The Dual Economy of Entrepreneurship: Normative Determinants of Informality and Government Trust in Guatemala

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Abstract

Guatemala presents a puzzle: despite pervasive corruption and poorly enforced property rights, Guatemalans start businesses at rates exceeding the global average. Standard institutional analysis offers no satisfying answer. Drawing on a humanomics framework and three waves of Global Entrepreneurship Monitor data (2022–2024), this paper shows that two normative factors drive entrepreneurial activity: a commitment to markets and private property, and skepticism toward government. Guatemalans do not coordinate through formal institutions, but despite them. Quantitative and qualitative survey evidence supports the dualistic economy thesis: culture sustains entrepreneurship where institutions fail. Normative commitments reach where formal enforcement cannot.

Keywords: Latin America, Guatemala, Humanomics, Entrepreneurship, Norms

1 Introduction

In their work on the dualistic economies of the Ancient Maya, anthropologists Scarborough and Valdez Jr (2009) noted something particular about the Indigenous population that flourished in Mesoamerica: there were two economies at play and distinct cultures that emerged from them. The first type of economy was highly centralized, with large city-states as their centers. These city-states were structured hierarchically, with the god-like divine king at the top and beneath them nobility, priests, warriors, scribes, and commoners. This economy relied on tributes from neighboring villages, subsidizing the lifestyles of the king and nobility. When the Spanish reached the Americas in the early 16th century, many of these large city-states collapsed and were lost beneath the rainforests and jungles of the region. The last one, Nojopéten in Guatemala, fell to the conqueror Martín de Ursúa y Arismendi in 1697. The second type of economy was decentralized, consisting of trade networks among villages scattered across the region. These networks outlived Spanish conquest and colonization, independence and liberalization, and can partly explain the ties between different Maya communities in modern-day Guatemala and Belize (Chase et al. 2025). This dualistic economy reveals the complexity of societies today, but more importantly, demonstrates how norms and culture that promote economic activity can exist separately from centralized power structures.

In this paper, we focus on one of the countries where the Ancient Maya once lived and their ancestors continue to do so today: Guatemala. We argue that like the Ancient Maya and their dualistic economies, the country of Guatemala continues to share this characteristic at the national level. The country's property rights regime has long favored foreign investors and the politically connected, promoting top-down development with central governments dictating and deciding the focus of the country's economic activity.

Despite these dynamics, the country has been unable to overcome a political history of corruption, cronyism, and exclusion. As noted in Freedom House's *Freedom in the World* report in 2025, protections for property rights and economic freedom tend to only be secure for the wealthy and politically connected in Guatemala. Fraser's Economic Freedom of the World index notes this tension directly: despite high scores on size of government (9.18), sound money (8.87), freedom to trade (8.34), and regulation (7.07), Guatemala's legal system and property rights score falls well below the others (4.61) (Gwartney et al. 2025), indicating a framework that encourages some entrepreneurial activity while the legal system hinders the flow of resources and entrepreneurial action.

Latinobarometro's 2024 survey found that 42.5% of respondents have no trust in the government (versus 7.2% "a lot" and 15.6% "some") (Latinobarómetro Study 2024), yet over 50% agreed that the market economy is the only system through which Guatemala can develop. This gap between institutional distrust and market

enthusiasm is reflected in entrepreneurial behavior: since 2009, Guatemala has participated in the Global Entrepreneurship Monitor (GEM), tracking entrepreneurship globally, and the country stands out as an outlier. Guatemalans have highly favorable cultural and social norms toward entrepreneurship, with survey respondents more likely to want to start a business, be in the process of starting one, and own a business than the global average.

Guatemala's GEM status points to a dualistic economy: one component is a weak centralized system plagued by cronyism and corruption; the second is the norms and culture that sustain entrepreneurial activity. We depart from neo-institutionalist analysis and its overemphasis on formal institutions, which cannot properly explain this duality. Standard neo-institutional analysis would predict that in an environment characterized by weak enforcement of *de jure* property rights, pervasive corruption, and barriers to investment, individuals would not choose to engage in entrepreneurial activity. Instead, we agree with McCloskey (2016): economies rely on ethics. Market participants share internalized models of exchange, property, and trustworthiness (Denzau and North 2000); these shared commitments drive entrepreneurial activity regardless of the formal institutions in which markets are embedded (Roy et al. 2026).

Using a humanomics framework, we argue that two factors drive entrepreneurship in Guatemala's dualistic economy. The first is a normative commitment to markets; the second is a skepticism toward government, which sits outside the social knowledge those normative commitments embody. As Wilson (2020, ch.1) argues, long before governments formalize property rights, individuals feel the injury of dispossession — and with that injury comes resentment when something they regard as theirs is taken. This felt moral claim, not legal title, is the foundation of property, and it is what moves individuals to engage in market exchange and entrepreneurial action. The rules governing that exchange have evolved within cultural contexts (Yonk and Earle 2026), and when governments open a gap between *de jure* property rights and the *de facto* norms sustaining those relationships, they do not facilitate exchange but rather they disrupt it.

The paper draws on two sources of GEM data collected in Guatemala: the Adult Population Survey (APS), administered by Universidad Francisco Marroquín since GEM's launch, which measures entrepreneurial activity and attitudes across the population; and the National Expert Survey (NES), which captures expert assessments of the conditions shaping entrepreneurial activity, including cultural and normative environments.

A distinctive feature of Guatemala's GEM implementation is the inclusion, since 2022, of questions on trust in government institutions at both the local and national levels, as well as beliefs regarding free markets and private property, providing direct empirical traction on the two normative factors the humanomics

framework identifies as drivers of entrepreneurship. We analyze APS responses across three waves, 2022 to 2024, with each wave containing more than 2,000 respondents. Alongside this quantitative analysis, we examine open-ended NES responses from the same period to assess how experts perceive the role of shared norms and cultural context in shaping entrepreneurial activity.

Together, the APS and NES evidence supports the argument that entrepreneurship in Guatemala is driven by a normative commitment to markets and a skepticism toward government, consistent with the country's dualistic economy. We find a strong positive relationship between pro-market norms, particularly around the importance of property rights, and entrepreneurial activity, as well as between skepticism toward the national government and entrepreneurial activity. Qualitative evidence from the NES is consistent with our framing: respondents consistently identify culture and shared norms as drivers of entrepreneurial activity, and positive assessments of government concern the removal of barriers to business rather than any affirmative role for the state. These results support our argument that normative commitments and personal characterizations sustain entrepreneurship in Guatemala, while government, to the extent it features in that story, does so primarily as a source of disruption.

These findings contribute to a broader humanomics research program that has generated insight into: why humans value property and how that valuation shapes the salience of property rights (Benzecry and Thompson 2025); why punishment functions not as a utility-maximizing deterrent but as a balance between the harm suffered by a victim and the sympathy extended by an impartial spectator (Aimone et al. 2025); why individuals vote on the basis of identity rather than material interest (Martin and Swisher 2025); and why property rights carry non-political consequences for individual responsibility, sociality, and tolerance (Benzecry et al. 2025). These are mechanisms that standard utility maximization cannot recover. For a context as institutionally complex as Guatemala, this is not a minor advantage; it is the point.

Our contribution is correspondingly distinct. The paper centers on entrepreneurship in the Global South, with norms as the primary explanatory variable rather than a residual category. In doing so, we extend a literature that has thus far taken two dominant approaches in humanomics: experimental work (Smith and Wilson 2019) and economic history (McCloskey 2024). We pursue neither, using qualitative and quantitative survey evidence to examine the normative foundations of entrepreneurship in contemporary Guatemala.

The remainder of the paper proceeds as follows. Section 2 introduces the humanomics framework and derives our expectations for a dualistic economy. Section 3 contextualizes these expectations within Guatemala's specific institutional background. Section 4 presents the data, design, and results of our quantitative APS analysis. Section 5 provides qualitative evidence from the National Expert Survey. Section 6 concludes with

a discussion of the findings and implications for institutional reform and future research.

2 Humanomics and the Dualistic Economy

The framework we propose starts with a fundamental premise: economic life is not sustained by incentives alone. Market mechanisms interact with meanings and moral commitments, the shared mental models that shape how individuals view and interpret the market itself (Denzau and North 2000). As Adam Smith (1776) argued, our awareness of self-interest (self-love) and our sympathy toward others (fellow-feeling) move us to cooperate in the marketplace (Roy et al. 2026). While institutions matter, they do not exist as standalone entities: they rest on prior normative foundations, grounded in these same moral commitments, that make impersonal coordination possible (McCloskey 2016).

Classically, institutional economics treats norms as informal constraints that supplement formal rules (North 1990): when enforcement is incomplete, shared expectations reduce transaction costs. In this framework, institutions are more fundamental than cultural factors. Humanomics reverses this analytical order. Our framework argues that norms are constitutive elements of economic order, and thus of market activity. Formal institutions channel behaviors already embedded in moral practice and in the everyday understanding of entrepreneurs.

Economic exchange operates on two levels. First, coordination is driven by personal, self-interested activity. As Smith (1776) observed, "It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest." Yet markets also depend on repeated interactions, and senses of trust, fairness, and justice reinforce behaviors that self-interest alone cannot explain (Thomas and Thomas 2025).

Second, coordination is mediated through impersonal means: prices, contracts, and the legal system. The norms sustaining this impersonal exchange are learned in settings of reciprocity, promise-keeping, and respect for other market participants. Individuals experience the results of their self-interest, sympathy toward others, and gratitude and resentment within a personal context. This leads to the development of rules and norms that facilitate coordination (Smith and Wilson 2019, ch. 8). These rules and norms are then extended to the impersonal, the anonymous, facilitating market coordination and entrepreneurial behavior. Impersonal markets, in short, depend on moral capacities formed in personal contexts (Martin 2026).

The same logic applies to property rights. Institutional quality, written law, and formal enforcement are crucial in modern economies, but as Wilson (2020) argues, property is fundamentally a custom, unique

to human beings. Across cultures and throughout history, individuals make claims to goods, carrying an expectation about how others will treat what one regards as "mine" and "theirs," expectations that exist independently of formal enforcement, since systems of property historically emerge through shared recognition before they are codified in statute (Demsetz 1974; Ellickson 1991).

Codification alone does not explain why ownership ought to be respected: belief and trust in a normative setting play a vital role in sustaining property rights, and even in environments where formal registration is absent (De Soto 2000), informal recognition can coordinate expectations and reduce conflict. Property rights thus become institutions formalized through moral endorsement, illustrating how customs and norms grounded in "mine" and "thine" (see Murtazashvili and Murtazashvili 2015; Murtazashvili 2016) can stabilize property systems without constant recourse to courts or the threat of punishment.

When individuals regard property as legitimate, they are more willing to bear risk, engage in exchange, and pursue long-term business activities. For Mises (1949), entrepreneurial action is precisely this: purposeful human action under uncertainty, made possible by the normative confidence that one's claims will be respected (Mises 1951, ch. 1). The same logic applies to market participation more broadly: Hayek showed that prices coordinate dispersed knowledge beyond the capacity of centralized planners (Hayek 1945), yet the price mechanism requires participants willing to engage in open exchange.

A commercial society requires not only goods and information but a cultural environment in which market participation is regarded as honorable. McCloskey argues that modern prosperity depended on a rhetorical and ethical shift that dignified bourgeois virtues, innovation, prudence, and enterprise, and that the ideas of liberty and dignity for ordinary people preceded the institutions that eventually codified them (McCloskey 2010, 2016). When market participation is treated as morally legitimate rather than socially inadequate, voluntary cooperation expands, regardless of the formal institutions in place.

In a dual economy, two distinct economic systems operate within a single society. The first is organized around the state: government actors enact laws and manage both the enforcement and selective non-enforcement of property rights. The second consists of an order that arises not from centralized imposition but from localized norms and practice (Yonk and Earle 2026). The distinction maps onto what Vernon Smith (2003; 2008) terms constructivist and ecological rationality: the first holds that institutions can and should be deliberately designed through centralized human reason; the second describes order that emerges through practice, experience, and local knowledge. This bottom-up system persists not because it is formally protected, but because a normative appreciation for markets sustains entrepreneurial activity among those excluded from the top-down system.

From a humanomics perspective, economic systems are layered moral orders. Formal institutions, informal norms, market participation, and perceptions of authority interact within a shared cultural environment (Denzau and North 1994; Roy et al. 2026). When centralized institutions are weak or unevenly trusted, economic life does not dissolve into chaos; coordination persists through normative commitments that operate independently of statutory enforcement. A dual economy persists, resisting absorption into the centralized system, because shared mental models sustain entrepreneurship outside formal channels. These models entail interactions with any environment related to conducting businesses, from institutional engagement to technology adoption. Indeed, digital platforms, and more recently Artificial Intelligence-assisted tools, can extend the reach of market coordination, mobilizing the dispersed knowledge that Hayek (1945) identified as the basis of decentralized exchange. In this instance, technological adoption is filtered through the shared mental models that govern how individuals interpret technological change, perceive opportunity, and judge whether an exchange can be trusted. Of course, technology is only the most recent force to pass through this filter. The same shared models govern whether economic necessity becomes reason to start a venture, and whether running a business can be considered a dignified calling instead of signal of low status, which relates to the ethical shift (McCloskey 2016) places at the center of modern prosperity.

This perspective frames the analysis of Guatemala's dualistic economy. Rather than viewing informal sectors solely as distortions produced by institutional failure, they can be understood as domains in which moral commitments sustain exchange outside formal channels. Economic interaction is stabilized by the shared belief that property, contract, and voluntary exchange are legitimate modes of cooperation, regardless of whether they are enforced by the state. Economic coordination can persist and even thrive precisely where formal institutions are weak or distrusted.

Trust in authority represents another morally charged dimension of economic life. Centralized institutions claim legitimacy as coordinators of social order, but when that legitimacy is questioned, individuals shift reliance away from bureaucratic channels toward decentralized, community-based arrangements. Polycentric governance shows that dispersed, less-formal systems can generate effective coordination precisely because they draw on local knowledge and local accountability rather than a structured, centralized system (Ostrom 2005). Formal institutions also generate distrust by disrupting the systems of ecological rationality already sustaining economic activity from the bottom up.

Humanomics therefore directs attention to the moral language through which individuals interpret economic action. Incentives matter, but they are filtered through beliefs about dignity, fairness, and autonomy. Grounded in self-love and fellow-feeling, economic order is cultivated through culture and through the value

individuals place on one another and on the institutions that structure their interactions, reinforcing those perceived as legitimate and undermining those that are not. In contexts like Guatemala, where formal institutions have long been weak and distrusted, humanomics offers a framework for understanding how norms and culture sustain economic coordination even in the absence of strong institutional enforcement.

3 Guatemala: Historical, Institutional Context and Theoretical Linkage

Guatemala's formal institutions have consistently served narrow elites, forcing the broader population to develop informal and norm based mechanisms of economic coordination.

Spanish colonization imposed extractive institutions (the encomienda, the repartimiento, and later the hacienda system) that concentrated land and labor in colonial elite hands, incorporating Indigenous populations primarily as forced labor (McCreery 1994). Independence in 1821 altered the identity of the governing elite without changing the structure of extraction: conservative governments through the Liberal Revolution of 1871 aimed to preserve the mercantilist institutions of Spanish rule. The liberal reforms of Justo Rufino Barrios (1873-85) modernized the economy around coffee exports but deepened land concentration among foreign investors and local elites (Noé 2026), while displacing Indigenous communities to effectively create a plantation labor force (Grandin 2000). Guatemala's integration into global markets thus proceeded through elite-directed, top-down institutional arrangements. This pattern fits the broader Americas-wide thesis advanced by Sokoloff and Engerman (2000): initial factor endowments of large Indigenous populations and plantation agriculture produced extreme inequality that shaped institutional trajectories for centuries. Comparative work places Guatemala in the semiperipheral group whose colonial inequality locked in a development hierarchy stable for over a century (Mahoney 2003; Katz et al. 2005).

The twentieth century intensified this already locked-in pathway: the brief democratic opening of 1944–1954 ended with a CIA-backed coup that restored elite control and initiated three decades of military rule. The civil war that followed (1960–1996) devastated the countryside—particularly Indigenous Maya communities—and produced more than 200,000 casualties (Comisión para el Esclarecimiento Histórico 1999). The Peace Accords committed the state to institutional reform, but implementation has been limited at best: as Torres-Rivas (2011) argues, formal democratic transitions in Central America have consistently failed to alter the underlying power structures, and formal institutions remain weak, corruption pervades public administration (Godinez and Garita 2015), and the legal system continues to serve the economically and politically connected. This mirrors Acemoglu and Robinson (2008)'s characterization of this dynamic, in the context of persistence of extractive institutions in the Americas: centralized structures change form while

the underlying distribution of economic and political power remains remarkably stable (i.e., scenarios would go from colonial administration to liberal dictatorship to military regime to nominal democracy).

The common thread links back to our theory: centralized structures come and go, but decentralized norms of exchange and coordination persist, influencing markets and their actors, and Guatemala's contemporary institutional environment makes the country a direct case study for that framework.

The scope of informal economic activity completes the picture. Over 60% of Guatemala's economic activity occurs outside formal institutional channels—in unregistered businesses, informal labor arrangements, and exchanges that operate without legal contracts or state oversight (Pisani 2014). Standard institutionalism interprets high informality as a symptom of institutional failure, and while De Soto (1989) argued that it reflects rational responses to exclusionary legal systems, even that framing treats informality as an addendum. In a dualistic economy, informal activity is sustained by the same norms of property and exchange that operate independently of formal channels. If informality were merely a second-best response to institutional deficiency, one would expect it to produce weaker coordination and unstable outcomes. Instead, Guatemala maintains above-average entrepreneurial activity by global standards.

Humanomics offers a more complete explanation in our framing. The paradox dissolves if norms are understood as fundamental, constitutive elements of economic order. Guatemalans coordinate economic activity informally *because* they possess these very norms (of property, exchange, and mutual obligation), rather than because they lack institutions. The gap between normative property-rights support and institutional property-rights enforcement is precisely where humanomics provides explanatory leverage that standard institutionalism cannot.

Based on this theoretical foundations, we derive the following hypotheses for our analyses:

H1. *Stronger pro-market norms are associated with higher levels of entrepreneurial activity.*

H2. *Lower federal government trust is associated with higher levels of entrepreneurial activity.*

Hypothesis 1 follows directly from the humanomics framework: if market-enabling norms are constitutive of entrepreneurial coordination, then individuals who express stronger support for private property and free markets should exhibit higher rates of entrepreneurial activity, even where formal enforcement is weak. Hypothesis 2 captures the second dimension of the dualistic economy: where the centralized state is perceived as extractive or unreliable, individuals more skeptical of federal institutions may be more likely to coordinate market-based activity.

4 Linking Norms and Markets: Quantitative Evidence from Guatemala

4.1 Data: The GEM Adult Population Survey for Guatemala

We test these hypotheses using three waves of the GEM Adult Population Survey from Guatemala (2022 to 2024). The GEM APS is a nationally representative survey of adults (aged between 18 and 64) conducted annually in many different countries worldwide. For Guatemala, data has been collected since 2009 with an average of respondents hovering around 2500 and 3000 per year. The GEM consortium provides a standardized set of questions on entrepreneurial attitudes, activity, and aspirations, including items on whether respondents are currently starting a business, own or manage an established business, or have invested in someone else's business. The survey started to collect information about the population's perspectives on pro-market attitudes and governmental trust only in the last 4 years, allowing us to study responses only between 2022 and 2024. Three relevant questions (on the value of private property, support for free markets, and attitudes toward privatization) are available in all three waves (2022–2024). Two additional questions of interest (on trust in federal and municipal government institutions) were introduced in 2023 and are available only in the 2023 and 2024 waves. These waves yield a combined raw sample of 8,962 respondents (3,261 in 2022; 3,109 in 2023; 2,592 in 2024).

Data availability structures our design: we build a **three-wave sample** (2022–2024, $N = 8{,}734$) using the three market-norm variables, and a **two-wave sample** (2023–2024, $N = 5{,}163$) that adds federal and municipal trust. Our primary results use the two-wave sample, which supports the full specification testing our dualistic economy thesis; the three-wave models appear in the appendix for consistency across the larger, more restricted sample.

The normative characteristics refer to our theoretical expectations regarding market attitudes and trust. *Market orientation* comprises three 1–5 Likert items: value placed on private property, support for free markets, and support for privatization of public enterprises. *Institutional trust* comprises two 1–4 items, reverse-coded so that higher values indicate more trust: federal and municipal government trust. The entrepreneurial activity variables capture early-stage (starting a business, startup investment), established (ownership, ownership investment), and informal (investing in someone else's business) dimensions of entrepreneurship. Controls include capital-city residence, gender, age, and year fixed effects. Both pooled samples are filtered to respondents with valid responses on all applicable norm variables, positive age, valid gender, and non-missing city codes. Binary outcome variables were harmonized to a consistent 0/1 coding across waves, and special response codes (-2 = Refused, -1 = Don't know) are set to NA. Appendix Table A1 presents the variables used in the analysis, while a full sample-size breakdown by wave and outcome is

reported in Appendix Table A2.

Table 1 presents descriptive statistics for both norm variables and entrepreneurial outcomes across our samples. This first, descriptive representation can already provide some valuable insights related to the local population. Property rights support averages approximately 4.8 and free market support above 4.2 on the 1–5 scale, both well above the midpoint of 3.0 and stable across waves. Privatization support falls *below* midpoint at approximately 2.6–2.8: Guatemalans strongly endorse property rights and free markets in principle while remaining skeptical of transferring public enterprises to private hands. Federal and municipal trust both average approximately 2.0 on the 1–4 scale, below the midpoint of 2.5, confirming widespread government skepticism. Three-wave descriptives, which confirm the stability of market norms across the full 2022–2024 window, are reported in Appendix Figure A2.

Table 1: Descriptive Statistics by Year (2-Wave Sample, 2023–2024)

		Norm Means					Entrepreneurial Activity (%)		
Year	*N*	Prop. Rights	Free Mkts	Privatiz.	Fed. Trust	Mun. Trust	% Start	% Own	% Inform.
2023	2796	4.82	4.22	2.59	1.98	2.09	28.1	30.0	12.3
2024	2367	4.75	4.18	2.78	2.10	2.13	28.8	27.8	7.4

Note: Market norms: 1–5 scale (midpoint 3.0). Trust: 1–4 scale, reverse-coded, higher = more trust (midpoint 2.5). Activity rates as % of valid responses.

Entrepreneurial activity rates confirm Guatemala's status as a high-entrepreneurship context. Approximately 28% of respondents report starting a business and a similar proportion report owning or managing one. Informal investment is relatively less prevalent but still relevant hovering between 7 and 12%.

Appendix Figure A1 presents the response distributions for all five normative variables, while Figure 1 compares norm preferences across four groups: business starters, business owners, informal investors, and people with no entrepreneurial activity. Entrepreneurs of all types show higher property rights support and free market support than non-entrepreneurs. The free-markets difference can be especially underlined for business owners. Government trust, conversely, is *lower* among entrepreneurs: informal investors show the lowest federal trust while non-entrepreneurs show the highest. This descriptive pattern (higher market norms and lower government trust among entrepreneurs) aligns with our thesis and drives the following analysis. The underlying means are tabulated in Appendix Table A3.

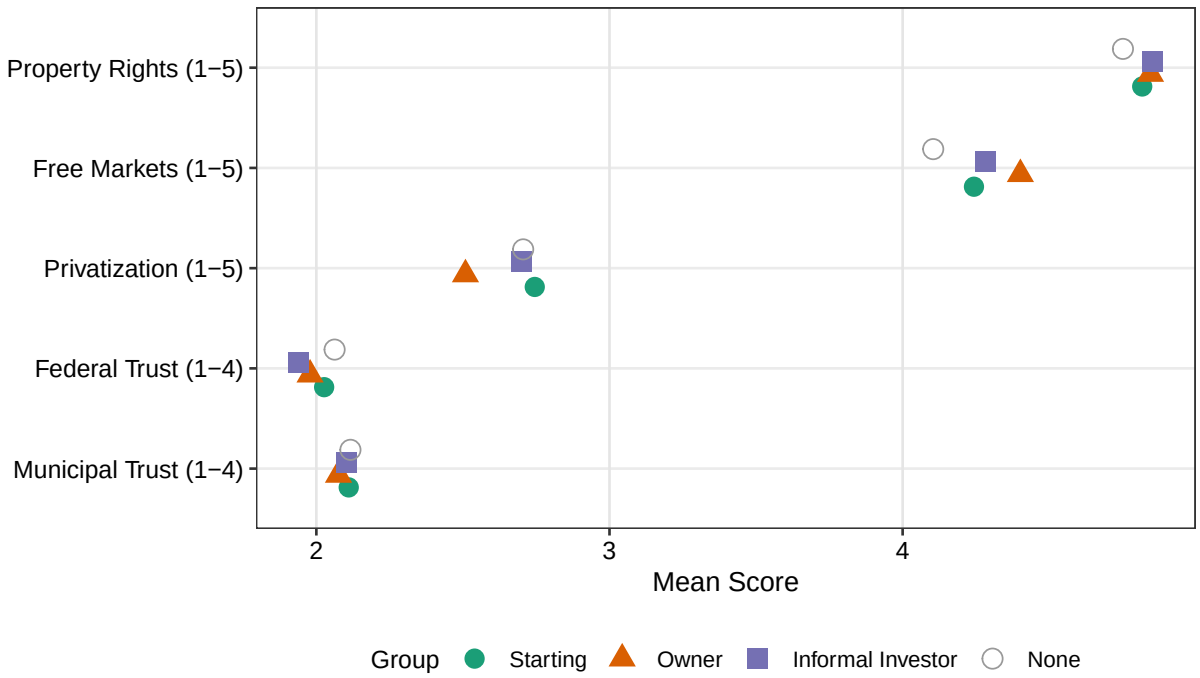


Figure 1: Norm Profiles by Entrepreneurial Status (2-Wave Sample)

4.2 Empirical Strategy and Results

We estimate linear probability models via OLS with year fixed effects for the four binary outcomes (starting a business, startup investment, business ownership, informal investment), which allows for direct percentage-point interpretations; the logit specification in Appendix Table A4 yields substantively similar conclusions in sign and significance. Ownership investment is continuous and non-negative, so we estimate it via standard OLS.

Our primary specification uses the 2023–2024 sample with all five norm variables (property rights, free markets, privatization, federal trust, and municipal trust) alongside the listed controls. We also estimate the same specification on the three-wave sample (2022–2024), restricted to the three market-norm variables, for a larger sample and longer time window; those results are reported in the appendix and referenced where relevant. Additional specifications are also reported in the appendix (interaction models to identify moderating effects in Appendix Table A5, capital/non-capital subgroup splits in Appendix Table A6).

Table 2 presents the main results across all five entrepreneurial outcomes. We highlight three sets of findings corresponding to the expectations developed in Section 2.

Table 2: Norms and Entrepreneurship: OLS (2-Wave, 2023–2024)

	Dependent variable:				
	Start	Start Inv.	Own	Own Inv.	Informal
	(1)	(2)	(3)	(4)	(5)
Property Rights	0.023**	−0.034	0.028**	1,086.671	0.015**
	(0.011)	(0.040)	(0.011)	(3,343.712)	(0.007)
Free Markets	0.007	−0.010	0.043***	1,591.869	0.003
	(0.006)	(0.017)	(0.006)	(1,601.982)	(0.004)
Privatization	0.005	−0.021*	−0.011***	−1,377.783	0.001
	(0.004)	(0.012)	(0.004)	(1,090.408)	(0.003)
Federal Trust	−0.005	0.006	−0.020**	−220.878	−0.013**
	(0.009)	(0.024)	(0.009)	(2,271.172)	(0.006)
Municipal Trust	0.002	−0.013	−0.003	−486.454	0.006
	(0.009)	(0.024)	(0.009)	(2,204.428)	(0.006)
Capital City	−0.023	−0.012	−0.063***	824.729	0.040***
	(0.019)	(0.051)	(0.018)	(4,644.284)	(0.012)
Female	−0.067***	−0.096***	−0.071***	−9,859.590***	−0.066***
	(0.013)	(0.034)	(0.012)	(3,036.002)	(0.008)
Age	−0.002***	0.004***	0.005***	151.877	−0.001*
	(0.001)	(0.001)	(0.001)	(133.121)	(0.0003)
Year: 2024	0.011	−0.011	−0.015	−2,342.314	−0.046***
	(0.013)	(0.034)	(0.012)	(3,107.918)	(0.008)
Constant	0.243***	0.709***	−0.064	5,087.741	0.096**
	(0.062)	(0.212)	(0.061)	(17,377.370)	(0.041)
Observations	5,163	895	5,163	339	5,162
R^2	0.011	0.027	0.049	0.055	0.024
Adjusted R^2	0.010	0.017	0.048	0.029	0.022

Note: Linear probability models (1-3,5), OLS for model 4. Trust reverse code: higher = more trust). Reference: Male, Year 2023. * p<0.1; ** p<0.05; *** p<0.01.

Pro-market norms and entrepreneurship. Property rights is the most consistent predictor across outcomes. A one-unit increase in property rights support is associated with a 1.5–2.8 percentage-point significant increase in the probability of starting a business, owning a business, and investing informally. Free markets is positively and significantly associated with owning a business, but not with starting a business or informal investment. Privatization, notably, shows a *negative* and significant association with business ownership, suggesting that support for markets in principle does not translate into support for specific market-reform policies. These findings carry over to the larger three-wave sample (Appendix Table A7), where market norms are the only available predictors.

Government trust and entrepreneurship. Federal trust carries a significant *negative* coefficient for both business ownership and informal investment. Respondents who show more trust in the federal government are *less* likely to own businesses or invest informally. In a context of weak centralized institutions, government skepticism is associated with entrepreneurial activity, consistent with the second dimension of the dualistic economy thesis. Municipal trust, by contrast, is not significant for any outcome, suggesting that attitudes toward local government do not independently correlate with entrepreneurial behavior.

Formal versus informal entrepreneurship. One descriptive contrast in Table 2 is consistent with the dualism we are showcasing: free markets is significantly associated with business ownership, but not with informal investment, while property rights and federal trust carry through to both. This division, while not

definitive, suggests that there is a certain degree of heterogeneity between distinct kinds of market players. An isolated trust-channel analysis (Appendix Table A8) confirms that this pattern is specific to the central state: federal trust is negative and significant for informal investment whether entered alone or alongside municipal trust, while municipal trust is not significant in either specification.

4.3 Discussion

These results support our central argument: Guatemala's entrepreneurial activity is associated with a coherent normative profile combining strong pro-market orientation with deep skepticism toward the central government, consistent with the humanomics claim that moral commitments are prior to formal enforcement and can sustain the coordination structure for entrepreneurial action.

The null result for municipal trust indicates that this institutional critique is targeted at the central state specifically, consistent with a history in which federal institutions have served narrow elites while local-level coordination has operated through different mechanisms.

An interaction between property rights and federal trust (Appendix Table A5) yields a non-significant coefficient, showing that the two dimensions contribute additively rather than reinforcing each other: property rights support predicts higher entrepreneurship *regardless* of trust level, and federal government skepticism predicts higher entrepreneurship *regardless* of property-rights orientation.

Finally, the privatization finding adds an additional layer of nuance. The negative association between privatization support and business ownership reveals that support for markets in principle does not entail support for specific state-reductive policies. Within our humanomics framework, this distinction matters: Guatemalan entrepreneurs embrace market exchange as principle while rejecting specific state-reductive policies, perhaps because historical experience with privatization has been associated with elite capture. The current data do not permit further inference on this point.

These results are subject to important limitations. The cross-sectional design cannot establish causality: market norms may shape entrepreneurial behavior, but entrepreneurial experience may also shape normative attitudes. The relatively low R squared values indicate that norms account for a small share of individual-level variation, as is typical for survey-based studies of attitudes and behavior. The trust variables are available in only two of three waves, limiting the expanded models to a smaller sample. Lastly, using multiple sets of variables does not exclude the possibility that certain results would appear by random chance. Section 5 will thus solidify our analysis by complementing these quantitative findings with qualitative insights from the National Expert Survey, providing expert assessments of the normative and institutional dynamics at

play in Guatemala's entrepreneurship.

5 A Qualitative Assessment of Entrepreneurship in Guatemala: Insights from the National Expert Survey

We now examine qualitative expert assessments from the GEM National Expert Survey to validate and contextualize the quantitative analyses we carried out. The NES draws on the same three years of GEM data covered by our APS analysis (2022–2024), with each wave consisting of 36 individuals for a total of 108 respondents (subsequent breakdowns by industry and by driver may sum to fewer than 108 because not every response was codable for every item). Unlike the APS, the NES uses convenience sampling; we therefore interpret these findings as supplementary, qualitative validation rather than independent hypothesis tests.

Respondents in all of these samples were categorized in their respective area of expertise: business and finance, economics, science and technology, and government and policy. We have separated the respondents in economics from those of business and finance because the latter category is large enough on its own to warrant disaggregation (see Figure 2 for distribution).

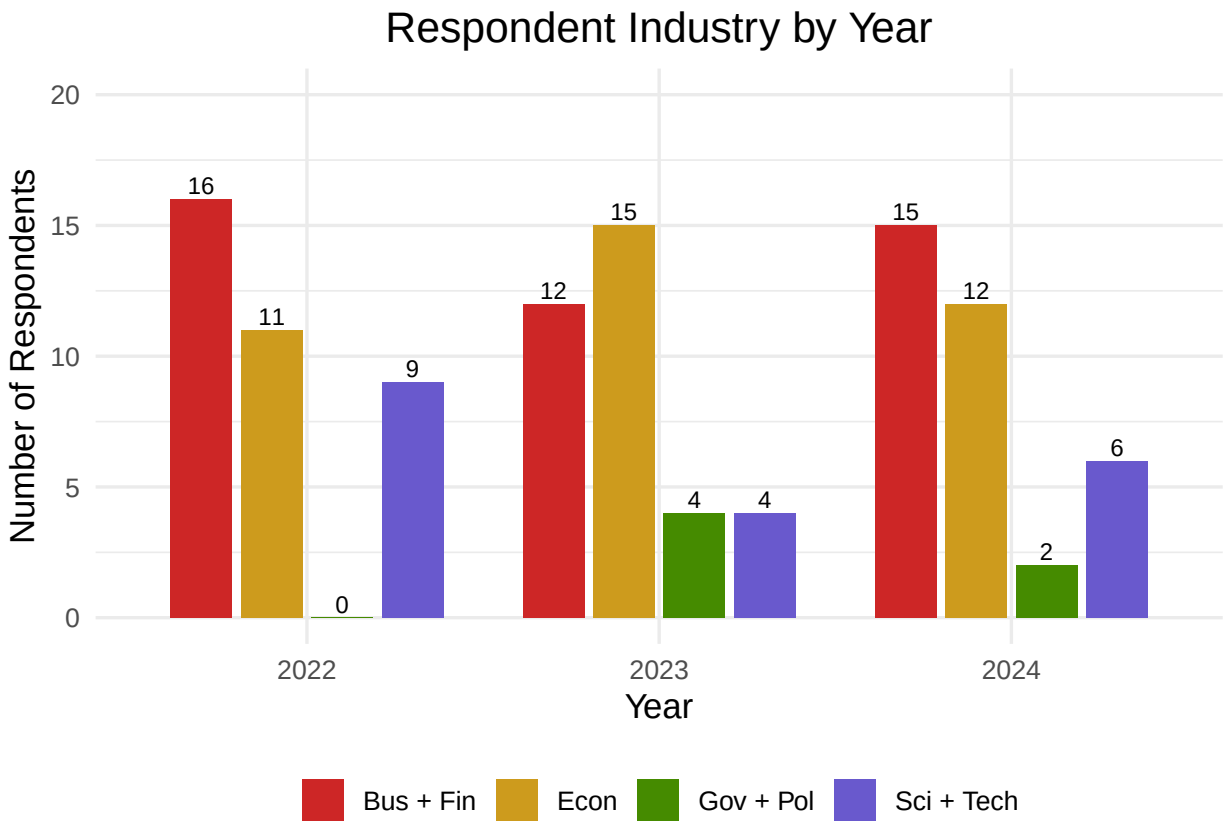


Figure 2: Respondent Industry by Year

An inductive coding strategy was employed to understand expert perceptions of the institutional context shaping entrepreneurship in Guatemala. By allowing themes to emerge from the responses for the question related to what drives entrepreneurship six key drivers were identified: (1) entrepreneurial culture and education, (2) technology and industrial innovation, (3) changes in demographics and consumption patterns, (4) economic necessity/need, (5) remittances, and (6) government policy and programs.

A difficulty in thematically coding these responses was that some respondents viewed certain factors as intertwined. In contrast, other respondents provided single-word answers. In instances where it was difficult to identify the most important theme, and for the sake of simplicity of analysis, we opted for the first factor listed. Figure 3 represents these 6 drivers of entrepreneurship, and each factor highlights the dualistic nature of the country's economy. We focus on two: need and culture.

Need (28): Need is the largest driver in the pooled 2022–2024 sample, although the modal driver varies by wave: technology in 2022 and 2023, need in 2024 (Figure 4). When the majority of economic activity in the

country is informal and federal trust is low, entrepreneurship becomes a necessity-based coping mechanism. Although the evidence does not let us distinguish whether this necessity-driven activity is formal or informal, the prominence of need as a driver supports our reading of informal markets as a viable economic order rather than a second-best alternative. This is consistent with an account in which low enforcement of property rights is linked with higher rates of entrepreneurship: businesses are more viable either in a context where they are given substantial protections, or wherever entrepreneurial activity is chosen because of sheer necessity (Regalado Cardoso 2025).

Culture (24): Tied numerically with technology, culture is the driver that maps most directly to the humanomics framework: it captures the trust and reciprocity norms that organize exchange where formal institutions fail. There are cultural drivers that are central to the country's economic life. Many respondents mentioned that entrepreneurial culture was inherent in Guatemalan people. The humanomics framework explains why this matters: under a sole focus on formal institutions, engaging in entrepreneurial activity in a context where the state is a hindrance would appear irrational. The prominence of cultural drivers in the NES shows that culture and norms function as a primary organizing force in Guatemalan business life.

The other factors: **technology and industrial innovation (24)** and **policy (17)**, also highlight the dualistic economy of the country.

Technological innovation operates as a mechanism that lowers the cost of engaging in entrepreneurship, serving as a mechanism to bypass the costs imposed by formal government institutions. Further, one expert linked information technology to service exports to the North American market, instance that can be tied to Hayek's (1945) account on how dispersed knowledge is mobilized through exchange embedded in shared norms of trust and reciprocity. Engagement through new technological innovations (e.g., earlier through apps, Software as a Service, and social media, and more recently through developments in AI) may both be influenced by, and help shape, the ideologies that in turn affect the likelihood of successful entrepreneurship (Denzau and North 1994). This can be explained by the interaction between context (Welter 2011), and preconceived belief systems that shape how individuals interpret technological change, economic opportunity, and trust in institutions (North 1990).

Policy-coded responses are mixed: a minority cite the removal of specific barriers (e.g., insolvency, factoring, and leasing laws, a fast commercial registry), while the majority point to active institutional support, including municipal initiative, competition among levels of government, public-private programs, education, and macroeconomic stability. The final two drivers, remittances (8), and demography (6), note changes in the Guatemalan economy that are worth recognizing, but provide relatively little insight into the dualistic

nature of the country's economy. Remittances are a driver of entrepreneurship now that they aid with the entry of financial capital that was not available to individuals, while demography indicates changes in the country's migration patterns and consumption.

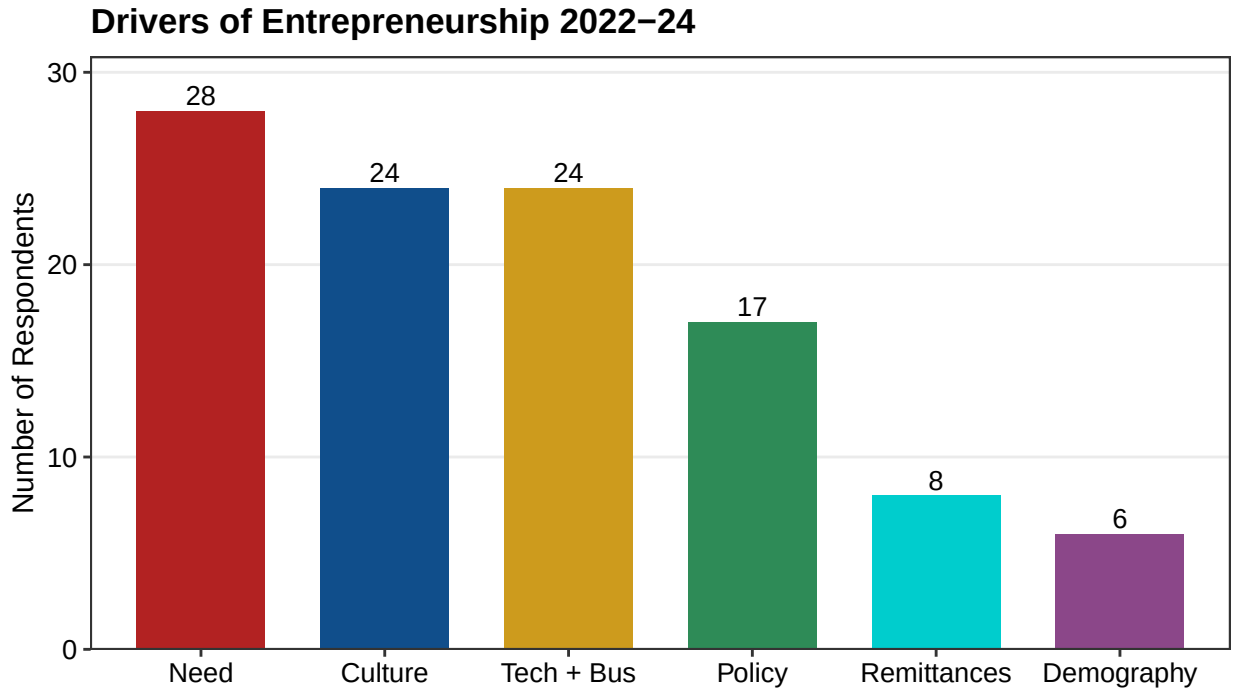


Figure 3: Drivers of Entrepreneurship 2022-24

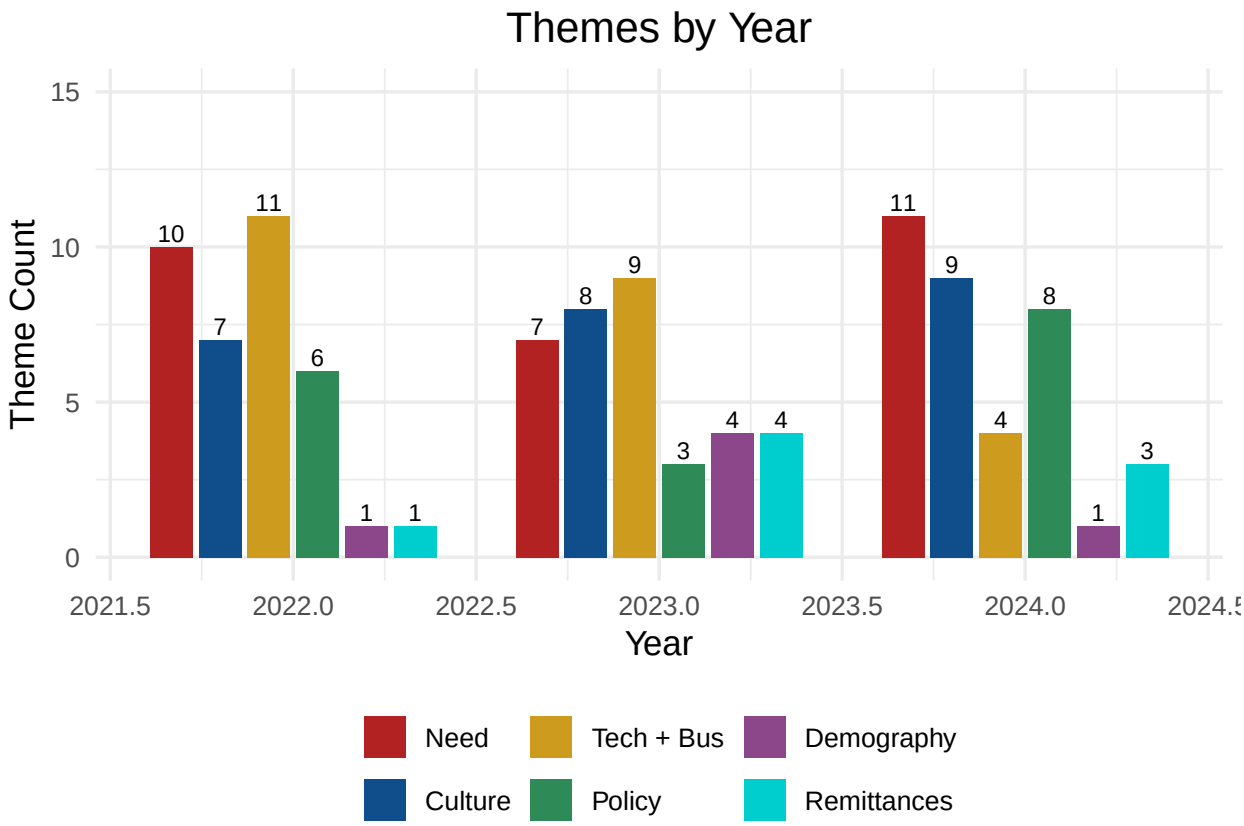


Figure 4: Themes by Year

Taken together, these six drivers help us understand the engine of Guatemalan entrepreneurship outside of standard neo-institutional models that place formal institutions, and ultimately the state, as the forces driving economic activity. Need and culture account for the majority of coded responses, with technology and industrial innovation appearing at the same rate as culture. In the context of our theory, necessity reframes informal activity as a viable economic choice, and culture identifies shared norms as a primary organizing force in commercial life. Technology operates as a complementary mechanism: it lowers the costs of acting on these normative commitments and lets dispersed knowledge circulate where formal institutions cannot. Asked an open question about what drives entrepreneurship, experts reach for normative and decentralized factors before they reach for the state.

Our two instruments with different samples and design point in the same direction: entrepreneurial activity in Guatemala is sustained by a normative commitment to markets and a skepticism toward the central state, consistent with a dualistic economy grounded in humanomics.

6 Conclusion

In this paper, we show that the moral foundations of entrepreneurship in Guatemala are the load-bearing structures of a market order that has outlasted five centuries of extractive formal institutions. The country's entrepreneurial status as an outlier traces to a moral architecture older than its formal institutions: shared mental models of property, exchange, and voluntary association that Guatemalans inherit, defend, and act on regardless of whether the state ratifies them (Denzau and North 1994; Yonk and Earle 2026). Where neo-institutionalism reads weak formal protection and pervasive distrust as a puzzle, humanomics reads them as the conditions under which the moral substrate of commercial society becomes visible.

Two empirical findings carry this argument. The first is that an appreciation for property rights is highly correlated with an individual's decision to engage in entrepreneurial activity, even where formal enforcement institutions are weak or distrusted. What matters empirically is not confidence in courts or registries but the shared normative understanding of ownership that lets exchange proceed. The second finding, drawn from the qualitative analysis, is that culture and skepticism toward the state function as enabling conditions for entrepreneurial activity: respondents describe entrepreneurship as something people do because the moral order around them treats work, property, and self-reliance as legitimate, regardless of whether formal institutions facilitate it.

By focusing on Guatemala, we show that entrepreneurship not only occurs but flourishes outside of formal mechanisms. An exclusive focus on formal mechanisms fails to engage with the economic activity that happens outside of a central economic system, as visible in rankings by the U.S. News and World Report, IBEI, and World Population Review, and it understates the role of culture and norms in driving entrepreneurial activity. Further, we add survey-based observational evidence to a humanomics-based scholarship that has thus far advanced primarily through experimental and historical approaches, letting humanomics speak to Global South cases where scholarly attention is scarce and the historical record is contested.

More broadly, these findings speak to a wider question about what economics considers as priors. Standard institutional analysis treats incentives and constraints as the foundation of economic order; humanomics, including this paper, treats shared moral commitments as prior, that is, what people regard as legitimate, dignified, and one's own. The Guatemala case shows that this is not a stylistic preference. In contexts where formal institutions are weak or distrusted, the moral order is a load-bearing structure for accounting for the observed economic behavior.

There are limitations to our analysis, ranging from the difficulty of making causal inferences in the quantita-

tive analysis to the sampling bias introduced by the convenience sampling used in the qualitative analysis.

Even so, we show that economies are sustained by what their participants regard as legitimate, and legitimacy is a moral fact before it is an institutional one. Where formal enforcement is strong, that prior moral fact recedes from view, and the analyst can credibly treat institutions as the unit of explanation. Where formal enforcement is weak, as in Guatemala, the moral grounding that comprised the very roots of local culture may end up becoming the direct explanation of market engagement.

Appendix

A.1 Variables Used in the Analysis

Table A1: Variables Used in the Analysis

Variable	Code	Description	Scale	Waves
Normative Characteristics (Independent)				
Property Rights	q2MER	Value placed on private property	1–5 Likert	2022–24
Free Markets	q3MER	Support for free markets	1–5 Likert	2022–24
Privatization	q4MER	Support for privatizing public enterprises	1–5 Likert	2022–24
Federal Trust	q8mer	Trust in federal government (rev.-coded)	1–4 Likert	2023–24
Municipal Trust	q9mer	Trust in municipal government (rev.-coded)	1–4 Likert	2023–24
Entrepreneurial Activity (Dependent)				
Starting a Business	bstart	Currently starting a new business	Binary 0/1	2022–24
Startup Investment	NAC_INV_PROPIA	Invested own money in new venture	Binary 0/1	2022–24
Business Ownership	ownmge	Currently owns/manages a business	Binary 0/1	2022–24
Ownership Investment	OMMONOWN	Investment amount in owned business	Continuous	2022–24
Informal Investment	busang	Informally invested in another's business	Binary 0/1	2022–24
Controls				
Capital City	GTcity	Respondent in Guatemala City	Binary 0/1	2022–24
Gender	gender	Respondent gender (1=Male, 2=Female)	Binary	2022–24
Age	age	Respondent age in years	Continuous	2022–24
Year	—	Survey wave (fixed effects)	Factor	2022–24

Note: Trust variables reverse-coded: higher = more trust. Binary outcomes harmonized to 0/1 across waves. Special codes (Refused, Don't know) set to NA.

A.2 Sample Sizes by Wave and Filtering Stage

Table A2: Sample Sizes by Wave and Filtering Stage

	2022	**2023**	**2024**	**Total**
Raw survey responses	3261	3109	2592	8962
3-wave filtered sample	3197	3013	2524	8734
2-wave filtered sample	NA	2796	2367	5163
Starting business (0/1)	3197	3013	2524	8734
Startup investment (0/1)	530	566	394	1490
Business ownership (0/1)	3197	3013	2524	8734
Ownership investment (>0)	238	216	146	600
Informal investment (0/1)	3197	3013	2523	8733

Note: 2-wave sample includes only 2023–2024 (trust variables unavailable in 2022).

A.3 Distribution of Normative Variables (2-Wave Sample, 2023–2024)

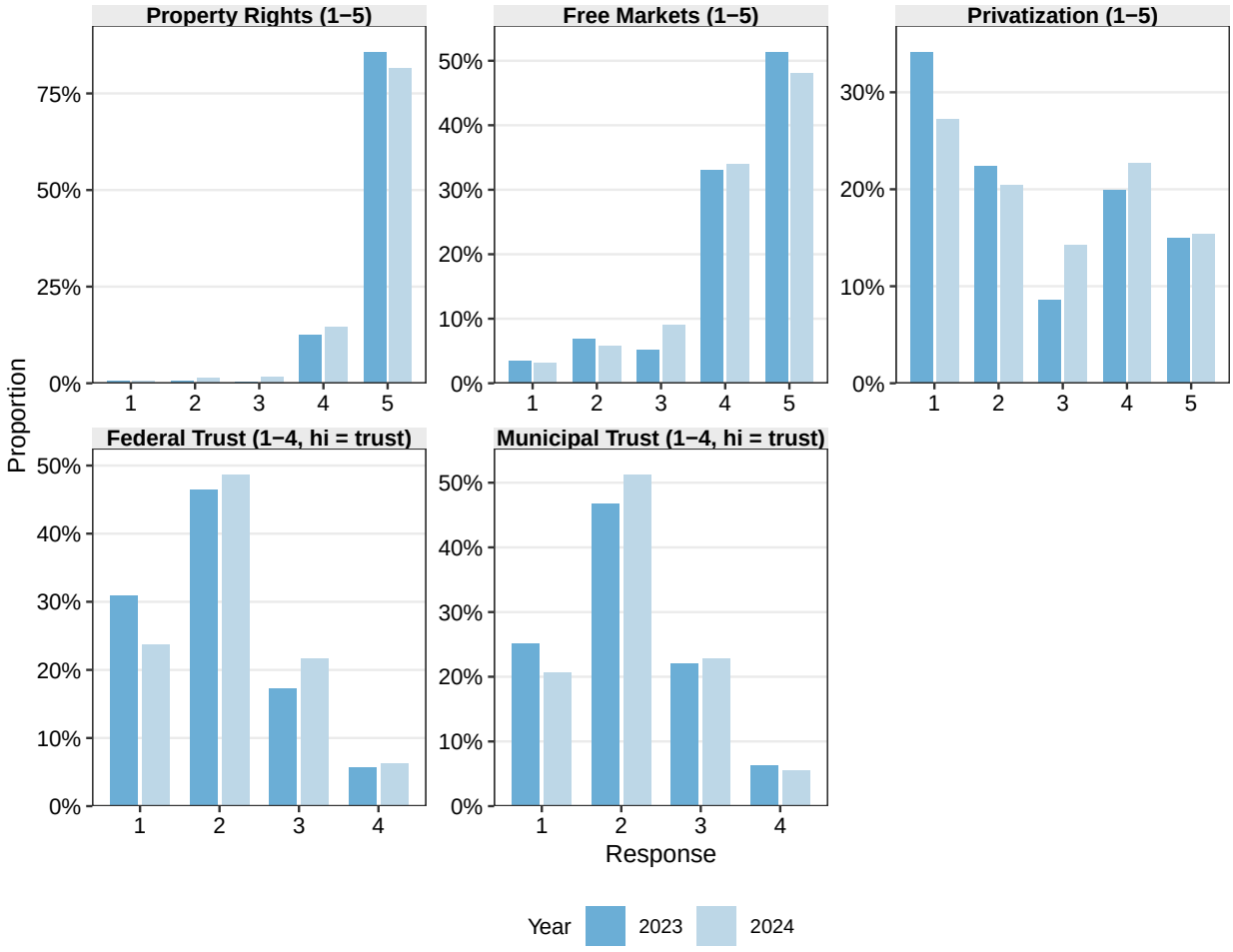


Figure A1: Distribution of Normative Variables (2-Wave Sample, 2023–2024)

A.4 Norm Profiles by Entrepreneurial Status

Table A3: Mean Norm Scores by Entrepreneurial Status (2-Wave)

Group	N	Prop. Rights	Free Mkts	Privatiz.	Fed. Trust	Mun. Trust
Starting	1467	4.82	4.24	2.75	2.03	2.110429
Owner	1496	4.85	4.40	2.51	1.98	2.075535
Informal Investor	518	4.85	4.28	2.70	1.94	2.104247
None	2520	4.75	4.10	2.71	2.06	2.116270

Note: Market norms: 1–5 scale; trust: 1–4 scale reverse-coded, higher = more trust.

A.5 Logit Specifications (2-Wave, 2023–2024)

Table A4: Norms and Entrepreneurship: Logit (2-Wave, 2023–2024)

	Dependent variable:			
	Start	Start Inv.	Own	Informal
	(1)	(2)	(3)	(4)
Property Rights	0.121**	−0.141	0.167***	0.230**
	(0.060)	(0.166)	(0.064)	(0.106)
Free Markets	0.036	−0.041	0.232***	0.042
	(0.032)	(0.071)	(0.034)	(0.049)
Privatization	0.025	−0.084*	−0.057**	0.019
	(0.022)	(0.049)	(0.022)	(0.033)
Federal Trust	−0.027	0.025	−0.104**	−0.152**
	(0.043)	(0.097)	(0.044)	(0.067)
Municipal Trust	0.009	−0.052	−0.019	0.065
	(0.044)	(0.099)	(0.045)	(0.065)
Capital City	−0.117	−0.053	−0.339***	0.411***
	(0.094)	(0.207)	(0.099)	(0.126)
Female	−0.333***	−0.391***	−0.356***	−0.767***
	(0.063)	(0.139)	(0.063)	(0.099)
Age	−0.010***	0.017***	0.024***	−0.007*
	(0.003)	(0.006)	(0.003)	(0.004)
Year: 2024	0.052	−0.046	−0.076	−0.543***
	(0.063)	(0.139)	(0.064)	(0.099)
Constant	−1.182***	0.869	−2.897***	−2.637***
	(0.326)	(0.885)	(0.350)	(0.561)
Observations	5,163	895	5,163	5,162

Note: Trust reverse-coded: higher = more trust.
Reference: Male, Year 2023. * p<0.1; ** p<0.05; *** p<0.01.

A.6 Interaction Models: Property Rights × Federal Trust

Table A5: Interaction: Property Rights × Federal Trust (2023–2024)

	Dependent variable:		
	Start	Own	Informal
	(1)	(2)	(3)
Property Rights	0.047	0.014	0.019
	(0.032)	(0.032)	(0.021)
Federal Trust	0.055	−0.054	−0.004
	(0.073)	(0.072)	(0.049)
Free Markets	0.007	0.043***	0.003
	(0.006)	(0.006)	(0.004)
Privatization	0.005	−0.011***	0.001
	(0.004)	(0.004)	(0.003)
Municipal Trust	0.002	−0.003	0.006
	(0.009)	(0.009)	(0.006)
Capital City	−0.022	−0.064***	0.040***
	(0.019)	(0.018)	(0.012)
Female	−0.068***	−0.070***	−0.066***
	(0.013)	(0.012)	(0.008)
Age	−0.002***	0.005***	−0.001*
	(0.001)	(0.001)	(0.0003)
Year: 2024	0.011	−0.015	−0.046***
	(0.013)	(0.012)	(0.008)
Prop. Rights × Fed. Trust	−0.012	0.007	−0.002
	(0.015)	(0.015)	(0.010)
Constant	0.123	0.003	0.078
	(0.158)	(0.156)	(0.104)
Observations	5,163	5,163	5,162
R^2	0.011	0.049	0.024
Adjusted R^2	0.009	0.047	0.022
Note:	2-wave sample. Trust reverse-coded: higher = more trust.		

A.7 Capital City vs. Rest of Country

Table A6: Start Business: Capital vs. Non-Capital (2023–2024)

	Dependent variable:	
	Starting a Business	
	Capital	Non-Capital
	(1)	(2)
Property Rights	0.007	0.025**
	(0.028)	(0.012)
Free Markets	0.010	0.007
	(0.016)	(0.007)
Privatization	−0.006	0.006
	(0.012)	(0.005)
Federal Trust	0.008	−0.008
	(0.024)	(0.009)
Municipal Trust	0.009	0.00001
	(0.023)	(0.010)
Female	−0.054	−0.070***
	(0.034)	(0.014)
Age	0.001	−0.003***
	(0.001)	(0.001)
Year: 2024	−0.014	0.015
	(0.034)	(0.014)
Constant	0.171	0.254***
	(0.156)	(0.067)
Observations	684	4,479
R^2	0.007	0.013
Adjusted R^2	−0.004	0.012
Note:	Capital = Guatemala City.	

A.8 Three-Wave OLS Models (Market Norms Only, 2022–2024)

Table A7: Market Norms and Entrepreneurship: OLS (3-Wave, 2022–2024)

	Dependent variable:				
	Start M1	Start Inv. M2	Own M3	Own Inv. M4	Informal M5
	(1)	(2)	(3)	(4)	(5)
Property Rights	0.019**	−0.010	0.030***	3,653.337	0.014**
	(0.008)	(0.029)	(0.008)	(3,092.331)	(0.006)
Free Markets	0.011**	0.013	0.036***	1,158.704	0.001
	(0.005)	(0.013)	(0.005)	(1,592.801)	(0.003)
Privatization	0.006*	−0.006	−0.010***	513.327	−0.0002
	(0.003)	(0.009)	(0.003)	(1,077.115)	(0.002)
Capital City	0.005	0.007	−0.040***	−2,195.467	0.027***
	(0.015)	(0.039)	(0.014)	(4,730.740)	(0.010)
Female	−0.061***	−0.096***	−0.057***	−8,208.438***	−0.063***
	(0.010)	(0.026)	(0.010)	(3,003.968)	(0.007)
Age	−0.002***	0.005***	0.004***	474.381***	−0.001***
	(0.0004)	(0.001)	(0.0004)	(134.013)	(0.0003)
Year: 2023	0.005	0.028	0.020*	−436.687	−0.034***
	(0.011)	(0.030)	(0.011)	(3,411.891)	(0.008)
Year: 2024	0.016	0.023	0.006	−2,623.049	−0.078***
	(0.012)	(0.033)	(0.012)	(3,850.423)	(0.009)
Constant	0.222***	0.377**	−0.092**	−22,505.290	0.141***
	(0.046)	(0.151)	(0.045)	(16,509.400)	(0.033)
Observations	8,734	1,490	8,734	600	8,733
R^2	0.010	0.027	0.031	0.040	0.022
Adjusted R^2	0.010	0.022	0.030	0.027	0.021

Note: Linear probability models for M1-M3 and M5. OLS for M4. Reference: Male, Year 2022.

A.9 Informal Investment: Federal vs. Municipal Trust

Table A8: Informal Investment: Federal vs. Municipal Trust (2023–2024)

	Dependent variable:		
	Informal Investment		
	Fed. Only	Mun. Only	Both
	(1)	(2)	(3)
Federal Trust	−0.010**		−0.013**
	(0.005)		(0.006)
Municipal Trust		−0.001	0.006
		(0.005)	(0.006)
Property Rights	0.015**	0.015**	0.015**
	(0.007)	(0.007)	(0.007)
Free Markets	0.004	0.003	0.003
	(0.004)	(0.004)	(0.004)
Privatization	0.002	0.001	0.001
	(0.003)	(0.003)	(0.003)
Capital City	0.040***	0.041***	0.040***
	(0.012)	(0.012)	(0.012)
Female	−0.066***	−0.067***	−0.066***
	(0.008)	(0.008)	(0.008)
Age	−0.001*	−0.001*	−0.001*
	(0.0003)	(0.0003)	(0.0003)
Year: 2024	−0.046***	−0.048***	−0.046***
	(0.008)	(0.008)	(0.008)
Constant	0.101**	0.086**	0.096**
	(0.041)	(0.041)	(0.041)
Observations	5,162	5,162	5,162
R^2	0.024	0.023	0.024
Adjusted R^2	0.022	0.021	0.022

Note: Trust reverse-coded: higher = more trust. 2-wave sample. Reference: Male, Year 2023. * p<0.1; ** p<0.05; *** p<0.01.

A.10 Three-Wave Market Norm Distributions (2022–2024)

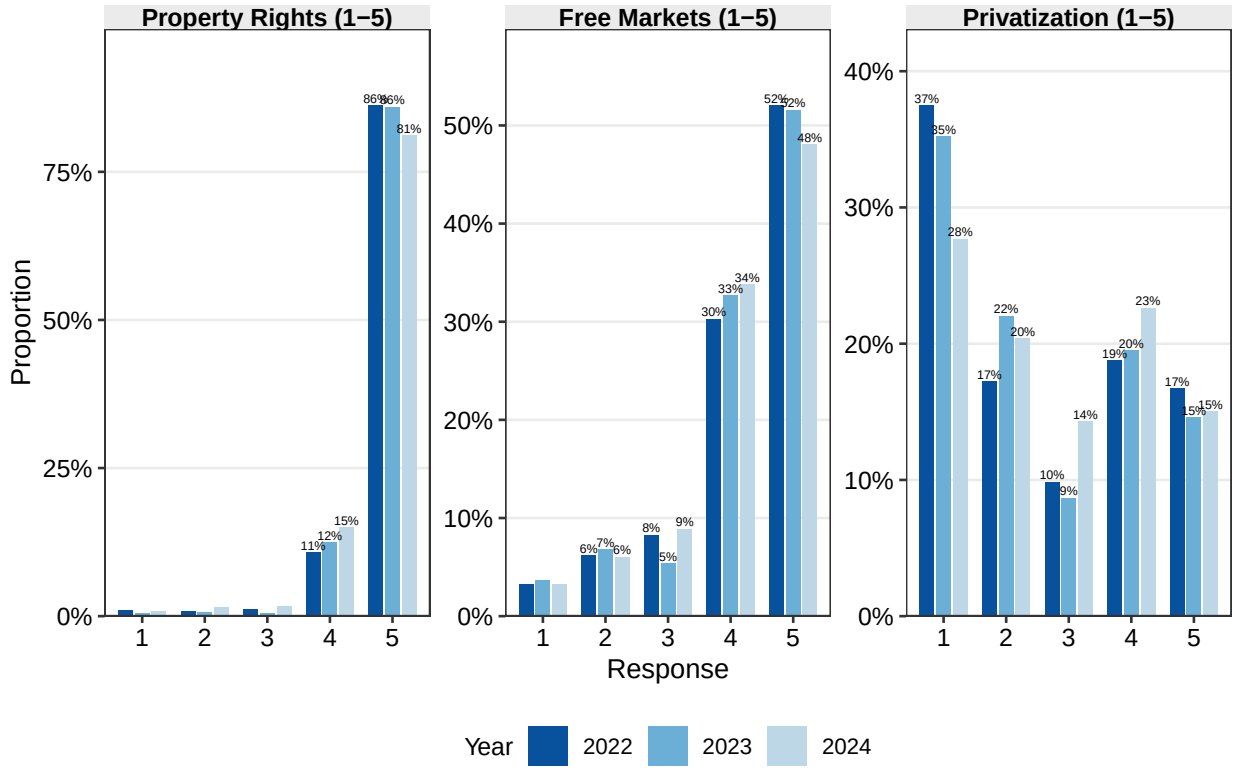


Figure A2: Market Norm Distributions (3-Wave, 2022–2024)

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