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Micro and small enterprise survival in contexts of poverty: Evidence from Peru

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Abstract

This study analyses the determinants of micro and small enterprise survival in a high-poverty setting, drawing on a longitudinal cohort of 1,861 firms registered under REMYPE in Cajamarca province, Peru, where monetary poverty affects 44.5% of the population (2015–2024). Using Kaplan–Meier curves and Cox proportional hazards regression, we assess how firm size, geographic location, and economic sector shape closure risk over time. Firm size is the dominant determinant: microenterprises face a substantially higher closure risk than small enterprises, a gap that persists despite REMYPE benefits. Geographic location shows no significant effect, while the economic sector exerts a substantial influence, with essential services proving more resilient than discretionary ones. Closures cluster in the post-pandemic period rather than during the pandemic, consistent with a delayed crisis. The findings indicate that,

Keywords

- enterprise
- economic development
- business management
- poverty
- small enterprise

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under structural poverty, standard support mechanisms are insufficient and differentiated, size- and sector-sensitive policies are required.

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Introduction

Business survival constitutes a multidimensional phenomenon influenced by geographic location, firm size, and economic sector. These dimensions directly affect the design of public policies aimed at supporting micro and small enterprises, especially in contexts of structural vulnerability where business closure affects both the local economy and social fabric (Marshall & Schrank, 2020). In environments characterised by high informality and weak institutions, moderate risk disposition can improve strategic decision-making and organisational stability (Koch & Menkhoff, 2025).

International evidence indicates that small and medium enterprises face significant continuity challenges: in countries such as Spain, New Zealand, and Thailand, approximately half fail within four years. Financial constraints, limited innovation capacity, and deficits in internal control systems systematically appear as the main barriers to survival (Del Campo Villares et al., 2020; Duppati et al., 2021). However, these findings come primarily from urban contexts and middle-to-high income economies, leaving unexplored how poverty may modify business survival dynamics.

In Peru, national studies estimate the business failure rate at 37% in the first year (Pantaleón SantaMaría et al., 2023). However, these estimates may underrepresent the problem in high-poverty provinces. Such is the case of Cajamarca province, where monetary poverty—households whose per capita expenditure falls below the official poverty line—affects 44.5% of the population, well above the national average of 29% (IPE, 2024). In this setting, micro and small enterprises formalised under REMYPE, the national registry granting tax and labour benefits to such firms, sustain much of local economic activity yet remain especially exposed to early closure.

Previous studies have identified multiple determinants of business continuity, including firm type, size, operational strategies, owner experience, location, and economic sector (Li et al., 2023). Despite this accumulated evidence, important gaps persist. Firstly, most empirical studies use cross-sectional data, limiting the capture of temporal dynamics. Secondly, the literature has pre-

dominantly examined metropolitan areas, leaving rural and impoverished regions largely underexplored. Thirdly, survival determinants are usually analysed in isolation, without integrated models that assess their comparative weight. Fourthly, although SDG 8.3 prioritises SME strengthening (United Nations, 2020), empirical evidence from high-poverty provinces remains scarce.

The present study addresses these gaps through a longitudinal analysis of 1,861 micro and small enterprises in Cajamarca province (2015–2024). Using Kaplan–Meier curves and Cox proportional hazards regression, we examine how firm size, geographic location, and economic sector influence closure risk, and whether the effect of location varies across sectors. To account for the observed patterns, the next section develops a theoretical framework—integrating the liabilities of smallness and poorness, agglomeration theory, sectoral competitive structure, and crisis-resilience dynamics—from which four hypotheses are derived. The study is descriptive in nature; the deeper causes of firm closure lie beyond its scope and are left for future research.

The remainder of the article is organised as follows: Section 1 develops the theoretical framework; Section 2 describes the data and methods; Section 3 reports the results; Section 4 discusses the findings. Finally, the Conclusions summarise the main contributions and acknowledge limitations.

1. Theoretical framework

1.1. The liability of smallness and the amplifying role of poverty

Organisational ecology holds that survival prospects are shaped by structural conditions present at and after founding. Stinchcombe (1965) introduced the *liability of newness*, arguing that young organisations fail at higher rates because they must invent roles and routines, rely on trust among strangers, and lack stable ties to clients and suppliers. Aldrich and Auster (1986) distinguished a *liability of smallness*, showing that small firms face elevated mortality independent of age, owing to restricted access to capital, financing, and skilled labour. In contexts of structural poverty, Morris et al. (2022) extend this logic to a *liability of poorness*, whereby disadvantage and fragility compound. We argue that poverty does not merely add a further handicap but amplifies the liability of smallness through three mechanisms: demand volatility, as constrained purchasing power narrows and destabilises local markets; credit rationing, as information asymmetries disadvantaging small borrowers are magnified where collateral and financial infrastructure are scarce;

and institutional thinness, as the support services that might offset smallness are themselves underprovided. We therefore propose:

H1: The liability of smallness is amplified in poverty contexts, where resource constraints intensify survival disadvantages for smaller firms.

1.2. Agglomeration economies and threshold effects in impoverished territories

Agglomeration theory predicts that spatial concentration confers survival advantages through shared infrastructure, deeper markets, and institutional proximity (Wei et al., 2022). Yet these benefits presuppose a minimum threshold of underlying conditions. Tello (2010) shows that peripheral, low-productivity regions become caught in development traps sustained by weak social capital, where competition relies on imitation and low prices, keeping output confined to low-value-added activities. Where such conditions prevail uniformly, the differential advantage of central locations erodes, since core and peripheral firms confront comparable constraints. Saha et al. (2023) confirm that, among rural microenterprises, location exerts only a marginal effect relative to internal capacity. We therefore expect agglomeration advantages to attenuate below a poverty threshold, as homogeneous structural limitations dissolve territorial differentials. We therefore propose:

H2: In contexts of homogeneous poverty, agglomeration advantages associated with urban location are attenuated by structural limitations common to all areas.

1.3. Sectoral structure and the elasticity of demand

Industry structure is a primary determinant of firm performance. Porter (1985) argues that industry attractiveness, governed by the five competitive forces conditions the prices, costs, and investment that shape long-run profitability, and hence the risk environment that a firm inherits from its sector. Paéz et al. (2021) synthesise this market-based view with the resource-based view, locating competitiveness alternately in external industry structure and in valuable, rare, and inimitable internal resources. From these perspectives, sectors differ systematically in their exposure to demand shocks: essential services, facing relatively inelastic demand, should retain viability even under contracting purchasing power, whilst sectors dependent on discretionary ex-

penditure should prove more fragile. The heterogeneous sectoral effects of the COVID-19 shock on the Polish economy—a severe contraction in tourism alongside expansion in technology (Kuryłek & Shachmurove, 2025) together with a reallocation of employment that fell most sharply in sectors such as arts, entertainment, and recreation (Kwiatkowski & Szymańska, 2022)—illustrate this divergence. We treat demand elasticity as the theoretical mechanism mediating these patterns, recognising that it is inferred from observed survival rather than measured directly. We therefore propose:

H3: Demand elasticity mediates sectoral survival patterns, with essential services showing greater resilience than discretionary sectors.

1.4. Crisis dynamics and the delayed manifestation of failure

Organisational resilience—the capacity to absorb disruption and adapt—mediates how external shocks translate into closure (Hillmann & Guenther, 2021; Soria et al., 2021). The relationship between an economic shock and observed firm exit is not, however, contemporaneous. Government support can suppress failure during the acute phase of a crisis: Assefa (2023) finds that financial support schemes substantially reduce the probability of small-business failure. Once such support is withdrawn, firms sustained by emergency measures may succumb to accumulated financial strain, producing a lagged wave of closures (Tonetto et al., 2024). This lag is reinforced administratively, since reduced capacity for formal deregistration during a crisis defers recorded closures to subsequent years (Katare et al., 2021). We therefore expect closures to cluster after, rather than during, the pandemic. We therefore propose:

H4: Business closures exhibit temporal clustering, with crises producing delayed rather than immediate effects on enterprise survival.

1.5. Poverty as a structural moderator

Taken together, these mechanisms suggest that poverty operates not as an additional independent variable but as a structural moderator that reshapes the strength and direction of established survival determinants. It magnifies the liability of smallness, dissolves the differential value of location, sharpens the divergence between elastic and inelastic sectors, and conditions the temporal pathway through which crises register as failures. This integrated view frames the empirical analysis that follows.

2. Data and methods

2.1. Data

This research adopted a quantitative, non-experimental, retrospective longitudinal cohort design with an explanatory-descriptive scope. Variables were not manipulated but analysed from official administrative records (Creswell & Creswell, 2022).

The study was conducted in Cajamarca province, Peru, where monetary poverty—households whose per capita expenditure falls below the official poverty line—affects 44.5% of the population, significantly above the national average of 29% (IPE, 2024). Poverty is therefore treated as a contextual condition of the study setting, measured at the provincial level; it is not a firm- or household-level variable, which limits inferences about its effect on individual enterprises.

The data source was the administrative database of Peru’s national tax authority (SUNAT), comprising 11,387 records. From this database, the study population was defined as legally constituted micro and small enterprises registered in REMYPE—the national registry granting tax and labour benefits to formalised firms—located in Cajamarca province. Sole proprietorships and natural persons, enterprises not registered in REMYPE, duplicates, and organisations outside the study window were excluded. Applying these criteria yielded a final sample of 1,861 enterprises (Table 1). Because REMYPE registration is voluntary, the sample comprises only formalised firms that sought regime benefits.

Firm size (micro vs. small) was taken from the REMYPE classification maintained by the Ministry of Production, which assigns categories on the basis of annual sales thresholds.⁵ As sales figures were not directly accessible, this administrative classification was used; however, being updated periodically rather than continuously, it may not capture short-term changes in firm scale.

Table 1. Sample selection: from the SUNAT database to the REMYPE study population

Total SUNAT database	11,387
Total excluded	(9,526)
Total included	1,861

Source: based on SUNAT administrative records.

⁵ Firm size in the REMYPE registry is defined solely by annual sales, measured in Tax Units (Unidad Impositiva Tributaria, UIT) — a reference value set annually by the Peruvian government. Microenterprises are those with annual sales of up to 150 UIT, and small enterprises those with annual sales above 150 and up to 1,700 UIT.

The dependent variable was business survival, defined as operational continuity from registration until formal deregistration or active status as of 31 December 2024, evaluated in two dimensions: duration in years and current status (active / closed). Closure was identified through administrative deregistration; a recognised limitation is that formal deregistration may lag the actual cessation of activity, particularly during periods of administrative disruption. The independent variables were: (a) firm size, coded binary (0 = micro, 1 = small); (b) geographic location, coded as capital district versus other (peripheral) districts; and (c) economic activity, classified into ten sectors following Peru's National Institute of Statistics and Informatics (INEI, 2019).

2.2. Methods

Enterprises were observed from their REMYPE registration—the earliest entries dating to 2015—until 31 December 2024; the first recorded closures occurred in 2016. The analysis proceeded in four phases. First, Kaplan–Meier survival curves were estimated and compared across firm size, geographic location, and economic sector using Log-Rank tests. Next, a Cox proportional hazards regression evaluated the simultaneous effect of these three variables on closure risk; with 444 events and 11 parameters (events per variable = 40.4), the sample comfortably exceeded the conventional threshold for stable estimation. Then, chi-square tests examined the temporal distribution of closures across three phases of the COVID-19 shock pre-pandemic (2016–2019), pandemic (2020–2021), and post-pandemic (2022–2024), as well as the interaction between location and sector. The three periods follow the chronology of the pandemic and its official containment in Peru rather than equal intervals. Peru declared a national state of emergency with mandatory social isolation in March 2020 (Decreto Supremo N° 044, 2020), and the national state of emergency was formally lifted only in October 2022 (Decreto Supremo N° 130, 2022). The binding lockdown and the most stringent mobility restrictions, however, were concentrated in 2020 and 2021, after which they were progressively relaxed and economic activity began to recover (Olivera, 2023); 2022 is therefore taken as the onset of the recovery phase. The outer bounds of the window are set by the data rather than by the shock: the pre-pandemic phase begins in 2016, the first year in which closures are observed in the cohort, and the post-pandemic phase ends in 2024, the close of the observation window. The resulting asymmetry in the length of these periods—four, two and three years—thus reflects the official chronology of the pandemic and its containment together with the boundaries of the data, not an analytical choice.

Finally, the proportional-hazards assumption was verified through Schoenfeld residuals (size $p = 0.827$; location $p = 0.066$; sector $p = 0.155$; global $p = 0.092$). Analyses were performed in IBM SPSS Statistics v.29 and R v.4.5.2.

2.3. Descriptive statistics

Of the 1,861 enterprises, 444 (23.9%) experienced closure and 1,417 (76.1%) remained active (censored). Table 2 reports the distribution by size, location, and sector.

Table 2. Sample characteristics and distribution

Characteristic	<i>n</i>	%	Business closures (events)	Survival rate (%)
Total sample	1,861	100.0	444	76.1
By size:				
Microenterprises	1,766	94.9	439	75.1
Small enterprises	95	5.1	5	94.7
By location:				
Capital district	1,691	90.9	410	75.8
Other districts ¹	170	9.1	34	80.0
By sector:				
Construction	444	23.9	167	62.4
Commerce	435	23.4	77	82.3
Real estate	347	18.6	71	79.5
Transport	190	10.2	30	84.2
Hotels & restaurants	140	7.5	37	73.6
Manufacturing	129	6.9	28	78.3
Education	60	3.2	11	81.7
Health services	44	2.4	3	93.2
Other services	37	2.0	12	67.6
Others ²	35	1.9	8	77.1

Note: survival rate = percentage still operating at the end of 2024. ¹ Peripheral districts within the study province. ² Groups primary sectors and public services.

Source: own work.

The sample is dominated by microenterprises and by firms located in the capital district, while economic activity concentrates in construction, commerce, and real estate. Closures are unevenly distributed across these categories, with construction and the smallest firms showing the highest exit rates. This descriptive composition frames the survival analysis reported in the following section.

3. Results

The analysis included 1,861 formally constituted enterprises registered in REMYPE during the 2015–2024 period in the province of Cajamarca. Of these, 444 (23.9%) experienced closures, whilst 1,417 (76.1%) remained active (censored). The sample showed heterogeneity in organisational characteristics. Table 2 presents the sample distribution.

Kaplan–Meier Log-Rank tests revealed significant survival differences by firm size and economic sector (both $p < 0.001$) but not by geographic location ($p = 0.356$). The Cox proportional hazards model was statistically significant ($\chi^2(11) = 81.512$, $p < 0.001$) with moderate discriminatory capacity (C-index = 0.60, 95% CI: 0.57–0.63) and a pseudo- R^2 of 0.287. Table 3 reports the integrated results.

Firm size was the strongest determinant. Microenterprises faced a fivefold higher closure risk than small enterprises ($HR = 5.00$, 95% CI: 2.03–11.87, $p < 0.001$), the largest effect in the model, with survival rates of 75.1% versus 94.7% (Figure 1A). This supports H1.

Location showed no significant effect ($HR = 1.18$, 95% CI: 0.83–1.68, $p = 0.356$); capital-district firms (75.8% survival) performed similarly to peripheral ones (80.0%) (Figure 1B). No significant location–sector interaction was found ($\chi^2 = 8.13$, $p = 0.521$). This supports H2.

Sector was significant ($p < 0.001$), with a 30.8-percentage-point gap between extremes: health services showed the highest survival (93.2%, $HR = 0.28$, $p = 0.037$) and construction the lowest (62.4%, $HR = 1.72$, $p = 0.008$) (Figure 1C). This supports H3.

Closures clustered significantly over time ($\chi^2 = 99.77$, $p < 0.001$): the post-pandemic period (2022–2024) concentrated 83.3% of closures, against 1.6% during the pandemic (2020–2021) and 15.1% pre-pandemic (2016–2019) (Table 4). This delayed pattern supports H4.

The proportional-hazards assumption held (Schoenfeld residuals: size $p = 0.827$; location $p = 0.066$; sector $p = 0.155$; global $p = 0.092$). No multicollinearity was detected (VIF 1.002–1.004). A sensitivity analysis excluding one influential observation confirmed the stability of the estimates. Table 5 summarises the diagnostics.

Table 3. Determinants of business survival: Integrated analysis

Univariate analysis					Multivariate Cox model		
	<i>N</i>	mean years	log-rank <i>p</i> -value	<i>HR</i> (95%CI)	<i>B</i>	<i>SE</i>	<i>P</i>
Enterprise size			<0.001				
Micro-enterprise	1,766	8.47		5.00 (2.03–11.87)	1.591	0.451	<.001
Small (reference)	95	9.61		1.00			
Geographic location			0.356				
Capital	1,691	8.52		1.18 (0.83–1.68)	0.165	0.179	0.356
Other districts (reference)	170	8.62		1.00			
Economic sector			<0.001				
Health	44	9.39		0.28 (0.09–0.92)	–1.270	0.677	0.037
Transport	190	8.99		0.70 (0.30–1.40)	–0.351	0.398	0.183
Commerce	435	8.82		0.89 (0.39–1.69)	–0.114	0.372	0.605
Education	60	8.73		0.77 (0.28–1.74)	–0.265	0.465	0.457
Real estate	347	8.45		0.97 (0.43–1.84)	–0.027	0.373	0.903
Manufacturing	129	8.65		0.91 (0.42–2.00)	–0.092	0.401	0.819
Hotels / restaurants	140	8.21		1.45 (0.61–2.84)	0.369	0.390	0.141
Construction	444	7.92		1.72 (1.15–2.56)	0.539	0.362	0.008
Other services	37	8.10		1.30 (0.48–2.90)	0.261	0.457	0.450
Others (reference)	35	8.46		1.00			

Note: *HR* = hazard ratio. Reference categories: small enterprise, other districts, and the “others” sector. Model statistics: $\chi^2(11) = 81.512$, $p < 0.001$; $-2 \log\text{-likelihood} = 5,901.866$; *C*-index = 0.60 (95% *CI*: 0.57–0.63); pseudo- $R^2 = 0.287$.

Source: own work.

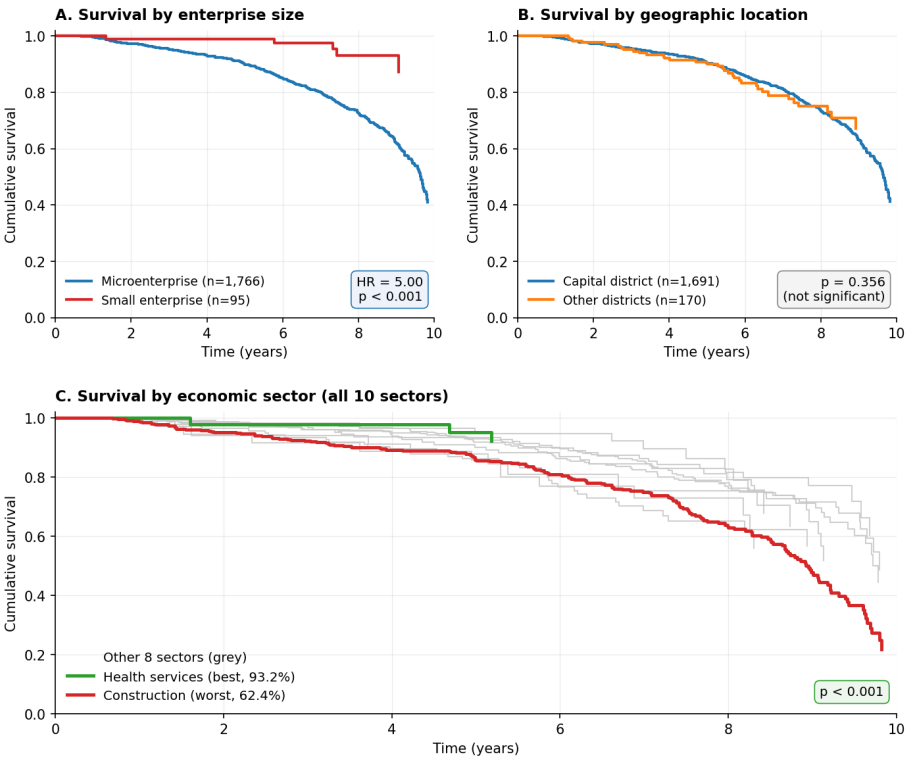


Figure 1. Kaplan–Meier survival curves by enterprise size (A), geographic location (B), and economic sector (C). Statistical results are shown within each panel

Source: own work.

Table 4. Temporal and spatial analysis of business closures

Analysis	Category	<i>n</i>	%	Test statistic	<i>p</i> -value
By year				$\chi^2(8) = 178.97$	$p < 0.001$
	2016	7	1.6		
	2017	7	1.6		
	2018	24	5.4		
	2019	29	6.5		
	2020	7	1.6		
	2021	0	0.0		
	2022	41	9.2		
	2023	49	11.0		
	2024	280	63.1		
By peri- od				$\chi^2(2) = 99.77$	$p < 0.001$
	Pre-pandemic (2016–2019)	67	15.1		
	Pandemic (2020–2021)	7	1.6		
	Post-pandemic (2022–2024)	370	83.3		
Location × sector	Active enterprises			$\chi^2(9) = 14.01$	$p = 0.122$
	Closed enterprises			$\chi^2(9) = 8.13$	$p = 0.521$

Note. Closures cluster significantly in the post-pandemic period (83.3%). No significant location–sector interaction was found ($p > 0.05$).

Source: own work.

Table 5. Model diagnostics summary

Diagnostic Test	Method	Result	Status
Proportional hazards	Schoenfeld residuals	All $p > 0.05$	Satisfied
Size		$p = 0.827$	
Location		$p = 0.066$	
Economic activity		$p = 0.155$	
Global		$p = 0.092$	
Multicollinearity	VIF	1.002–1.004	Satisfied
Influential observations	DfBeta sensitivity analysis	1 case; estimates stable	Satisfied
Overall fit	LR test	$\chi^2(11) = 81.512$, $p < 0.001$	Good
Discrimination	C-index	0.60 (95% CI: 0.57–0.63)	Moderate
Explained variation	Pseudo R^2	0.287	Acceptable

Source: own work.

Taken together, these diagnostics confirm that the Cox model is statistically sound and that its estimates are stable. The proportional-hazards assumption is satisfied, no multicollinearity is present, and the findings are robust to influential observations. The structural patterns reported above can therefore be interpreted with confidence, subject to the model's moderate discriminatory capacity.

4. Discussion

This study examined how firm size, geographic location, and economic sector shape enterprise survival under structural poverty, and how closures distribute over time. Its contribution lies in showing that poverty does not merely add to established survival determinants but reconfigures them: relationships documented largely in urban and middle-income settings behave differently where poverty is pervasive.

Firm size proved the dominant determinant. The survival gap between micro and small enterprises substantially exceeds the roughly twofold differential reported for other Peruvian contexts (Montes-Tocto et al., 2023), and it persists despite the benefits of the REMYPE regime—evidence that the liabilities of smallness and poorness set out above operate jointly rather than in isolation. As Azañero et al. (2023) observe, the typical advantages of larger firms—distribution networks, economies of scale, and financial strength—become amplified in constrained environments, and the ten-employee threshold appears to mark a meaningful transition in access to resources and markets (Audretsch et al., 2025).

Geographic location, by contrast, showed no significant effect. This is inconsistent with the predictions of agglomeration theory but aligns with the threshold logic developed earlier: agglomeration economies presuppose a minimum level of market depth, infrastructure, and institutional density, and where poverty depresses these uniformly as in a province at 44.5% poverty, the advantages of central location fail to materialise.

Sectoral heterogeneity was pronounced, with essential services resilient and construction highly vulnerable. We interpret this primarily through demand elasticity: activities meeting basic needs retain demand as incomes contract, whereas sectors reliant on discretionary or public spending are more exposed, consistent with the evidence of Najib et al. (2021) on discretionary-demand sectors and Mackiewicz and Kurczewska (2023) on adaptability across activities. Two caveats apply. Firstly, demand elasticity is inferred from survival patterns rather than measured directly, and should be read as a theoretically motivated mechanism rather than an empirically isolated one.

Secondly, alternative explanations cannot be discounted: pandemic-period government support such as Peru's *Reactiva Perú* and *FAE-MYPE* programmes may have favoured particular sectors, while differential capital intensity and exposure to public-investment cycles, especially in construction, could also contribute to the observed gap.

The temporal concentration of closures is equally notable: rather than peaking during the pandemic, closures clustered in 2022–2024. We read this as a delayed manifestation of the crisis, whereby emergency support sustained firms that later succumbed once it was withdrawn, compounded by reduced administrative capacity for formal deregistration during the emergency. An alternative is nonetheless plausible: the surge coincides with a period of elevated inflation and the restrictive monetary response that followed; therefore, tighter credit and higher costs may have independently precipitated closures, reinforcing the lagged pandemic effect. Disentangling these channels lies beyond the present descriptive design.

Finally, the model's moderate discriminatory capacity should temper interpretation. With structural variables alone, a substantial share of variance remains unexplained, plausibly reflecting unmeasured intangibles entrepreneurial experience, social networks, and adaptive capacity that administrative data cannot capture. This accords with Higashi et al. (2023), who attribute firm failure largely to macro-level factors, and with Chavez et al. (2022) and Bartlett and Morse (2021) who show that management practices and firm-level capabilities shape resilience beyond the structural determinants captured here. The findings therefore identify robust structural patterns rather than a complete predictive account of firm survival.

Conclusions

This study analysed the structural determinants of enterprise survival among 1,861 micro and small enterprises in Cajamarca province, Peru, a setting where monetary poverty is pervasive. Firm size emerged as the dominant determinant, with microenterprises markedly more vulnerable than small enterprises even under the preferential REMYPE regime; economic sector was also significant, with essential services proving more resilient than discretionary ones; geographic location, by contrast, showed no significant effect; finally, closures were concentrated in the years following the pandemic rather than during it. Taken together, these patterns indicate that structural poverty does not simply add to the difficulties firms face but reshapes the way size, sector, and location influence survival.

These findings carry several policy implications. Because the survival disadvantage of the smallest firms persists despite existing benefits, support should be intensified for microenterprises and oriented towards helping them cross the threshold beyond which access to credit, suppliers, and markets improves; timely financing at critical moments of growth is particularly important (Bohórquez & Bohórquez, 2024). Sectoral targeting is also warranted: essential-service activities can anchor new enterprise formation, while structurally exposed sectors such as construction merit countercyclical support. The delayed concentration of closures suggests that emergency programmes should be designed with longer horizons, since firm vulnerability may peak during recovery rather than at the height of a crisis. Finally, the absence of a location effect implies that resources devoted to place-based incentives might be redirected more effectively towards direct enterprise support, consistent with evidence that centrality advantages erode in peripheral economies (Leurcharusmee et al., 2022). In the short term, feasible measures include cash-flow support and timely financing at critical moments of growth; in the longer term, structural interventions are needed to create viable pathways for microenterprises to scale beyond the threshold at which survival prospects improve.

The study has limitations. It focuses on a single province, which constrains generalisation; it relies on administrative records that omit firm-level variables such as capitalisation and managerial capacity, leaving part of the variance unexplained; REMYPE registration is voluntary, thus the findings apply to formalised firms that sought governmental benefits; and the 2015–2024 window may not span complete economic cycles. Future research could replicate the analysis across provinces with differing poverty levels to test the generalisability of these patterns, incorporate behavioural and organisational variables to explain the residual variance, and track enterprise cohorts through full economic cycles to clarify the temporal dynamics of survival in contexts of poverty.

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