in the logic of some of these results, it is possible to suggest first, stereotypical gender roles that influence the belief that the place of women is within the home (Alesina, Giuliano, and Nunn 2013), can affect their desire to prefer more flexible independent jobs, even if they are informal. On the other hand, income associates negatively with the desire of informal independent workers to switch towards a salaried formal job. This result can suggest that as income increases, the capacity of individuals to insure risks increases, too, lowering the value of the social services associated with formality – e.g., health insurance and retirement. Furthermore, independent informal workers in urban areas might be more prone to desire a formal salaried job than those in rural areas because of the lack of benefits formality has in rural areas. In other words, the suboptimal provision of services in rural areas compared to urban areas might affect individuals' attitudes toward formality. Thus, the desire for formality might decrease in rural areas as the lack of state and provision of key social services related to formality might diminish the benefits of formality. While the explication of this mechanism is purely speculative, further looking at this result might be important not just to identify how sub-national inequalities (Otero-Bahamon 2019) affects the desire for labor formality, but also affect other attitudes that influence the establishment of formal relationships between individuals and the state.

**Table 3.2.** Sociodemographic Factors' Effect on Desire for a Salaried Formal Job Among Independent Informal Workers.

VARIABLES	Informal	Informal Self- employed	Informal Employer
Female	-0.406*** (0.011)	-0.402*** (0.011)	-0.248*** (0.056)
Education	0.026*** (0.005)	0.024*** (0.005)	0.036 (0.023)
Age	-0.019*** (0.000)	-0.019*** (0.000)	-0.012*** (0.002)
Income	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
Urban	0.367*** (0.019)	0.344*** (0.020)	0.462*** (0.098)
Couple	-0.020* (0.011)	-0.009 (0.011)	-0.114** (0.056)
Children	0.073*** (0.013)	0.071*** (0.013)	0.174*** (0.062)
Constant	0.116*** (0.030)	0.106*** (0.030)	-0.861*** (0.169)
Observations	178,663	168,511	9,859

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Overall, these results allow us to identify some factors associated with independent informal workers' desire to switch towards a salaried formal job, such as being a woman, income, education, and living in a rural area. Nevertheless, the previous analysis does not intend or allow us to make assessments of the specific mechanism decreasing informal workers' desire to enter the formal sector. Given the results of this chapter, we can only suggest that in the Colombia context, both the *exclusion* and *exit* explanation help to explain the large levels of informality in the country. More concretely, the descriptive and regression analyses suggest that many informal workers are content or comfortable with working informally and the working conditions that derive from it. In addition, if they had the opportunity, many would not leave their informal job for a formal one.

### 3.3 Conclusion

The argument of this work centers on an *exit* explanation of labor informality where workers decide to work informally as they do not desire to establish formal relationships with the state due to their lack of trust towards it. This chapter focuses on the Colombian context and begins to evaluate individuals' incentives to self-select in the informal sector using DANE data. While this data does not allow to development of causal analyses of the factors behind workers' desire to remain in informality – nor to test the proposed argument that lack of trust in the state affects that desire – it provides support in favor of the *exit* explanation of labor informality. More concretely, while more formal workers feel comfortable at their jobs, working hours and job stability, among informal workers, most of them are also satisfied with their current jobs and working conditions.

These results are interesting for the following reasons. The conditions of labor informality are generally sub-optimal compared to labor formality, as informal workers get excluded from key social services such as retirement. Furthermore, the salaries and returns from education are lower for informal workers compared to formal workers. Thus, why would workers self-select in informality considering the suboptimal conditions of informality compared to formality? While it is not possible to shed light on this question in this chapter, the empirical results provide suggestive evidence of the coexistence of both the *exclusion* and *exit* explanations of labor informality in the Colombian context.

In agreement with other literature (Bernal 2009), some sociodemographic characteristics, such as being a female and having a lower education, increase the propensity to be an informal worker. These results might evidence the existence of a segmented labor market where individuals' characteristics such as sex or educational level generate barriers to work formally. Yet, the data at

hand also makes evident that most informal workers are satisfied and feel comfortable with their current job arrangements, working hours, and sense of stability. Thus, suggesting that labor informality is mainly the product of a labor market that excludes workers from formality is, at least, imprecise.

When looking deeper at some sociodemographic factors that can decrease independent informal workers' incentives or desire to transition towards a formal salaried job, evidence from Table 3.2 suggests that factors such as being female and living in rural areas decrease such desire. These two factors are interesting, first, in the sense that stereotypical gender roles which define the role of women as the ones who take care of the home and are in charge of childcare, influence their lower incentives to desire a formal salaried job in exchange for the flexibility of an informal independent job. On the other hand, and closer to the argument proposed through this work, rural workers, if had the opportunity, would have less desire to obtain a formal salaried job instead of their informal independent job compared to informal independent urban workers. One explanation for this result can be the lack of trust individuals in rural areas have in the state. Suboptimal provision of public services and the overall presence of the state in rural areas might decrease the trust workers have in the state. Accordingly, they would have lower expectations regarding the state's commitment to its promises. Therefore, their desire to establish formal relationships with the state – in this case, paying the contributions and potential taxes formality implies – decreases.

All in all, this chapter establishes an important base to suggest informal workers self-select into informality, and even if they had the opportunity to transition towards formality, many of these informal workers would not take it. This chapter lacks the evaluation of causal mechanisms; nevertheless, the following chapter develops such analysis and allows us to test the argument this dissertation proposes more precisely.



## **Chapter 4**

### **State Trust and Demand for Informality: An Individual-Level Analysis**

While labor informality presents one of the most concerning social, political, and economic challenges across Latin America. And explanations on the issue of labor informality often suggest it is a voluntary decision of workers who self-select into informality given certain motivations (Perry et al. 2007). Academic works which have tried to empirically evaluate whether workers opt for informality voluntarily have lacked specific evaluations of the theorized mechanism and the actual outcome, that is desire of workers to choose informality over formality. Recently, academics in political sciences, economics, and other disciplines have made important efforts to make analyzes at the individual level looking at the specific motivations, attitudes, and opinions of individuals around the issue of informality (Acevedo-Pardo 2021; Altamirano 2019; Baker et al. 2020; Berens 2015b, 2015a, 2020; Berens and Kemmerling 2019; Holland 2017, 2018; Holland and Hummel 2022; Singer 2016). Yet, much work is left to do in this scholarship. More concretely, in unveiling and testing the specific motivations of workers to prefer to stay in informality, and correctly testing the desire of workers to remain or not in informality and the costs they are willing to incur for a formal job. This work provides efforts in that direction.

Generally, the theoretical proposition of this dissertation suggests trust in the state, state actors, and institutions are factors contributing to workers' incentives to self-select into informality. In other words, this work argues the lack of trust in the state and its commitment to improve individuals' vulnerability and supply the benefits and protections formality would imply is a

relevant factor decreasing individuals' desire to establish formal relationships with the state, leading them to self-select into informality. The previous chapters have developed this argument in detail, provided cross-country level analyses providing some support for the argument, and developed an analysis in the Colombian context in favor of the reality of the *exit* explanation of labor informality, suggesting individuals feel comfortable with the conditions of informality and often choose informality voluntarily. This chapter empirically evaluates the proposed theoretical argument at the individual level – trust in the state affects individual desire to remain or not in informality – using outcomes variables that precisely measure individuals' preferences and demand for formal or informal jobs, and the costs they are willing to incur for a formal job.

For this purpose, an original online survey containing a survey experiment, and novel measures for demand and willingness for informality/formality was fielded in Colombia in 2023. The empirical results from this survey suggest trust in the Colombian state affects Colombians' demand and willingness for labor formality. More concretely, higher state trust decreases individuals' likelihood to choose an informal over a comparable formal job alternative. Furthermore, the more individuals trust the Colombian state, the more costs they are willing to bare – payment of social security contributions – for formality. These results go along with the theoretical proposition of this dissertation, suggesting low state trust is a factor contributing to the decreased willingness of individuals to enter the informal sector and pay the costs for formality. Thus, providing relevant theoretical and empirical contributions to the scholarship on labor informality and *exit* explanation of labor informality, specifically.

#### 4.1. Informal Workers' Demand for Formality. A Review

As observed in the previous chapter, at least in the Colombian context, a substantial share of informal workers feels comfortable with the conditions of their informal jobs, and, given a comparable formal job alternative, they would still prefer the informal job. These results go along with the *exit* explanation of informality, which suggests informal workers voluntarily self-select in the informal sector. Nevertheless, further understanding of the dynamics and specific motivations behind the desire of workers to choose the informal sector over the formal is still necessary.

Previous works trying to explain the motivations behind why workers would prefer informal jobs instead of formal ones point out factors such as noncontributory social programs which substitute de benefits of formality, valuations of some characteristics of informal jobs such as time flexibility and freedom, and the low valuation of the benefits that formality offers, among others (Bosch and Campos-Vazquez 2014; Garganta and Gasparini 2015; Levy 2008; Maloney 2004). Other accounts suggest a more structuralist perspective suggesting opting out from formality relates to the quality of the relationship workers have with the state (Berens 2020; Perry et al. 2007; Saavedra and Tommasi 2007).

The more structuralist explanation relates to the valuation workers give to the social benefits of formality and might account in workers' private cost-benefit analyses. Nevertheless, the theoretical postulate of this work, while related, goes beyond these cost-benefit calculations and effects of specific policies which can increase or decrease the costs and benefits of formality and informality. In other words, in the postulate of this work, individuals, based on their experiences, develop a lack of trust in the state, which leads them to distrust the state's commitment

towards them. Thus, they are inclined to avoid establishing formal relations with it. Even if there are policy efforts to decrease the costs to enter formality. Thus, informality is a manifestation of this lack of trust, and policies changing the costs/benefits of formality and informality would not have a big effect on workers' desire to enter formality since they simply do not trust the state in committing to its promises and the inherent benefits of formality, as Chapter 2 suggests.

One of the most important contributions of this dissertation, and this chapter more specifically, is to more directly test the proposed postulate – the effect trust in the state has on demand for labor informality – by precisely measuring the outcome variable that is demand for informality. To my knowledge, besides the work of Romero and Mantilla (2022), which finds that individuals' knowledge of the composition of the labor market can influence their decision to opt out or not from formality, there are no other experimental efforts to test the *exit* explanation of informality. And, to my knowledge, no other works directly test the effect trust in the state has on individuals' decisions to choose between formality and informality. Some empirical analyses have made some approximations, such as that of Berens (2020), who used AmericasBarometer data for 2008 and 2010 to identify the relationship between decreased trust in the state and poor perception of public services with increased likelihood of informality. Nevertheless, these results need to be looked at carefully since it does not test workers' decisions, but instead, their propensity to work informally. And as Berens notes, the direction of the causal mechanism can go either way, with conditions of informality potentially exacerbating vulnerabilities and further decreasing trust in the state and its capacity.

Thus, the original survey presented below is valuable to the literature on the *exit* explanation of informality and to test the effect of trust in the state on demand for informality for the following reasons. First, and one of the most important contributions of this work is that this

effort let respondents choose between two similar job alternatives, but one is formal, and the other is informal. Thus, this study is not measuring individuals' propensity to be an informal worker, as other analyses do, but instead, measures individuals' actual desire to be an informal worker or not. In addition, the survey includes a question measuring willingness to pay the costs for formality that, further, lets us identify the effect of state trust on the value of formality by measuring the amount individuals are willing to pay to be in the formal sector.

Second, given the questions included in this survey we can directly identify the relationship between trust in the state and demand for formality as the theoretical proposition of this work suggests. Because in this work we do not test the relationship of trust in the state with propensity for informality, but instead give individuals' the opportunity to choose their preference between a formal and informal job. We can more confidently assume trust in the state is the one leading that decision-making process and not the other way around. Still, even if the empirical results suggest trust in the state causes a lack of demand for informality, conditions of informality still can generate a decrease in trust in the state. Yet, it does not diminish the proposed argument as conditions of informality and the incapacity of the state to protect informal workers' basic needs are part of the individuals experiences with the state. It, then, further affects individuals' desire to establish formal relationships with the state, and increasing their desire to continue working informally. In this order of ideas, the dynamics of *exit* and *exclusion* can be more intertwined than previously argued, and dynamics of exclusion that pushed workers' away from formal jobs can affect individuals' experience with the state that then, can affect their decisions to work formally or not, given the opportunity is presented.

The following sections describe the characteristics of the original survey and survey experiment design and explain in detail how the proposed argument of this dissertation is tested.

## 4.2 Data, Experimental Design, and Methods

To test the empirical expectations proposed in this chapter, I use an original online survey with a sample of 1500 Colombian adults. This survey was administered between May and June 2023 and approved by the Institutional Review Board at the University of Mississippi. This is a national sample administered by NetQuest with specific quotas on sex, age, socioeconomic level, and geographical location to match recent Colombian census. Furthermore, some criteria were established for the analyses below to filter out bad and unreliable answers, which reduced the amount of observations included in the analyses below. Among these criteria is the survey duration. In other words, the analyses below considered those survey responses among the 10<sup>th</sup> and 90<sup>th</sup> percentile of duration (from 531 to 2286 seconds). Thus, this work tries to exclude surveys that took too little or too long to answer. More details of the sample's descriptive demographic characteristics, considering and not the duration criteria to exclude bad and unreliable answers, can be found in Table 4.1A and Table 4.2A in the Appendix, along with other relevant variables used in this analysis.

In this online survey, I included a vignette experiment intended to identify how positive or negative performance of the Colombian state in its purpose to maintain or improve the population's welfare influence state trust, demand for informality and willingness to pay the costs for labor formality. For this, the experiment design randomly assigned respondents one out of three vignette treatment possibilities (a neutral, a positive, and a negative prompt) related to the state's capacity to maintain or improve the welfare of the Colombian population. The randomly assigned treatments are the following:

**Neutral:** One of the roles of the state is to deliver or guarantee the delivery of services directed to maintain or improve the welfare of the population.

**Positive:** One of the roles of the state is to deliver or guarantee the delivery of services directed to maintain or improve the welfare of the population. In Colombia, thanks to the public policies and efforts of the state, the coverage of health services has gone from 29,2 percent of the population in 1995 to the 99 percent of the population in 2021. These improvements have benefited the welfare of the Colombian population.

**Negative:** One of the roles of the state is to deliver or guarantee the delivery of services directed to maintain or improve the welfare of the population. Nevertheless, the cases of corruption, common in Colombia and where state agents are often involved, damage the capacity of the state to deliver or guarantee the delivery of such welfare services to the population.

After randomly assigning one out of these prompts to respondents, they were asked to write a sentence describing their sentiment toward the Colombian state, considering the given prompt. This was to make respondents think about what they had just read and increase the prompt's effect on their attitudes toward the Colombian state.

After receiving one of the three treatments, and thinking on the given prompt and writing a sentence describing their sentiments towards the Colombian, the survey asked respondents their trust towards the Colombian state on a scale from 0, being no trust, to 10 being a lot of trust. Thus,

we can evaluate whether prompts had positive or negative effects on respondents' trust towards the state and how this change in trust might or might not affect demand and willingness for labor formality. In addition, with the trust towards the Colombian state question we can clearly identify the relationship between state trust and demand for informality and willingness to pay the costs for formality.

We put two questions in the survey to measure the outcome variables, *demand for informality* and *costs for formality*. The first, *demand for formality*, is a hypothetical scenario where individuals have to choose between two similar job alternatives, but one is formal and the other is informal. The specific question reads as follows:

Imagine you have two job opportunities which pay the exact same salary and will allow you to live comfortably. Yet, one obligates you to make social security contributions from your salary which implies the Colombian government will give or guarantee you the provision of health services and retirement. The other job does not require you to make social security contributions, meaning, you do not have the benefits of health insurance and retirement but you will obtain the full amount of the salary.

Which job would you take?

- The job that obligates you to make social security contributions and is subject to income taxes
- The one which DOES NOT obligate you to make social security contributions and IS NOT subject to income taxes



Individuals who chose the job that obligates them to make social security contributions and be subject to income taxes were coded as 0, and individuals who chose the job that do not obligate them to make social security contributions or be subject to income taxes were coded as 1.

The next outcome variable, *costs for formality*, is measured by a question asking respondents, for the job that obligates them to make social security contributions, what is the higher percentage from their salary they would be willing to give for social security contributions. They can choose any percentage from 0 to 100 from a sliding scale. Yet, the analysis below includes those who choose any option from 0 to 50 on the sliding scale, as it seems unrealistic that an individual will choose to discount more than half of her salary to pay toward social security contributions, raising some doubts regarding these responses' credibility. Setting the threshold at 50 is very discretionary, and for that reason, in the Appendix, it is evaluated analyses at different thresholds above and below 50 percent.

With these two novel measures, respondents of the survey can clearly choose their preference between an informal job or a formal job. And given a scenario where individuals had to choose a formal job, what is the maximum costs they are willing to assume for such a formal job. Thus, including these two outcome variables fulfills the purpose to precisely measuring demand for informality and formality, and not just propensity of informality, as many other studies trying to explain the *exit* explanation of informality have done it.

Other relevant sociodemographic characteristics included in this survey are *female*, *socioeconomic level*, *age*, *urban*, *education*, *ideology*, and *income*. Female is a binary variable where 0 are individuals who are male and 1 female. The socioeconomic level is based on respondents reported socioeconomic stratum, which is an official classification that is used in Colombia to identify the residential properties that receive subsidies in their public services or, on

the contrary, contribute to finance the subsidies from the lower stratum. This measure of socioeconomic stratum goes from 1 to 6, where lower values represent lower socioeconomic levels and higher values have higher socioeconomic levels. Age is a continuous variable with the reported age of respondents. Education is an ordinal variable from 1 to 6 where 1 represents individuals with no education, 2 is primary school, 3 is secondary school, 4 is technical education, 5 a university degree, and 6 a post-graduate degree. Ideology is an ordinal variable from 0 to 10 where 0 is left political tendency, and 10 is right political tendency. The final control variable is income, an ordinal variable from 0 to 11 where 0 is no income, and 11 are from those individuals earning more than \$3150000 COP. In addition, the analyses below consider different subgroups, among those, formal and informal workers. Thus, from those respondents who are working, the survey includes a question that ask them whether, themselves or their employers, make social security contributions. The rest of the sample and models that include the whole sample is constituted by adults who are either looking for jobs, students, individuals taking care of home, individuals disable to work, retired individuals, or individuals who are not working and are not looking for a job.

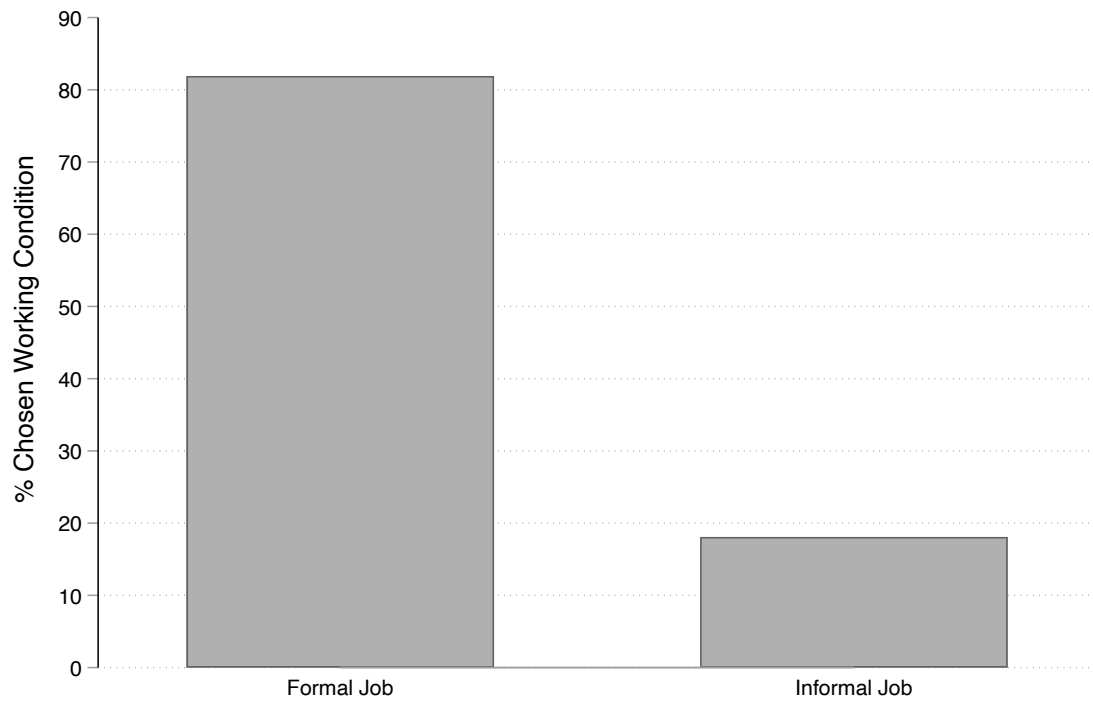
For the analyses of the data obtained from the original survey, this chapter develops a combination of descriptive and regression analyses. The descriptive analyses allow us to observe dynamics of demand for informality and costs for formality across different groups of people. As for the regression analyses, this chapter shows logistic and tobit regression models. The logistic regression models are used for the binary outcome variable *demand for informality*. On the other hand, the tobit regression models are used when the dependent variable is *cost for formality* as this is a limited dependent variable, left censored at 0, and with a corner solution response where individuals' choosing zero might be common. Therefore, the tobit regression model is appropriate

to avoid obtaining negative predicted values given a potential nontrivial amount of observation in this variable being zeroes (Wooldridge 2013:596-604).

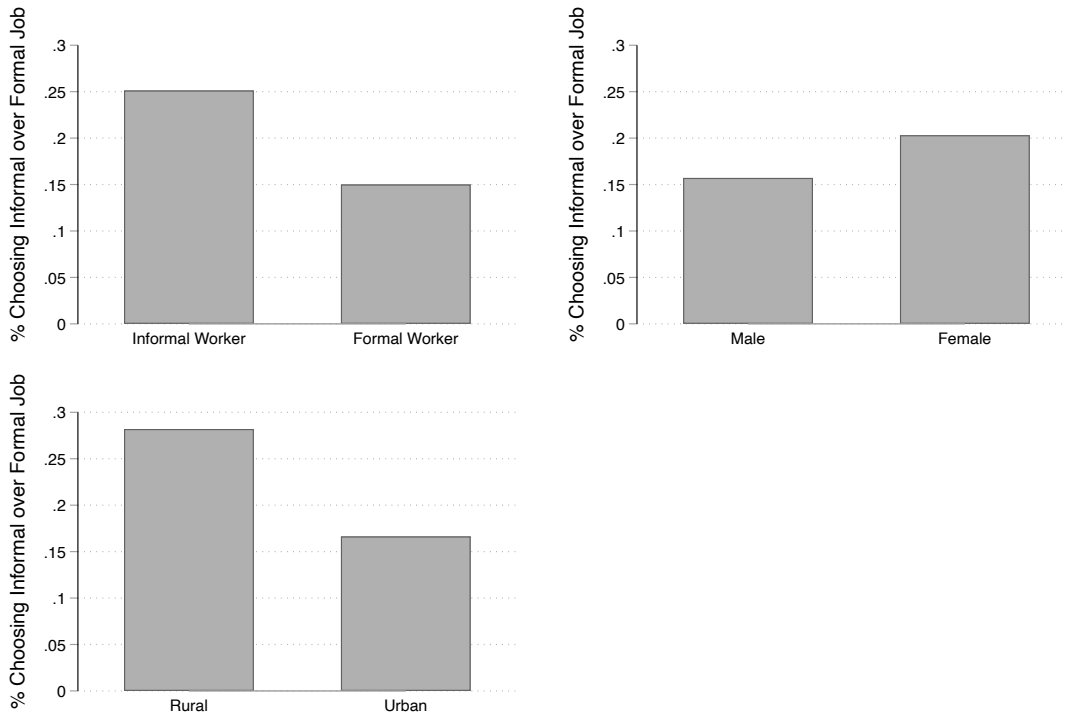
### **4.3 Results**

Before discussing the main results spurring from the original survey, this section begins observing how the outcome variables, demand for informality and costs for formality, vary across different groups with specific demographic and economic characteristics. Figure 4.1 let us observe that, across the sample, most individuals (~82 percent) would prefer taking the formal job instead of the comparable informal job (~18 percent). These results show evidence, that across this sample, the preference of individuals for a formal job instead of an informal one if they had the option to choose. Nevertheless, these preferences vary across social groups as shown in Figure 4.2. The upper left panel shows that among informal workers, about 25 percent would choose the informal job instead of the comparable formal job, and among formal workers 15 percent will choose the informal alternative. Thus, informal workers, in a higher proportion compared to formal workers, prefer then informal job alternative. Furthermore, on the upper right panel we can see that among female, about 20 percent would choose the informal job, and among male, about 15 percent have a preference for the informal job. Taking these together, we observe that female more than male prefer the informal job instead of the comparable formal job. Finally, from this figure, bottom panel, we can observe that among individuals in rural areas about 28 percent prefer the informal job. And among individuals in urban areas, about 16 percent would choose the informal job instead of the comparable formal alternative. Thus, we can identify that individuals in rural areas prefer,

in a higher proportion compared to individuals in urban areas, the informal instead of the formal job alternative.



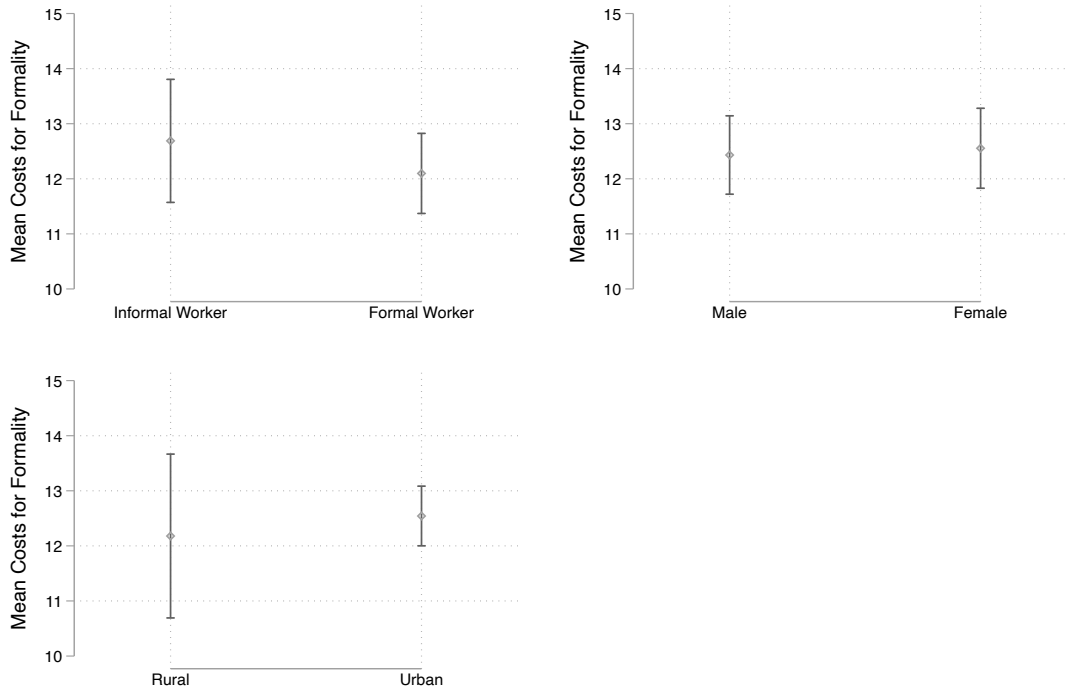
**Figure 4.1** Proportion of Individuals Preferring a Formal Job Alternative or an Informal Job Alternative.



**Figure 4.2.** Proportion of Individuals Preferring an Informal Job Alternative Across Various Socioeconomic Groups.

Overall, the previous result allows us to infer that substantively more individuals would prefer and choose a formal job compared to a similar informal alternative if given the option. Nevertheless, while much lower, a relevant portion of individuals (~18 percent) still would choose the informal job alternative. When compared these results across different groups we can observe first, that more informal workers than formal workers will choose the informal job alternative. It, suggesting that that portion of informal workers (~25 percent) are working informally willingly and do not have a desire to make a transition towards a formal job even if they had the possibility. These reinforces the ideal that a relevant portion of workers self-select into informality. Finally, the fact that a bigger proportion of individuals in rural areas prefer choosing the informal job alternative than individuals in urban areas, as it was observed too in Chapter 3, is suggestive of the

higher distrust towards the state and its capacity to commit with the provision of the benefits of formality.

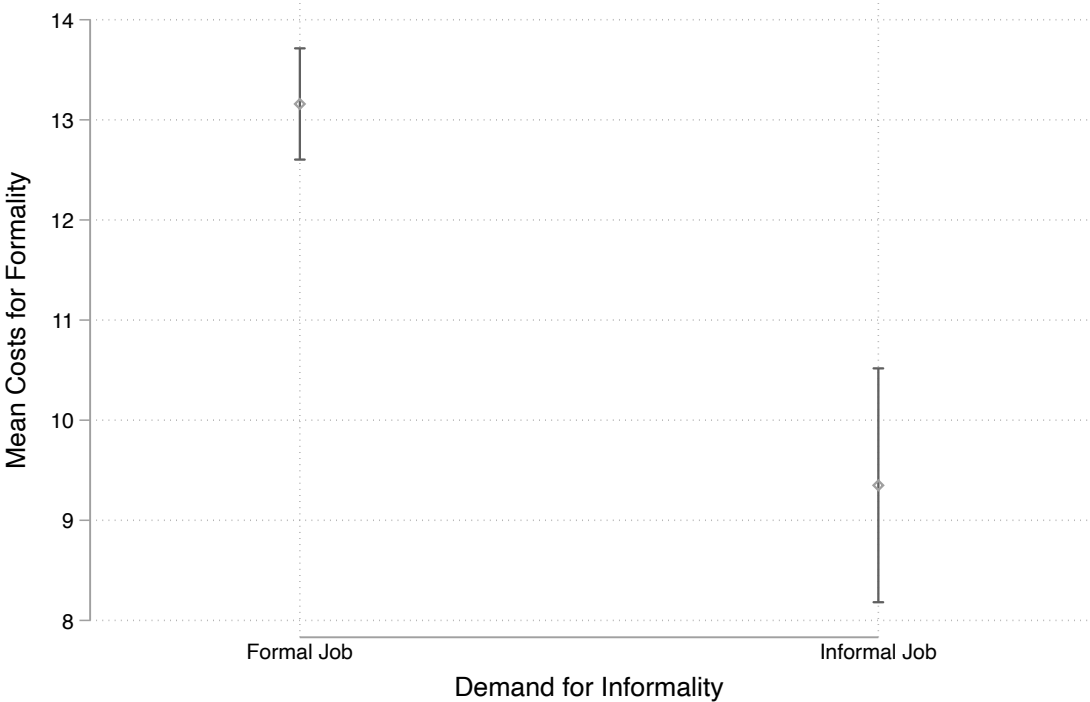


**Figure 4.3.** Mean Costs for Informality Across different Socioeconomic Groups.

In Figure 4.3 we observe results for mean costs for formality individuals are willing to pay across different groups. In this figure we observe no substantive nor statistically significant differences across groups. Overall, across all groups, the mean costs individuals are willing to pay towards social security if they had to choose the formal job alternative is between 12 to 13 percent of their salary. Nevertheless, as we can observe in Figure 4.4, we do see statistically significant and substantive differences in the mean costs for formality across those individuals who chose the formal job alternative and those who chose the informal job alternative when asked the demand for informality question. More specifically, the mean costs individuals who chose the formal job

alternative are willing to pay in social security contributions are about 13 percent of their salary. On the other hand, those who chose the informal job alternative are willing to pay about 9 percent of their salary in social security contributions.

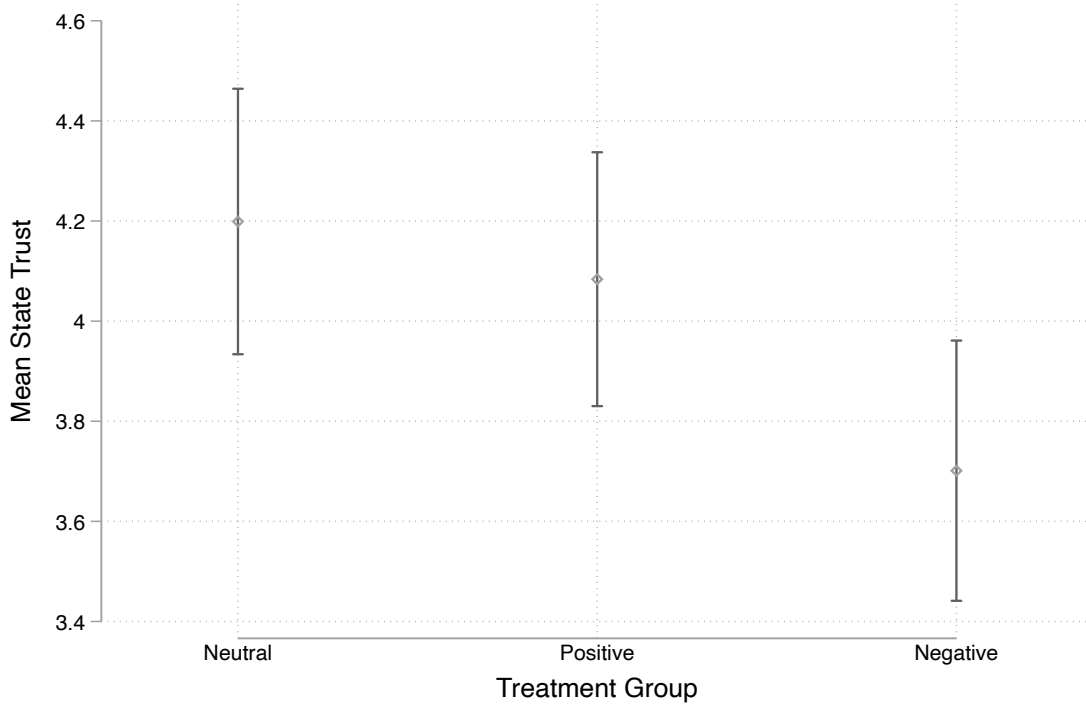
Thus, these results let us observe a correlation between the two proposed outcome variables – desire for informality, and the costs for formality – providing validity to the assumption these are measuring the same phenomena, which is, the degree of involvement individuals are willing to have with the state. After showing these descriptive evaluations of the outcome variables, we now move to the evaluation of the relationship between state trust and demand for informality and willingness to pay the costs for formality.



**Figure 4.4.** Mean Costs for Formality Across Individuals Who Chose the Formal Job Alternative and Individuals Who Chose the Informal Job Alternative.

Figure 4.5 let us observe mean state trust across the different experimental groups. First, the figure shows us the positive treatment group has almost no difference in mean state trust compared to the neutral treatment group – a mean State trust of 4.5 for the neutral treatment group and 4 for the positive treatment group. One possible explanation for this unexpected result is the polarization surrounding the Colombian health system, given the political context when the survey was fielded. Given there is a lot of polarization and strong opinions regarding the health system, the positive treatment might have failed to increase state trust as was expected in the experimental design stages. Furthermore, we see the mean state trust for the group that received the negative treatment (3.7) is lower than that of the neutral treatment group. This difference, as seen in the figure, is statistically significant and corroborated by a t-test that allows us to reject the null hypothesis ( $p .004$ ) – no difference exists between groups. Finally, as expected, the group that received the negative treatment had a lower mean state trust than the group that received the positive treatment. And while there is some overlap between the lower confidence interval bound of the positive group and the upper confidence interval bound of the negative group, the t-test suggests the differences are statistically significant at conventional levels ( $p .019$ ), allowing to reject the null hypothesis.

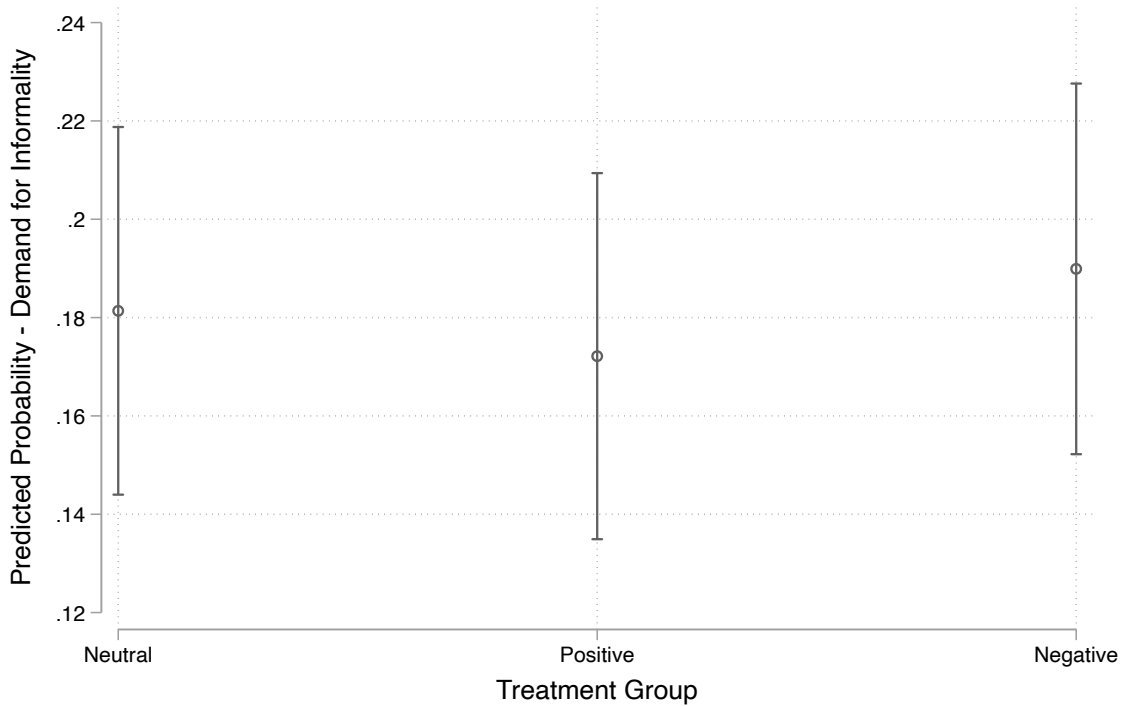




**Figure 4.5.** Mean State Trust Across Experimental Groups.

Overall, we can suggest that the negative prompt that reminds respondents how corruption affects the state's capacity to maintain or improve the population's well-being relates to a decreased trust in the Colombian state, compared to the neutral and positive treatment groups. Nevertheless, this result seems substantively unimportant. Now, I evaluate how the experimental treatments relate or not, with demand and willingness to formality. First, as observed in Figure 4.6, and based on a Logistic model that can be observed in the Appendix, Table 4.3A, there are no substantive or statistically significant differences in the predictive probabilities to choose the informal instead of the comparable formal job across treatment groups. In other words, the predictive probability of choosing the informal over the formal job is 18 percent for the neutral treatment group, 17 percent for the positive treatment group, and 19 percent for the negative treatment group. Thus, we can

suggest the different treatments did not affect individuals' demand for labor informality statistically or substantively.



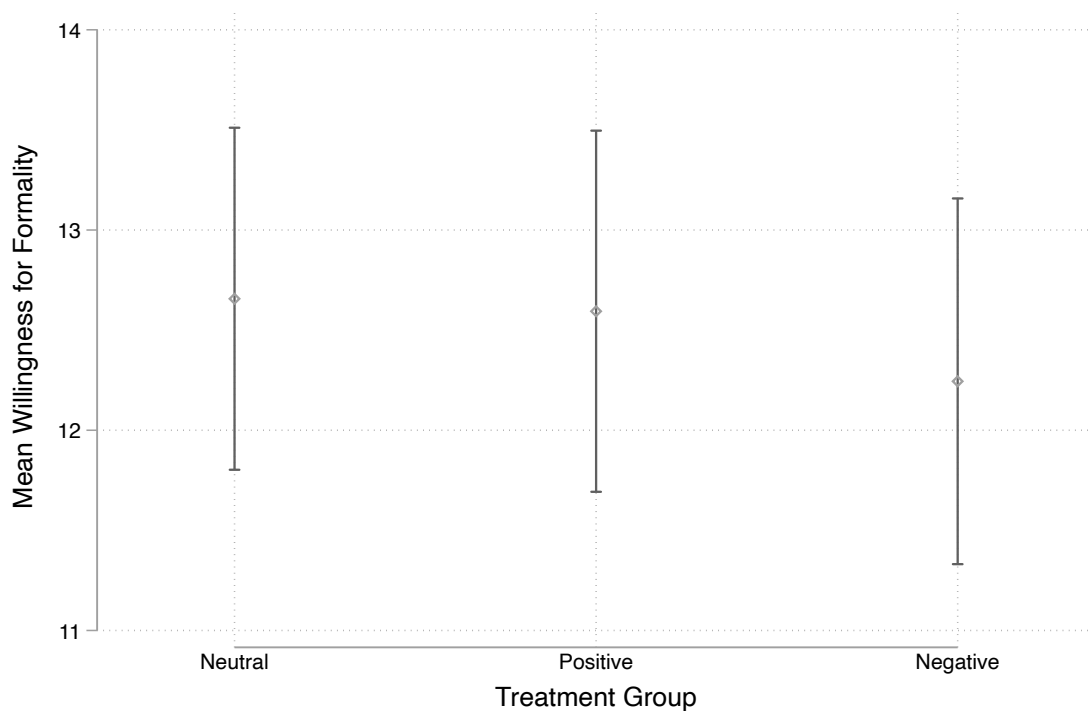
**Figure 4.6.** Predictive Probabilities of Demand for Informality Across Experimental Groups.

The final evaluation of the experimental treatments can be seen in Figure 4.7, which shows the mean willingness for formality across the experimental groups. The figure shows no significant or substantive differences in willingness for formality across groups. More concretely, the mean percentage of the salary individuals are willing to pay in social security is about 12.6 percent for the neutral group, 12.5 percent for the positive group, and 12.2 percent for the negative treatment group.

From the previous results, we can first observe some differences in the mean state trust across experimental groups. More importantly, we can infer some reaction of respondents to the

negative treatment as this group had lower mean state trust compared to the neutral and positive treatment groups, yet, these results appear to be substantively unimportant. On the other hand, the unexpected result of the positive treatment – failing to increase mean state trust in relation to the neutral group – might indicate some issues with such a treatment, probably affected by the political contextual reality of Colombia at the time the survey was fielded. More concretely, while the survey was in the field, the government of President Gustavo Petro introduced in Congress a public health reform proposal. This reform, broadly, looks to increase the public sector's role in providing health services in the country. This health reform proposal has been widely debated in the public sphere with very polarized views. Thus, the positive treatment mentioning advancements in the coverage of health services and its effect on demand and willingness for formality might be somewhat more limited than in a context where the public health issue is salient and strongly polarized.

All in all, from the previous results, we observe no indication the different treatments affect demand or willingness for formality. While these results offer no evidence of the direct effect the experimental treatments might have on demand and willingness for formality, we can still find evidence of the proposed argument by testing the link between state trust and demand and willingness for informality.



**Figure 4.7.** Mean Willingness for Formality Across Experimental Groups.

Now we move to the analysis of various logistic and tobit regression models with cluster standard errors by geographical area<sup>23</sup> to identify the empirical link between state trust and demand and willingness for labor formality. Table 4.1 portrays the results of logistic models and evaluates the effect of state trust over demand for informality – whether an individual, given comparable options, would choose to work formally or informally. This table includes 4 Models, where Model 1 includes just the relevant independent variable, state trust. Model 2 includes sociodemographic controls, Model 3 considers just informal workers, and Model 4 just formal workers<sup>24</sup>. This chapter

<sup>23</sup> The geographical areas these Models are clustered on are Bogotá, Medellín, Cali, Barranquilla, Pereira, Manizales, Armenia, Santa Marta, Tunja, Villavicencio, Ibagué, Neiva, Cúcuta, Bucaramanga, Pasto, and rest of Colombia.

<sup>24</sup> The formal and informal workers are identified in the survey question by a question that asks those respondents who are working, whether if they or their employers make contributions towards their retirement. Those who themselves or their employers make retirement contributions are considered formal, and those who do not make retirement contributions are considered as informal.

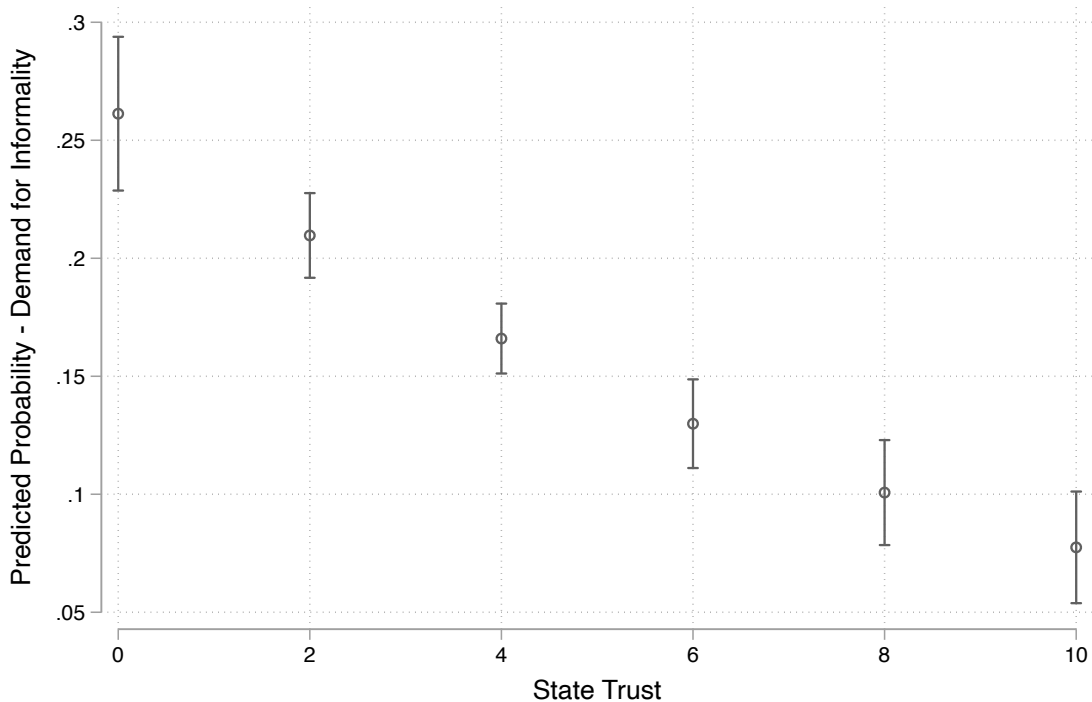
develops separate models for formal and informal workers as their experiences in such labor conditions can impact state trust's influence on their labor preferences. Across models, the coefficient for state trust is negative, as expected by the theoretical proposition, and statistically significant for Models 1, 2, and 3. In other words, for these models, there is evidence that holding all the other variables constant, increases in state trust decreases individuals' likelihood to choose the informal job over the formal job. Finally, the coefficient of state trust for Model 4 – considering just formal workers – is negative. Nevertheless, it is not statistically significant at conventional levels (p-value of .089).

**Table 4.1.** Logistic Regression Models on Demand for Informality.

	Model 1	Model 2	Model 3 Informal Workers	Model 4 Formal Workers
State Trust	-0.151*** (0.027)	-0.144*** (0.028)	-0.160* (0.071)	-0.109 (0.064)
Female		0.213 (0.111)	0.297 (0.319)	0.300 (0.172)
Social Strata		-0.022 (0.073)	0.270 (0.143)	-0.125 (0.096)
Age		-0.005 (0.004)	0.001 (0.011)	-0.003 (0.008)
Urban		-0.560*** (0.120)	-0.912*** (0.242)	-0.192 (0.318)
Education		0.073 (0.133)	-0.218 (0.183)	0.342** (0.121)
Ideology		0.040 (0.036)	0.109 (0.057)	0.055 (0.051)
Income		-0.063* (0.026)	-0.045 (0.075)	-0.104** (0.036)
Constant	-0.964*** (0.161)	-0.710* (0.312)	-0.325 (0.924)	-2.167*** (0.387)
Observations	1,229	1,226	192	552

Robust standard errors in parentheses  
\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

To understand the substantive implications derived from Table 4.1, Figure 4.8, from Model 2, plots the predictive probabilities of demand for formality across values of state trust<sup>25</sup>. In this figure, we observe that the predictive probability of choosing an informal instead of a comparable formal job decreases as state trust increases. In other words, an individual with a state trust value of 2 has a predictive probability of choosing an informal job over a formal job of 21 percent. In comparison, an individual with a state trust value of 8 has a predictive probability of 10 percent. Thus, moving from an individual with a value of state trust of 2 to one with state trust of 8, decreases the predictive probability of choosing the informal job over the formal job by 11 percentage points.



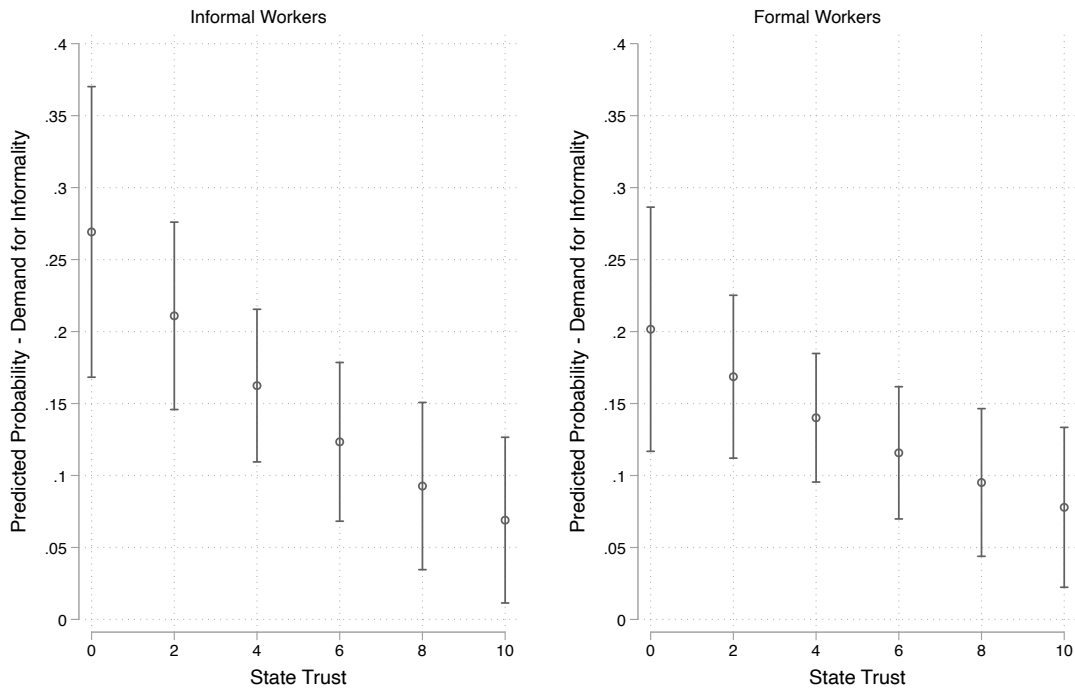
**Figure 4.8.** Predictive Probabilities of Demand for Informality Across State Trust Values with 90% CI.

<sup>25</sup> For this plot, all the other variables were set at their median values. Thus, these predictive probabilities are for a female, with a socioeconomic stratum 2 (low socioeconomic class), 40 years old, living in a city, with a technical education, ideology 5, and with an income between \$915001 – \$1250000 COP.

Figure 4.9 evaluates the substantive results of Models 3 and 4 from Table 4.1<sup>26</sup>. The left panel just considers Informal workers, and we can observe that an informal worker with a state trust value of 2 has a predicted probability of choosing the informal job over the formal job of 21 percent. In contrast, an informal worker with a state trust value of 8 has a predicted probability of 9 percent. On the other hand, as observed in the right panel, a formal worker with a state trust value of 2 has a predictive probability of choosing the informal job over the formal one of about 17 percent, and one with a state trust value of 8 has a predictive probability of 9 percent. From these results, we can first highlight a little more uncertainty among the results of formal workers, given the more overlapping between confidence intervals of the predicted probabilities across state trust values. And second, at lower levels of state trust, the predictive probability of a formal worker choosing an informal job appears to be lower than that of an informal worker, suggesting that state trust has a lower effect on demand for informality among workers working at the formal sector. Nevertheless, from the results observed in Figure 4.9 we still observe the expected dynamics across formal and informal workers – higher state trust decreases likelihood to choose the informal job over the formal job.

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<sup>26</sup> For this plot, all the other variables were set at their median values. Thus, the predictive probabilities for informal workers (left panel) are for a male, with a socioeconomic stratum 2 (low socioeconomic class), 43 years old, living in a city, with a technical education, ideology 5, and with an income between \$915001 – \$1250000 COP. On the other hand, the predictive probabilities for formal workers (right panel) are for a male, with a socioeconomic stratum 2 (low socioeconomic class), 39 years old, living in a city, with a university education, ideology 5, and with an income between \$1600001 – \$2000000 COP.



**Figure 4.9.** Predictive Probabilities of Demand for Informality Across State Trust Values by Formal and Informal Workers with 90% CI.

While Figures 4.8 and 4.9 show that regardless the level of state trust the probability of choosing an informal job over a formal job is relatively low – No more than 21 percent for individuals with a state trust value of 2. It is still important to highlight the substantive differences in such predictive probabilities when increasing the value of state trust. Thus, while individuals would prefer the formal over the informal job most of the time, the chances an individual would choose the informal job over the formal job substantively decrease more as state trust increases.

Table 4.2 shows tobit models' results with cluster standard errors by geographical area, with the effect of state trust on willingness for formality – the percentage of salary individuals are willing to pay in social security. Model 5 include only the relevant independent variables, Model 6 include various sociodemographic control, Model 7 considers just informal workers, and Model 8 just formal workers. It is important to mention again that these models only consider respondents



who choose any option from 0 to 50 in the sliding scale of the variable costs for formality to exclude no credible answers – those who say they are willing to give more than half of their salary in social security contributions. In addition, results without threshold restrictions and with a threshold restriction set at the value 30 of costs for formality can be found in the Appendix. Overall, the results in the Appendix find similarity with the ones of Table 4.2, yet, shows some substantive differences. The results from Table 4.2 suggest that state trust positively affects willingness to pay for the costs for formality across models, and these results are statistically significant at conventional significance levels for all but Model 7 – just informal workers. While the results are statistically insignificant for Model 7, it is important to point out that regardless the small sample size for of this model that just consider informal workers, the coefficients are similar in size to all other significant models in Table 4.2. Thus, taking all models in Table 4.2 together, the results suggest the more trust in the state individuals have, the higher the percentage from their salary they are willing to contribute towards social security for a job that obligates them to make social security contributions. These results go along with the theoretical expectations.

To further understand the substantive implications of the results in Table 4.2, Figure 4.10, using Model 6, plots the predictive values of willingness for formality across levels of state trust<sup>27</sup>. This figure shows us increases in willingness to pay the costs for formality across values of state trust. More concretely, an individual with a state trust of 0 is willing to pay about 11 percent of her salary in social security contributions. In comparison, an individual with a value of state trust of 10 is willing to pay about 14 percent of her salary in social security contributions. Thus, moving from the lowest to the highest value of state trust increases the percentage of their salary that

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<sup>27</sup> For this plot, all the other variables were set at their median values. Thus, these predictive values are for a female, with a socioeconomic stratum 2 (low socioeconomic class), 40 years old, living in a city, with a technical education, ideology 5, and with an income between \$915001 – \$1250000 COP.

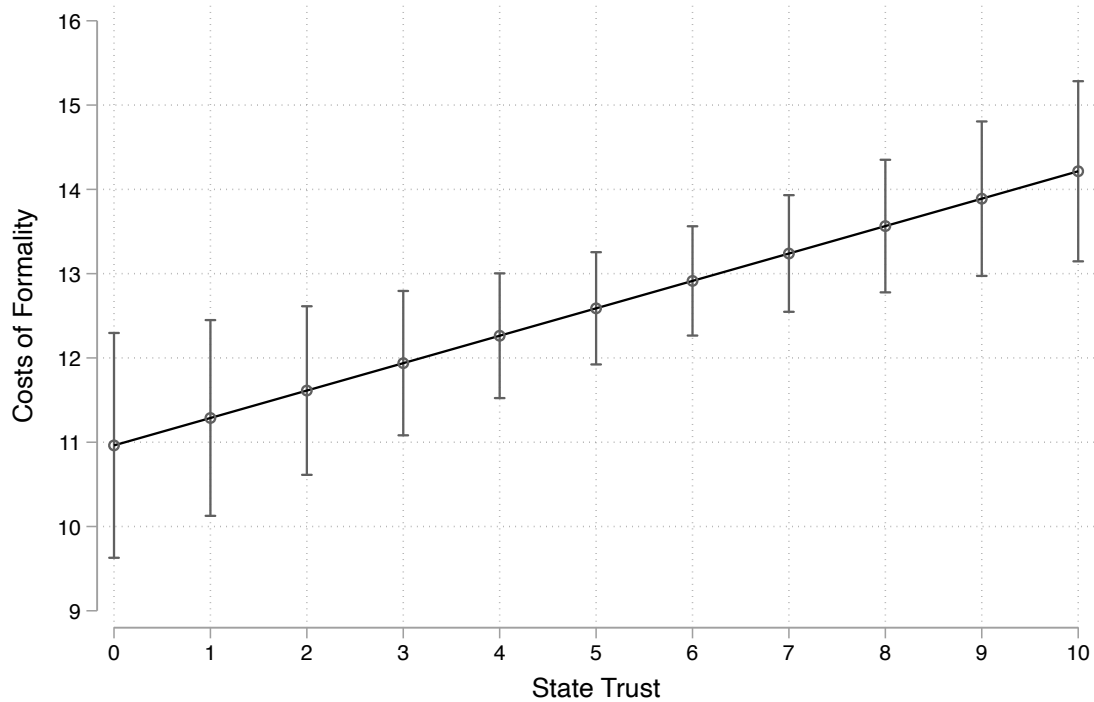
individuals are willing to pay in social security contributions by 3 percentage points. As for informal and informal workers (Models 7 and 8), the substantive increases in willingness to pay the costs for formality, holding all other variables constant, are similar to those observed in Model 6 and Figure 4.4 – about .3, yet, not statistically significant at conventional levels for informal workers.

**Table 4.2** Tobit Regression Models on Willingness for Formality.

	Model 5	Model 6	Model 7 Informal Workers	Model 8 Formal Workers
State Trust	0.306** (0.118)	0.325** (0.123)	0.342 (0.202)	0.367* (0.164)
Female		0.003 (0.497)	0.736 (0.701)	0.095 (0.420)
Social Strata		0.516* (0.204)	0.074 (0.568)	0.808** (0.282)
Age		0.013 (0.022)	0.042 (0.049)	0.024 (0.027)
Urban		-0.014 (0.413)	-0.668 (2.804)	-0.832 (1.061)
Education		-0.341 (0.394)	-0.246 (0.678)	-0.599 (0.385)
Ideology		0.249* (0.116)	0.046 (0.270)	0.314* (0.131)
Income		-0.077 (0.129)	-0.235 (0.217)	0.078 (0.145)
Constant	11.182*** (0.676)	10.085*** (1.109)	11.167** (3.894)	8.642*** (2.149)
Var (Cost For)	82.294*** (8.135)	81.513*** (8.439)	58.668*** (8.336)	74.398*** (10.187)
Observations	1,196	1,193	184	543

Robust standard errors in parentheses

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05



**Figure 4.10.** Predictive Values of Costs for Formality Across State Trust Values with 90% CI.

While these increases might seem substantively small, they are not small in reality, as increases of 1 to 3 percentage points of individuals’ social security contributions will represent important real increases in the monies directed for the provision of the services formality imply. In addition, if social security contributions are considered a form of direct taxation, in a context, such as that of Latin America where direct taxation is very low and revenue is raised by other forms of indirect taxation (G. A. Flores-Macías 2019; Monaldi 2019), individuals’ willingness to pay more for the costs of formality might provide a signal that by reforming and improving the state capacity and the way it functions, provides higher incentives for individuals to pay more for the services the state provides (Bergman 2002; Chan, Supriyadi, and Torgler 2017; G. Flores-Macías and Sánchez-Talanquer 2020; Habibov, Cheung, and Auchynnikava 2018; Timmons and Garfias 2015).

Overall, the previous results suggest empirical evidence for the proposition that state trust has an incidence in demand and willingness for labor formality. In other words, and as theorized through this dissertation, individuals' level of trust in the state plays a role in their decision to establish a formal relationship with the state. In the case of this chapter, lack of trust in the state increases the likelihood of individuals preferring to work informally. In addition, given a scenario where they have to work formally, their willingness for formality – the amount of money they are willing to contribute towards social security – also decreases as state trust is lower, and increases as their level of state trust is higher.

#### **4.4 Conclusion**

Labor informality cannot be attributed to a single factor. Both *exclusion* and *exit* dynamics coexist to make sense of the high levels of labor informality across Latin America. Exclusion dynamics mainly center on the policy dynamics increasing the costs of formality (e.g., excessive labor protections), limiting the supply of formal jobs, or relating to inherent characteristics of workers (e.g., education) that make them unfit to occupy formal job positions. On the other hand, the exit dynamic relates to higher benefits of informality compared to formality. For instance, the existence of noncontributory social programs which provide additional or comparable social services (e.g., health insurance) to informal workers without paying the contributions for those services. Chapter 3 of this dissertation provides evidence of the exit explanation of labor informality in the Colombian context. In such a chapter, a substantive portion of individuals report feeling comfortable with the conditions of informality and working informally. And, even if they

were presented with a salaried formal job alternative, most independent informal workers would not take such an option.

This chapter digs deeper into exploring the *exit* dynamic of labor informality, but, differently to Chapter 3, which suggests the existence of this dynamic in the Colombian context, here I try to unveil one of the mechanisms explaining why informal workers choose informality voluntarily, and directly link this mechanism – trust in the state – with measures that precisely measure demand for informality. Through this dissertation, it has been argued one factor influencing high levels of labor informality across Latin American countries is a lack of trust in the state. In other words, based on their previous experiences with the state, individuals generate expectations regarding state's capacity and commitment toward them. When such expectations are low, they do not trust the state enough to commit to the benefits and protections formality promises. Thus, workers who lack trust in the state will choose labor informality voluntarily. Using original survey data from Colombia, this chapter finds evidence supporting the proposed argument.

As seen previously, the most relevant results suggest higher trust in the state decreases an individual's likelihood of choosing an informal job instead to a comparable formal job alternative. Furthermore, higher trust in the state also increases willingness to pay the costs of formality – how much are willing to pay workers for social security contributions if they had to work formally. The empirical contributions of this chapter are substantial. To my knowledge, this is the first study explicitly investigating the relationship of trust in the state with demand for labor informality and willingness for formality. Previous efforts, such as that of Berens (2020), have made similar empirical evaluations. But the way this analysis measures the dependent variables allows us to explicitly test demand and willingness to pay the costs of formality and not simply the likelihood

of being in the informal sector. Furthermore, this chapter provides a straightforward test of the argument suggested through this dissertation.

Additional efforts should continue investigating what we observed in the results of this chapter. For instance, making similar empirical efforts in other countries of Latin America and the world to identify the external validity of the results. Or, most importantly, test other theoretical implications this dissertation offers. For instance, develop a individual-level analysis identifying whether trust in the state mediates the efficacy of policies trying to decrease the cost of formality to decrease informality levels. Such analysis would permit us to identify whether, even if the conditions of formality become more attractive for informal workers (decreased costs of formality), trust in the state would condition their decision to switch towards the formal sector if presented with the opportunity.

## Chapter 5

### Conclusion

Across Latin America, the issue of labor informality is pervasive with relevant implications for the economic, social, and political conditions. Scholars have suggested a set of parallel explanations for the persistence of high informality across the region. On the one hand, the *exclusion* explanation suggests informality is the product of the high costs for businesses and workers to operate formally, and other characteristics that increase the barriers for workers to find desired formal jobs (e.g. lack of education). On the other hand, there is the *exit* explanation, which suggests workers choose informality voluntarily given the higher net benefits in informality compared to formality. Understanding that labor markets are not segmented, and both exclusion and exit explanations interrelate to explain the informality dynamics across Latin America and other developing regions, this dissertation focuses on the understanding of the exit dynamics of informality from a perspective centered in the relationship of citizens with the state.

The *exit* explanation of informality attributes the motivations of workers to self-select into informal jobs given the higher net benefits of informality. Academic works analyzing these explanations evaluate diverse policy measures affecting the costs and benefits of formality and informality such as noncontributory social programs that give benefits to informal workers without the economic burdens of paying social security. Other works, on the other hand, suggest workers self-select into informality because of the weak linkages they have with the state due to the precarity of the state and the services it provides. This dissertation deepens in such a proposition

providing a more structural perspective to understand the issue.

The argument of this work centers on the *exit* explanation of labor informality, suggesting labor informality often is a manifestation of the lack of trust workers have in the state. Workers, based on previous experiences, generate levels of trust and expectations towards the state. When the state has been incapable of providing solutions and protecting the well-being of its citizens, this generates a general lack of trust and low expectations, decreasing workers' incentive to establish a formal relationship with the state. Thus, labor informality can be a manifestation of the state's ability to create a credibility of the commitment guaranteeing and/or providing the benefits of formality.

The proposed argument has implications for other policy efforts directed to reduce informality levels. More specifically, trust becomes a moderating factor influencing the effectiveness of other policy measures used to reduce labor informality levels. When policy efforts directed to reduce informality levels (e.g. decreasing the costs of social security contributions or business regulations) are implemented, their success may depend on the level of trust workers have in the state. Thus, even if the regulatory environment presents lower costs and overall higher net benefits for businesses to supply formal jobs and for workers to work formally, workers will demand such formal jobs depending on their levels of trust in the state. If they do not trust the state enough to guarantee or supply the promised benefits of formality, even after the better conditions different policy reforms present, they will not demand or desire those formal jobs.

This dissertation has provided a detailed explanation of the proposed argument in Chapter 1, and empirically tested the argument using a combination of primary and secondary data at the country and individual level. In Chapter 2 I empirically evaluate the proposed argument at the country level using data in the Latin American region. Concretely, this chapter tests how factors



relating to trust in the state – perception of state capacity and perception of control of corruption – and factors related to the costs of formality – labor market and business regulations – affect directly and in interaction informality levels across Latin American countries. The results suggest factors related to the costs of formality have no direct independent effect on informality levels across countries. On the other hand, those factors related to trust in the state do affect informality levels – higher state capacity and higher control of corruption perception links to lower levels of informality. Finally, interactive models suggest relaxing the regulatory environment and decreasing the costs of formality decreases informality levels just in contexts with high control of corruption perception. These results provide initial validation to the argument. Nevertheless, the argument has as central the decision of workers and their incentives or not to demand formality or informality. Thus, empirical tests at the individual level are essential to test the proposed mechanism – trust in the state – and the actual decision of workers to choose formality and informality

Chapter 3 develops a test at the individual level using household survey data from Colombia. This chapter does not test the argument directly but instead focuses on providing evidence in favor of the *exit* explanation of informality. In other words, whether workers feel comfortable with the conditions of informality and do indeed self-select into informality even when having the alternative of a formal job. The results observed in this chapter suggest that among informal workers most of them feel comfortable with their current job conditions. And among independent informal workers, they would prefer to stay in their current informal jobs even if they were offered a salaried formal job with the same salary but with the benefits of formality. Furthermore, analyses in this chapter suggest factors such as being female and living in rural areas decrease workers' incentives to desire a salaried formal job. While the data in this chapter does

not allow to directly test the proposed theoretical argument, it provides some evidence that in the Colombian context exist dynamics of the *exit* explanation of informality. Therefore, the high informality levels in this country can be explained in part, by a desire of workers to self-select and remain working informally.

The final empirical chapter, Chapter 4, continues with an individual-level analysis using an original online survey fielded in Colombia in 2023. This survey presents novel measures for demand for informality and willingness to pay the costs for formality, helping to precisely test the proposed argument – the link between state trust and demand for labor informality. The empirical results provide further support to the proposed argument suggesting individuals with higher state trust are less likely to choose an informal job than a comparable formal alternative. In addition, higher state trust increases individuals' willingness to pay the costs for formality – a percentage of their salary they are willing to pay for social security contributions.

Overall, in combination, these chapters provide empirical evidence supporting the validity of the different nuances of the dissertation's argument. First, a low regulatory environment that decreases the costs for businesses to supply formal jobs and workers to enter formality appears not to be a completely effective strategy to decrease informality levels. Other structural factors such as state capacity and corruption perception are relevant for decreasing these informality levels and are central to the success of the more mainstream strategies. Second, at least in the Colombian context, a large portion of informal workers are comfortable with the labor conditions they face while working informally. In addition, even if presented with a comparable formal job opportunity, they would still choose their current informal jobs. It is very telling as workers might have other underlying motivations leading them to self-select into informality beyond the material ones. In other words, informality is not simply a matter of exclusion and material calculations. Therefore,

evaluating the way workers relate to the state is relevant as a potential source to identify their motivations to remain and choose informality over formality. Finally, here it is provided evidence of the link between state trust and demand for informality, providing a precise empirical test for the proposed argument.

### **5.1. Academic Contributions, Limitations, and Future Directions**

The most important contribution of this work is putting the state and the quality of the relationship with its citizens as a central analytical element to understand the issue of informality and its persistence across Latin America and other developing regions of the world. The literature on labor informality often centers on diverse policies that affect the costs and benefits of formality and informality to explain high informality levels. Other approaches have suggested the strength of the link between citizens and the state affects workers' decisions to comply with formality. Nevertheless, these later approaches lack a theoretical framework clearly outlining how the relationship between the state and citizens affects individual choices around informality. This dissertation provides such a framework, suggesting trust in the state is the specific mechanism leading the decision of workers to demand labor formality or informality. In addition, to the best of my knowledge, this academic effort is the first one considering the interactions between more traditional explanations of informality and the structuralist perspective suggested here which puts the state and the relationship with its citizens at the center of the analysis.

Besides the previously outlined theoretical contributions, this work provides precise measures of demand for labor informality. Previous works dealing with the *exit* explanation have used the propensity to be an informal worker as an outcome variable. This does not allow to

correctly measure the decision of workers to choose informality voluntarily. This work, by using an original survey, develops novel measures to capture demand for informality and willingness to pay the costs for formality. Thus, this dissertation provides a valuable empirical contribution as it develops measures that actually test the workers' desire and choices for labor informality.

Finally, this dissertation provides a theoretical framework that can be used not just to explain labor informality, but other forms of informality. In this order of ideas, this work understands informality, beyond the labor boundaries, as the lack of desire to establish formal relationships with the state and state institutions, or as it is called in Chapter 1, a culture of informality. It might manifest in individuals' behavior outside of the rules of the game, and translated into various actions outside legal frameworks. With this framework, scholars can enter to investigate phenomena such as tax evasion or individuals' willingness to take justice by their own hand.

While this dissertation offers relevant theoretical and empirical contributions, there are some limitations to what it presents. First, future empirical efforts need to be done using different sources of data and measures to guarantee the reliability and generalizability of the argument and results presented here. Second, the theoretical and empirical work centers on the Latin American region, nevertheless this argument can be helpful to explain informality incidence and persistence in other developing regions. Third, the test of the interactive pathway of labor informality (interactive relations between mainstream policies to reduce informality by decreasing the costs of formality and trust in the state) was developed just at the country level, without capturing the actual decision of workers to demand informality over formality as the outcome variable. Consequently, a future empirical effort developing an analysis of such interactive pathway at the individual level

using the decision of individuals regarding their actual demand for informality, would provide strong empirical bases to the theoretical argument presented through this work.

## **5.2. Policy Implications**

The theoretical proposition and empirical results derived from this dissertation offer an important policy implication for the fight against labor informality for Latin America and developing countries. Overall, this work suggests that states need to focus on improving their credibility and the level of trust citizens have in it. Without doing this, other common policy efforts to reduce informality levels might not work effectively and have a limited impact. As suggested through this work, both the *exclusion* and *exit* dynamics interrelate to explain the high levels of labor informality we observe in many countries. Policy efforts decreasing the costs and increasing the net benefits of formality might be successful to decrease informality levels attributed to exclusion dynamics. Nevertheless, for those individuals who choose informality voluntarily, those policies might not be sufficient for them to decide to make a transition towards formality. Many exit seekers might not choose informality over formality because the costs of formality are too high. They might do it because they do not trust the state enough to manage appropriately the monies they would have to give in social security contributions and taxes.

All in all, Latin American and other developing countries should start focusing on improving their performance and gaining the trust of their citizens. Thus, citizens will be more willing to follow the rules of the game and desire to establish formal relationships with the state. Implementing policies that change the conditions to offer higher benefits to citizens is not enough for individuals to make the conscious decision to pay money to the state in exchange for such

benefits. They actually need to trust the state and its capacity and willingness to provide or guarantee such services efficiently, and that it will continue to do so into the future. Thus, the first step for countries to start reducing labor informality to tolerable levels is to do better what they are currently doing. Once citizens perceive the state is capable of performing its most basic functions and committed to protecting citizens well-being they will be willing to respect the rules of the game, and will be willing to establish formal relationships with it.

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## Appendix

**Table 2.1A.** Descriptive Statistics of Variables

Variable	Mean	Std. Dev.	Min	Max
Informality	59.535	21.890	23.2	89.1
Labor Market Flexibilization	5.388	.984	2.987	7.372
Businesses Regulations	6.17	1.090	3.681	7.877
Income and Payroll Taxes	5.531	2.057	2	9
Control of Corruption	2.451	.789	1.105	4.081
State Capacity	2.485	.548	1.425	3.775
GDP Per Capita	8401.6	3875.704	2000.794	15553.66
% Workers in Agriculture	17.924	8.040	8.22	35.98
Education	74.85	12.877	42.208	95.385

**Table 2.2A.** Effect of Explanatory variables on Labor Informality Levels.

VARIABLES	Model 1A	Model 2A
Labor Market Flexibilization	1.728** (0.619)	
Business Regulation		0.592 (0.685)
Control of Corruption	-9.563*** (1.450)	-8.689*** (1.465)
State Capacity	0.621 (1.646)	1.007 (1.620)
GDP per capita	-0.001*** (0.000)	-0.002*** (0.000)
% Workers in Agriculture	0.922*** (0.123)	0.946*** (0.127)
Education	-0.176** (0.064)	-0.156* (0.065)
Constant	79.797*** (4.080)	81.794*** (4.806)
Observations	131	131
Number of Countries	10	10

Standard errors in parentheses  
\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

**Table 2.3A.** Regression Coefficients of Labor Market Flexibilization, Business Regulation, and Income and Payroll Taxes at Different Percentiles of State Capacity.

Percentiles of State Capacity	Coefficients Labor Market Flexibilization	95% Confidence Interval
10	-.100	-1.407 1.206
25	-.070	-1.182 1.041
75	-.009	-1.099 1.080
90	.016	-1.225 1.257
Percentiles of State Capacity	Business Regulations	95% Confidence Interval
10	.964	-.921 2.850
25	.671	-.795 2.137
75	.076	-1.144 1.297
90	-.179	-1.630 1.271

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

**Table 2.4A.** Regression Coefficients of Labor Market Flexibilization, Business Regulation, and Income and Payroll Taxes at Different Percentiles of Corruption Perception.

Percentiles of Control of Corruption Perception	Coefficients Labor Market Flexibilization	95% Confidence Interval
10	2.036**	.582 3.489
25	1.669**	.326 3.011
75	.063	-1.260 1.387
90	-.847	-2.482 .787
Percentiles of Control of Corruption Perception	Business Regulations	95% Confidence Interval
10	1.274	-.726 3.276
25	.990	-.713 2.694
75	-.251	-1.515 1.011
90	-.957	-2.800 .886

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

**Table 3.1A.** Descriptive Statistics of Variables Used in Chapter 3.

Variable	N	Mean	Std. Dev.	Min	Max
Informal	494198	.583	.493	0	1
Female	464173	.455	.497	0	1
Education	464129	3.771	1.225	0	5
Age	464173	40.065	13.812	15	98
Income (USD)	466298	822.954	1079.514	0	75145.03
Income (COP)	466298	1095155	1436574	0	1.00e+08
Urban	494198	.937	.242	0	1
Couple	464173	.556	.496	0	1
Children	494198	.236	.424	0	1

**Table 4.1A.** Descriptive Statistics with Restrictions

<b>Variable</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
Demand for Informality*	.180	.385	0	1
Costs for Formality**	12.494	8.962	0	50
Costs for Formality***	11.308	6.833	0	30
State Trust	3.996	2.664	0	10
Female	.515	.499	0	1
Social Strata	2.304	1.135	1	6
Age	40.934	14.580	18	75
Urban	.873	.332	0	1
Education	4.197	1.009	1	6
Ideology	5.157	2.496	0	10
Income	6.662	3.309	1	11

*Notes:* \*Demand for Informality with duration restriction (between 531 and 2286 seconds)

\*\*Costs for Formality with duration restriction (between 531 and 2286 seconds) and restriction including just those who chose below 50 in the sliding scale.

\*\*\*Costs for Formality with duration restriction (between 531 and 2286 seconds) and restriction including just those who chose below 30 in the sliding scale.



**Table 4.2A.** Descriptive Statistics without Restrictions

<b>Variable</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
Demand for Informality	.189	.391	0	1
Costs for Formality	14.276	13.812	0	100
State Trust	3.812	2.676	0	10
Female	.515	.500	0	1
Social Strata	2.308	1.137	1	6
Age	40.252	14.583	18	75
Urban	.875	.330	0	1
Education	4.190	1.001	1	6
Ideology	5.089	2.4962	0	10
Income	6.696	3.281	1	11

## Survey Questions

- Where do you live?
  - City
  - Periphery or around a city
  - Town close to a rural area
  - Rural area
  
- What is the highest educational degree or diploma you have received?
  - None,
  - Elementary School
  - High School
  - Technical Degree
  - Bachellors Degree
  - Graduate Degree
  
- Do you have children under 18 living with you?
  - No
  - Yes
  
- From 0 to 10, being 0 “left” and 10 “right”, where do you place yourself regarding your political tendencies?

0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

- How do you mainly spend your time? Are you currently
  - Working?
  - Not working, but have a job?
  - Actively looking for a job?
  - A student?
  - Taking care of the home?
  - Permanently disabled to work?
  - Retired or pensioner?
  - Not working and not looking for a job?
  
- (Ask if in previous questions answered working, or, not working but have a job). For this job, do you or your employer makes social security contributions?
  - No
  - Yes

- In the options below there are several income ranges. Can you tell me in which of the following ranges is the monthly personal income you obtain for your job or pension, without considering the other types of income?
  - No income
  - Less than 205.000
  - Between 205.000 y 440.000
  - Between 440.001 y 650.000
  - Between 650.001 y 750.000
  - Between 750.001 y 915.000
  - Between 915.001 y 1.250.000
  - Between 1.250.001 y 1.600.000
  - Between 1.600.001 y 3.150.000
  - More than 3.150.000

## Experiment

I.

One of the roles of the state is to deliver or guarantee the delivery of services directed to maintain or improve the welfare of the population.

### **A. No Treatment**

**B Positive Treatment:** In Colombia, thanks to the public policies and efforts of the state, the coverage of health services has gone from 29,2 percent of the population in 1995 to the 99 percent of the population in 2021. These improvements have benefited the welfare of the Colombian population.

**C Negative Treatment:** Nevertheless, the cases of corruption, common in Colombia and where state agents are often involved, damage the capacity of the state to deliver or guarantee the delivery of such welfare services to the population.

Thinking about the previous statement, write 2 sentences that describe your sentiment towards the Colombian state:

- In a scale from 0 to 10, being 0 a little and 10 a lot, how much do you trust the Colombian state?

0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

## II.

Imagine you have two job opportunities which pay the exact same salary and will allow you to live comfortably. Yet, one obligates you to make social security contributions from your salary which implies the Colombian government will give or guarantee you the provision of health services and retirement. The other job does not require you to make social security contributions, meaning, you do not have the benefits of health insurance and retirement but you will obtain the full amount of the salary.

- Which job would you take?
  - The job that obligate you to make social security contributions and is subject to income taxes
  - The one which DO NOT obligate you to make social security contributions and IS NOT subject to income taxes
  
- What is the higher percentage from your salary you will be willing to give for social security contributions?

Sliding scale from 0 to 100

**Table 4.3A.** Logistic Regression on Demand for Informality by Experimental Groups.

	Model 1A	Model 2A No Duration Restriction
Positive Treatment	-0.063 (0.185)	0.093 (0.161)
Negative Treatment	0.056 (0.179)	0.009 (0.162)
Constant	-1.507*** (0.128)	-1.485*** (0.115)
Observations	1,219	1,500

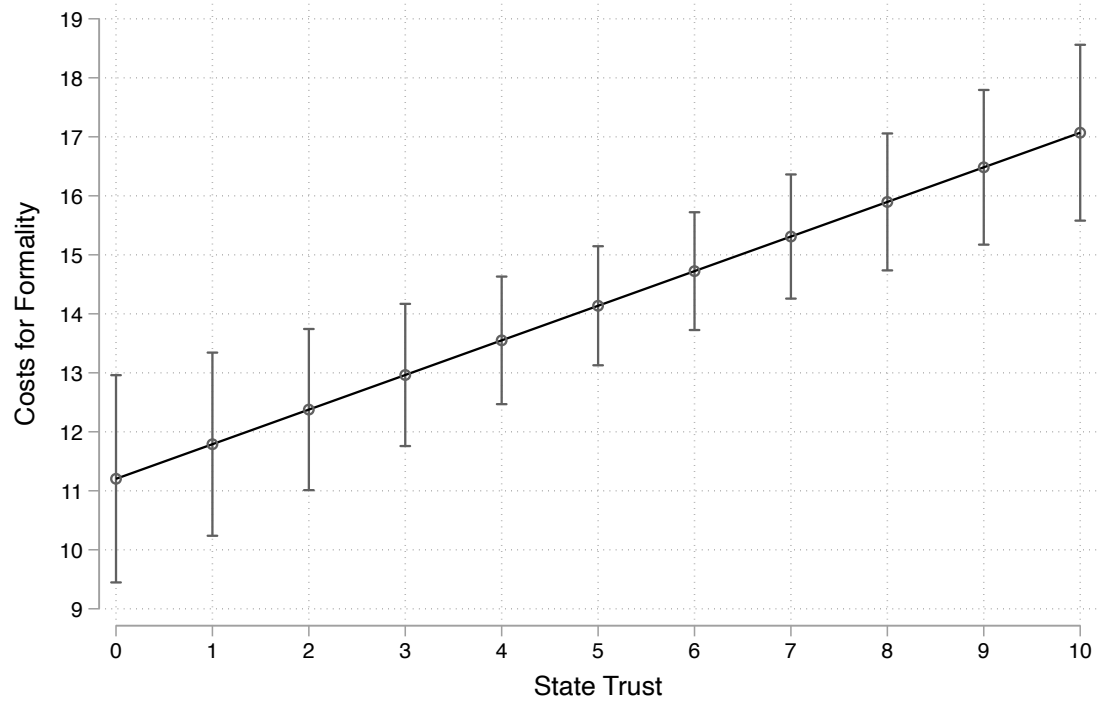
Standard errors in parentheses  
 \*\*\* p<0.001, \*\* p<0.01, \* p<0.05

**Table 4.4A.** Tobit Regression Models on Costs for Formality with no Costs for Formality Threshold Restriction.

	Model 3A	Model 4A	Model 5A Informal Workers	Model 6A Formal Workers
State Trust	0.556*** (0.148)	0.587*** (0.155)	0.640 (0.340)	0.552* (0.214)
Female		0.163 (0.752)	-0.387 (1.810)	0.488 (0.490)
Social Strata		0.380 (0.358)	-1.010 (0.714)	0.968** (0.337)
Age		0.018 (0.030)	0.064 (0.073)	0.019 (0.032)
Urban		0.795 (0.508)	1.761 (3.463)	-0.299 (1.128)
Education		-0.453 (0.380)	1.126 (1.532)	-1.033 (0.593)
Ideology		0.381** (0.130)	0.539 (0.323)	0.211 (0.136)
Income		-0.282* (0.121)	-0.261 (0.552)	-0.163 (0.213)
Constant	11.321*** (0.871)	10.481*** (1.321)	5.069 (6.399)	11.919*** (2.695)
Var (Cost For)	159.857*** (15.243)	157.918*** (14.675)	201.261*** (56.956)	122.449*** (16.226)
Observations	1,220	1,217	189	549

Robust standard errors in parentheses

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05



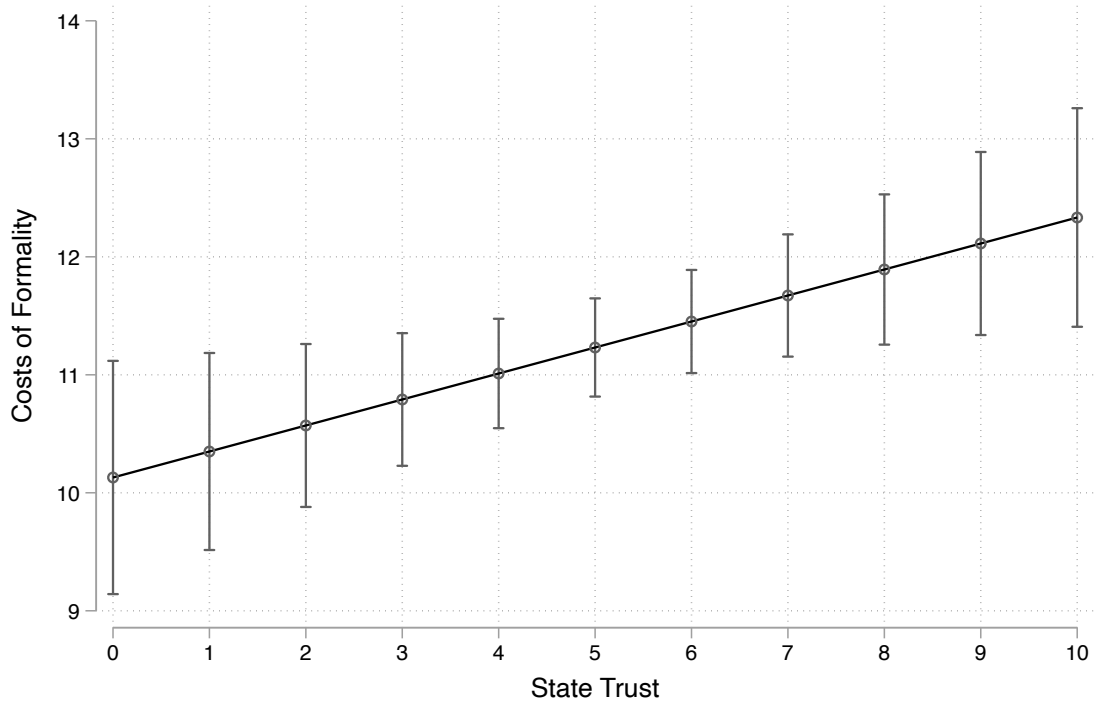
**Figure 4.1A** Predictive Values of Costs for Formality Across State Trust Values with 90% CI and no Threshold Restrictions.

**Table 4.5A.** Tobit Regression Models on Costs for Formality with Costs for Formality Threshold Restriction set at 30.

	Model 7A	Model 8A	Model 9A Informal Workers	Model 10A Formal Workers
State Trust	0.209* (0.103)	0.220* (0.105)	0.302 (0.208)	0.282* (0.115)
Female		-0.310 (0.347)	1.619** (0.618)	-0.478 (0.569)
Social Strata		0.474*** (0.140)	0.434 (0.635)	0.642** (0.224)
Age		0.011 (0.015)	0.044 (0.038)	0.005 (0.019)
Urban		0.124 (0.448)	0.353 (1.440)	-0.846 (0.658)
Education		-0.397 (0.264)	-0.212 (0.697)	-0.512 (0.279)
Ideology		0.173* (0.083)	0.184 (0.235)	0.214* (0.103)
Income		-0.007 (0.140)	-0.133 (0.251)	0.233 (0.169)
Constant	10.405*** (0.625)	10.026*** (1.249)	5.954* (2.887)	8.674*** (1.696)
Var (Cost For)	47.882*** (2.339)	47.289*** (2.536)	38.918*** (5.564)	41.818*** (2.804)
Observations	1,148	1,145	179	523

Robust standard errors in parentheses

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05



**Figure 4.2A** Predictive Values of Costs for Formality Across State Trust Values with 90% CI and Threshold Restrictions of Costs for Formality Set at 30.



## VITA

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## Education

University of Mississippi Ph.D. in Political Science Major Field: Comparative Politics Minor Field: International Relations Dissertation: A Demand-side Theory of Labor Informality: Workers' Trust and States' Credible Commitment	2023
University of Mississippi M.A. in Political Science	2021
Jacksonville State University Master of Public Administration	2017
Universidad Externado de Colombia B.A – Social Communication – Journalism	2014

## Research

### Peer Reviewed Publications

“Labor Informality and Economic Political Accountability of Executive Incumbents in Latin America.” 2021. *Revista Latinoamericana de Opinión Pública*

Carlin, Ryan E., Gregory J. Love, Julián A. Acevedo-Pardo, and Diego Luque. “Líderes Políticos y Opinión Pública: Hacia una Paz Negociada.” In *Paz y Opinión Pública en Colombia*, eds. Sandra Botero and Miguel García Sánchez. (forthcoming 2023)

## **Working Papers**

“Citizens Trust in the State and Demand for Labor Informality: Individual-Level Evidence from Colombia”

“Trust in the State, Costs of Formality, and Informality Levels: A Country-Level Analysis in Latin America”

## **Papers in Progress**

“The Legacy of Female Combatants: Female Combatants’ Electoral Success in Colombia” (With Laura Huber and Elizabeth L. Brannon)

“State Trust and Willingness to Pay More Taxes in Latin America”

## **Conferences**

*Advanced Graduate Workshop on Poverty, Development and Globalization*

2022: *Paper (Bengaluru, India)* – “State Reputation, Workers Trust, and Labor Informality in Latin America”

*Latin American Studies Association Congress*

2022: *Paper (Online)* – “State Reputation, Credible Commitment, and the Demand for Labor Informality in Latin America”

*Midwest Political Science Association Meeting*

2021: *Paper (Online)* – “Labor Informality and Economic Political Accountability of Executive Incumbents in Latin America”

*The Public and Democracy in the Americas (LAPOP Conference)*

2022: *Poster (Antigua, Guatemala)* – “Trust in State Institutions, Quality of Services, and Willingness to Pay More Taxes”

2021: *Poster (Online)* – “Personal Experiences and Immigration Attitudes: Evidence from the Venezuelan Immigration” (with Mahesh Acharya and Jenny Holt)

## **Teaching / Research Experience**

### **Instructor**

POL 102 – Introduction to Comparative Politics

Spring 2022

## **Teacher Assistant**

POL 102 – Introduction to Comparative Politics  
POL 321 – Politics of Latin America  
POL 343 – Comparative Democratic Institutions

## **Research**

Research Assistant – Gregory J. Love 2018-Present  
University of Mississippi

Research Supporter 2018-Present  
Executive Approval Project

## **Grants/Awards**

The University of Mississippi, Dissertation Fellowship (\$8,000) 2023  
The University of Mississippi, Summer Research assistantship Award (\$3,000) 2021  
The University of Mississippi, Summer Research assistantship Award (\$3,000) 2020  
Dwight L. Tays Political Science Scholarship Award (\$1,200) 2019

## **Service**

Panel Discussant, Mississippi Pi Sigma Alpha Conference for Undergraduate Research 2022

## **Language Proficiency**

English (Fluent)  
Spanish (Native)

## **Computational Skills**

STATA  
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