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Household distress, coping strategies, and the bifurcated credit market

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Abstract
Using microdata from the Life in Transition Survey IV across 28 post-socialist transition economies (22399 households), this paper examines the determinants of household borrowing behaviour by estimating binary logit models for five distinct outcomes spanning from credit demand to access. Our results reveal a structurally bifurcated credit market: while idiosyncratic shocks (food, health, and utility distress) channel households toward informal networks, formal financial systems fail to provide an emergency buffer, remaining accessible only to those with higher income and greater financial security. Utility payment stress is the dominant predictor of any borrowing attempt, and prior loan default is the single largest predictor across all outcomes, consistent with debt-spiral dynamics. Healthcare emergencies and climate shocks uniquely activate both formal and informal credit demand simultaneously, whereas COVID-19 impacts follow the same informal-only pattern as food and utility distress. Substantial country-level heterogeneity persists after comprehensive controls. The findings support three policy priorities: formal emergency credit instruments for distressed households, parametric climate-linked lending facilities, and strengthened credit information infrastructure to interrupt structural debt-spiral dynamics.

Keywords: *household borrowing; distress credit; informal finance; transition economies; coping strategies; financial inclusion; LiTS IV.*

Финансовые трудности домохозяйств, стратегии выживания и бифуркация кредитного рынка

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Аннотация
Предмет. В статье рассматриваются детерминанты кредитного поведения домохозяйств на основе микроданных LiTS IV, охватывающих 22 399 домохозяйств в 28 постсоциалистических странах с переходной экономикой. ***Методология.*** Оцениваются бинарные логит-модели со средними предельными эффектами для пяти результирующих показателей заимствования. ***Результаты.*** Ключевым результатом является структурная бифуркация кредитного рынка. Острый материальный стресс, выражающийся в сокращении потребления продуктов питания, отказе от медицинской помощи и накоплении задолженности по коммунальным платежам, направляет домохозяйства почти исключительно к неформальным источникам кредита (родственникам, знакомым и неформальным кредиторам), тогда как формальные финансовые институты остаются доступными преимущественно для домохозяйств с более высоким уровнем дохода и финансовой устойчивостью. Стресс, связанный с оплатой коммунальных услуг, является наиболее сильным фактором любой попытки заимствования, а предшествующий дефолт по займу – наиболее значимым фактором по всем пяти кредитным показателям, что соответствует механизму долговой спирали. Экстренные медицинские расходы и климатические шоки являются единственными видами стресса, генерирующими значимый кредитный спрос одновременно по формальным и неформальным каналам. Последствия COVID-19 следуют той же схеме «только неформального» заимствования, что и дефицит продовольствия или услуг ЖКХ. ***Применение.*** В заключении формулируются рекомендации в области политики, направленные на создание инструментов экстренного формального кредитования, параметрических климатических кредитных механизмов и укрепление инфраструктуры кредитных историй для пресечения структурной динамики долговых спиралей.

Ключевые слова: *кредитование домохозяйств; экстренные кредиты; неформальные финансы; страны с переходной экономикой; стратегии выживания; финансовая инклюзивность; LiTS IV.*

1. Introduction

Access to credit during periods of economic distress is a fundamental determinant of household welfare. When income falls unexpectedly, borrowing allows households to smooth consumption, preserve productive assets, and avoid irreversible welfare losses such as withdrawing children from education or foregoing medical care [15,34,31,36]. In the absence of complete insurance markets, credit functions as the primary risk-sharing mechanism, enabling households to decouple current consumption from transitory income shortfalls [24, 20]. Who borrows, from whom, and under what conditions of hardship is therefore central to understanding how households absorb shocks and how financial systems contribute to economic resilience.

In transition economies, this question carries particular urgency. The institutional environment of transition economies, the quality of governance and regulatory frameworks, shapes the conditions under which formal financial intermediation operates [3]. Weak institutional infrastructure limits the capacity of formal credit channels to serve households under distress conditions. These countries combine shallow formal financial sectors with high household exposure to economic volatility, inadequately targeted social protection systems, and large informal credit markets in which relatives, friends, and moneylenders fill gaps that formal institutions have not assumed [6, 22].

Financial exclusion of lower-income households from formal credit is well documented [7], and evidence from household financial diaries confirms that poor households navigate mixed portfolios of

formal and informal instruments, with informal borrowing serving as the primary emergency liquidity mechanism when formal channels are inaccessible [14]. Despite this, the relationship between specific forms of hardship and the choice of borrowing channel has received little systematic cross-national attention. Most studies examine credit demand in aggregate or focus on a single country or shock type [17,4], leaving open how different distress experiences route households toward formal versus informal credit and whether the predictors of credit-seeking also predict success in obtaining it.

This paper addresses that gap using microdata from the fourth wave of the Life in Transition Survey (LiTS IV), a large-scale cross-national survey administered by the European Bank for Reconstruction and Development and the World Bank across 28 transition economies spanning Central Asia, the Western Balkans, Central and Eastern Europe, and the Caucasus and Eastern Europe. We examine how distinct forms of household distress — food and healthcare cuts, utility payment stress, and asset liquidation — are associated with five borrowing outcomes simultaneously, controlling for household characteristics, income, concurrent shock exposure, and country fixed effects. Binary logit models with average marginal effects, probability weights, and primary sampling unit-clustered standard errors are estimated for each outcome.

Three main findings stand out. First, borrowing is largely distress-driven: hardship indicators consistently predict credit-seeking while financial security strongly suppresses it. Second, formal and informal markets serve structurally different populations. Food insecurity and utility stress route households almost exclusively into informal networks, while healthcare emergencies and climate shocks generate significant demand across both channels, revealing a lender routing asymmetry that reflects credit rationing by formal institutions rather than borrower preference. Third, prior loan default is the single largest predictor across all five outcomes, at a magnitude inconsistent with the operation of effective credit information systems across much of the sample.

The findings contribute to the literature on distress-driven credit demand in emerging markets [14,31], to research on household responses to overlapping shocks [26,29], and to the transition economy literature by documenting how borrowing behaviour varies substantially across countries even after accounting for household-level differences [8]. Section 2 reviews the relevant literature. Section 3 describes the data and empirical strategy. Section 4 presents the results. Section 5 discusses policy implications. Section 6 concludes.

2. Literature Review

2.1 Financial Distress and the Demand for Credit

The foundational model of household credit demand under income shocks derives from the theory of consumption smoothing [15,34]. Households with imperfect insurance seek credit when income falls below the level needed to sustain desired consumption. When shocks are severe enough to damage assets, signal excessive risk to lenders, or exhaust social connections, however, this relationship inverts: households most in need of credit become least able to obtain it. This gap is especially pronounced in transition economies where formal financial systems remain relatively shallow [7,16]. Energy and utility costs compound this vulnerability. For lower-income households, accumulated utility debt translates into longer-term financial adversity including reduced investment capacity and deteriorating health outcomes [11,23,33].

Collins et al. document that poor households actively manage portfolios of formal and informal instruments rather than treating borrowing as a last resort [14]. Evidence from COVID-19 emergency relief in Ghana further shows that formal channels systematically underserve the most distressed households, as in-kind electricity transfers were regressive in design and reached lower-income users least effectively [9]. Households facing uninsurable risks typically deplete savings and asset buffers before resorting to borrowing [31], so that observed coping behaviour reveals financial position with considerable precision.

Randriamaro et al. model utility bill payment as a strategic decision under liquidity constraint, showing that lower moral aversion to non-payment makes service disconnection and therefore forced credit-seeking more likely [32]. The institutional severity of non-payment consequences varies across income levels: high-income countries protect households through assistance programmes and restrict disconnection, while middle-income countries rely more heavily on service shutoffs, exposing utility-stressed households to harder liquidity constraints [30,27]. Carter and Barrett show that distress asset

sales frequently precede formal borrowing as households attempt to raise collateral while liquidating productive assets [10]. Jensen and Miller document that food insecurity generates distinctive credit demand patterns that diverge from standard income effects [25].

2.2 Formal versus Informal Credit

Formal and informal credit markets coexist and partly substitute for one another across developing economies. Udry, and Fafchamps and Lund show that extended family and community networks serve as primary lenders in rural settings, relying on social trust rather than collateral [35,20]. While effective for small and urgent needs, informal arrangements cannot reliably provide the larger or longer-term financing required to manage major financial setbacks [5]. The formal-informal divide closely tracks income. Madestam argues that moneylenders and informal networks are often the only option for low-income borrowers excluded from formal markets, while formal institutions focus on middle- and upper-income groups [28]. Our results confirm this structure within transition economies. Informal credit operates as a necessity good for lower-income households while formal credit access rises steadily with income. This segmentation carries distributional consequences because informal lenders typically charge higher effective costs and operate without the legal protections available in formal credit markets [13].

2.3 Overlapping Shocks and Credit in Transition Economies

Transition economies have experienced a distinctive sequence of economic disruptions over the past three decades, from the structural transformation out of central planning through the global financial crisis of 2008 to the COVID-19 pandemic and subsequent energy and food price shocks. The relationship between macroeconomic stress and household financial behaviour has been documented across crisis episodes. Askar Akaev highlights that in the aftermath of the global financial crisis, the debt burden of the corporate sector and households in the eurozone remained high, suppressing demand and investment in the real economy [1]. This dynamic particularly relevant for transition economies exposed to overlapping geopolitical and economic shocks.

Each episode exposed households to newly marketised risks against a backdrop of weakening social insurance systems. The global financial crisis caused sharp contractions in credit supply precisely when demand was rising [12]. During COVID-19, sub-Saharan African households depleted savings before turning to informal credit, consistent with the sequential depletion model [26, 29]. In the European transition context, Fidrmuc and Hainz show that institutional quality, including creditor rights and judicial efficiency, is a key moderator of the formal credit supply response to macroeconomic shocks [21]. Our study extends this literature by simultaneously examining idiosyncratic coping behaviours and covariate shocks within the same empirical framework, identifying their independent contributions to credit market outcomes across transition economies.

3. Data and Variable Construction

3.1 The Life in Transition Survey

This study draws on micro-level household data from the LiTS IV, a large-scale cross-national survey conducted jointly by the European Bank for Reconstruction and Development (EBRD) and the World Bank. LiTS IV was fielded across 37 countries spanning Central Asia, the Caucasus, the Western Balkans, Central and Eastern Europe, the MENA. The survey is designed to capture attitudes, living standards, and household-level economic outcomes in countries undergoing or having undergone significant political and economic transition from October 2022 to November 2023 (EBRD, 2024).

For the purposes of this analysis, the sample is restricted to 28 post-socialist economies across four regional groupings: Central Asia (Kazakhstan, Kyrgyz Republic, Tajikistan, Uzbekistan, and Mongolia), the Caucasus and Eastern Europe (Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Russia), the Western Balkans (Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia), and EU-CEE (Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, and Slovenia). Other countries are excluded from the main analysis, since their institutional settings and financial systems differ from those of post-socialist economies. After removing observations with missing values on key covariates, the final analytical sample comprises 22,399 households. Missing observations arise primarily from the household income quintile measure. Indicators of household coping behaviour and borrowing outcomes are taken from the survey

section on the impact of the crisis, which captures households' experiences and responses over the preceding two years, from 2020 to 2022.

3.2 Dependent Variables

We construct five binary outcome variables that span the full arc from credit demand to supply-side rationing. *Formal FI borrowing* (Model 1) equals one if the household borrowed from a bank or formal financial institution in the past 12 months. It is a stock measure of recent formal credit use. *Any borrowing attempt* (Model 2) equals one if the household tried to borrow from any source, including family, friends, moneylenders, banks, or NGOs, in the past two years. *Informal borrowing attempt* (Model 3) equals one if the most recent attempted lender was a relative, friend, informal money lender, or other non-institutional source. *Formal borrowing attempt* (Model 4) equals one if the attempted lender was a bank or NGO. *Borrowing success* (Model 5) equals one if the attempt resulted in successfully obtaining funds. Comparing outcomes across these five models allows us to distinguish demand-side credit-seeking from supply-side rationing, and to characterize the formal–informal divide. Table 1 provides a summary of all variables used in empirical models.

Table 1

Variable Definitions

Variable	Definition & Coding	Type
A. Dependent Variables — Borrowing Outcomes		
Formal FI borrowing	=1 if HH borrowed from bank/formal FI in past 12 months	Binary
Any borrowing attempt	=1 if HH tried to borrow from any source	Binary
Informal borrowing attempt	=1 if most recent attempted lender was relative, friend, informal moneylender, or other	Binary
Formal borrowing attempt	=1 if most recent attempted lender was bank or NGO	Binary
Borrowing success	=1 if most recent borrowing attempt resulted in successfully obtaining funds	Binary
B. Key Explanatory Variables — Coping Strategy Indicators		
Food consumption cut	=1 if HH reduced staple food consumption due to economic difficulty	Binary
Healthcare reduction	=1 if HH postponed medical visits or stopped buying medications	Binary
Education cutback	=1 if HH postponed or withdrew from university or training	Binary
Asset sale	=1 if HH sold an asset or was forced to move due to economic difficulty	Binary
Utility payment stress	=1 if HH delayed utility payments or had utilities cut	Binary
Service cut	=1 if HH cut TV, phone, or internet subscription	Binary
Social support cut	=1 if HH reduced or stopped financial help to friends/relatives	Binary
Prior loan default	=1 if HH delayed or defaulted on a loan instalment	Binary
C. Household Demographic & Socioeconomic Controls		
HH head is female	=1 if HH head is female; =0 if male	Binary
Education of HH head	1 = Low (primary or less); 2 = Medium (secondary); 3 = High (tertiary). Reference: Low	Ordinal
Age of HH head	Age of HH head in years	Continuous
Squared HH head age	Square of HH head age	Continuous
Urban residence	=1 if HH resides in an urban area; =0 if rural	Binary
HH size	Number of HH members	Count
D. Household Financial Position		

Income quintile	Within-country income quintiles (1 = Poorest 20%, 5 = Richest 20%).	Ordinal
Financially secure	=1 if HH saves >5% of income; =0 if making ends meet, drawing on savings, or in debt	Binary
E. Covariate Shock Indicators		
Negative COVID-19 impact	=1 if HH reports negative/very negative economic effect of COVID-19 pandemic	Binary
Climate shock	=1 if HH experienced disruption or damage from flooding, drought, or other natural disaster	Binary
Source: EBRD (2024), Methodology of LiTS IV *Note*: HH denotes household		

3.3 Main Explanatory Variables

The primary explanatory variables are eight binary indicators from the LiTS IV, capturing whether households adopted specific coping strategies (e.g., cutting food or health spending) in response to income declines or economic difficulty over the preceding two years. The coping indicators are ordered along a spectrum reflecting the reversibility of the response and the transaction costs involved in executing it, rather than the severity of welfare consequences.

At the lower end of the spectrum are adjustments to everyday consumption, including reductions in staple food intake (*Food consumption cut*) and cutbacks in health-related spending (*Healthcare reduction*), such as postponing medical visits or discontinuing the purchase of prescribed medications. Education-related adjustments (*Education cutback*) follow, reflecting decisions to postpone or withdraw from university studies or professional training. More severe responses include the liquidation of assets or involuntary residential moves (*Asset sale*), as well as difficulties in meeting basic service payments, indicated by delayed utility bills or temporary disconnections (*Utility payment stress*). Households may also respond by cancelling discretionary services, such as television, telephone, or internet subscriptions (*Service cut*), or by reducing financial support previously provided to relatives or friends (*Social support cut*). At the most severe end of the hierarchy is evidence of debt stress, captured by delays in loan repayments or outright default on loan instalments (*Prior loan default*).

3.4 Control Variables and Identification

All models include household head demographic controls for gender, age, and education. Education of the household head is recoded into three broad categories (low, medium, high) from the original eight-point scale to reduce collinearity while preserving the key gradient. Age enters the models both linearly and squared to allow for the inverted-U relationship between age and borrowing often observed in the literature. Household size is included as a count variable rather than a dependency ratio to avoid endogeneity with income.

Income quintiles are constructed within each country separately to capture relative household financial position within the national income distribution. Income measured through within-country quintiles constructed from reported net household income, business income, and other sources. The financial security binary indicator uses a conservative threshold (saving at least 5% of income) that distinguishes households with any meaningful savings buffer from those that are merely breaking even or actively drawing down assets.

Our logit models consider two covariate shock indicators. The COVID-19 impact variable is based on the household's subjective assessment of the pandemic's economic effect, capturing the net realized impact rather than exposure to specific events. The climate shock variable records whether the household directly experienced disruption or damage from flooding, drought, or natural disasters. It is a binary measure of realized exposure rather than geographic risk.

A central identification challenge in this analysis is the potential for reverse causality, since households that seek credit may subsequently adjust their coping behaviour in response to the borrowing process itself. This concern is partially addressed by the temporal framing of the survey. Both coping responses and borrowing attempts refer to the same two-year period, yet qualitative and institutional evidence suggests that households typically resort to consumption adjustments and other coping measures before approaching formal credit markets, often with a delay of several weeks or months.

Even with this temporal ordering, the cross-sectional nature of the data does not permit full causal identification. Addressing this issue rigorously would require valid instrumental variables, which are not available in the survey. Accordingly, the empirical findings are interpreted as conditional associations that capture the predictive relationship between observed distress signals and engagement with credit markets, rather than as estimates of structural causal effects.

4. Empirical Strategy

To examine the determinants of household borrowing behaviour, we estimate the probability of borrowing using a logit framework of the form:

$$Pr\ Pr\ (Y_{ic} = 1) = \Lambda(\alpha + \beta' H_{ic} + \gamma' X_{ic} + \delta_c + \varepsilon_{ic}) \quad (1)$$

where Y_{ic} is the borrowing outcome for household i in country c; $\Lambda(\cdot)$ denotes the logistic cumulative distribution function; H_{ic} is the vector of coping strategy indicators; X_{ic} is a vector of household controls; and δ_c represents country fixed effects, and ε_{ic} is the error term. We report AMEs rather than raw log-odds coefficients. AMEs express the average change in the predicted probability of the outcome associated with a one-unit change in each covariate, evaluated at the observed covariate values for each observation.

All models include country fixed effects (27 dummies with Albania as reference), absorbing time-invariant country-level confounders including institutional quality, banking depth, macroeconomic conditions, and cultural norms around borrowing. Survey probability weights correct for unequal sampling probabilities across strata to ensure national representativeness within each country. Standard errors are clustered at the primary sampling unit level to account for the design effect arising from the clustered sampling structure of LiTS IV.

5. Results and Discussion

Table 2 reports average marginal effects from five logit models examining distinct dimensions of household borrowing behaviour across 28 transition economies.

Table 2

Logit Average Marginal Effects: Coping Strategies and Household Borrowing Outcomes

	Formal FI borrowing	**Any borrowing attempt**	**Informal borrowing attempt**	**Formal borrowing attempt**	**Borrowing success**
A. Hardship and coping behaviour					
Food consumption cut	0,0112	0,0542***	0,0458***	0,0038	0,0397***
	(0,009)	(0,009)	(0,007)	(0,006)	(0,009)
Healthcare reduction	-0,0016	0,0421***	0,0259***	0,0137**	0,0316***
	(0,010)	(0,010)	(0,008)	(0,006)	(0,009)
Education cutback	0,0377**	0,0174	0,0160	-0,0056	0,0117
	(0,018)	(0,019)	(0,016)	(0,011)	(0,019)
Asset sale	0,0614**	0,0450	0,0324	-0,0016	0,0452
	(0,026)	(0,034)	(0,025)	(0,015)	(0,030)
Utility payment stress	0,0149	0,0987***	0,0789***	0,0135**	0,0801***
	(0,011)	(0,011)	(0,010)	(0,006)	(0,010)
Service cut	-0,0102	0,0039	0,0027	-0,0033	0,0045
	(0,017)	(0,014)	(0,012)	(0,008)	(0,013)
Social support cut	-0,0062	0,0320**	0,0181	0,0045	0,0380***
	(0,013)	(0,014)	(0,012)	(0,007)	(0,013)
Prior loan default	0,1465***	0,1466***	0,0592***	0,0566***	0,1194***
	(0,013)	(0,015)	(0,012)	(0,008)	(0,013)
B. Household characteristics					
HH head is female	-0,0057	0,0063	0,0066	-0,0015	0,0077
	(0,007)	(0,007)	(0,006)	(0,004)	(0,007)
Education of HH head *(ref.: Low)*					

Medium	0,0288***	-0,0264**	-0,0333***	0,0067	-0,0171*
	(0,009)	(0,010)	(0,009)	(0,006)	(0,010)
High	0,0470***	-0,0271**	-0,0388***	0,0123*	-0,0146
	(0,011)	(0,012)	(0,010)	(0,007)	(0,012)
Age of HH head (years)	0,0037***	0,0003	-0,0017	0,0027***	0,0001
	(0,001)	(0,001)	(0,001)	(0,001)	(0,001)
Age of HH head (squared)	-0,0001***	-0,0000**	-0,0000	-0,0000***	-0,0000**
	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
Urban residence	-0,0031	0,0385***	0,0330***	0,0049	0,0341***
	(0,010)	(0,011)	(0,009)	(0,006)	(0,011)
HH size	0,0094***	0,0104***	0,0048**	0,0045***	0,0081***
	(0,002)	(0,002)	(0,002)	(0,001)	(0,002)
Financially secure	-0,0513***	-0,0753***	-0,0450***	-0,0353***	-0,0682***
	(0,009)	(0,010)	(0,009)	(0,006)	(0,010)
C. Economic shocks					
Negative economic impact (COVID-19)	0,0057	0,0262***	0,0221***	0,0071	0,0256***
	(0,008)	(0,008)	(0,008)	(0,005)	(0,008)
Climate/natural disaster shock	0,0367***	0,0649***	0,0352***	0,0265***	0,0572***
	(0,008)	(0,009)	(0,007)	(0,005)	(0,008)
D. Income quintiles (ref.: Poorest 20%)					
Lower-middle 20%	0,0188**	-0,0156	-0,0237**	0,0111**	-0,0055
	(0,009)	(0,010)	(0,010)	(0,005)	(0,010)
Middle 20%	0,0672***	0,0156	-0,0012	0,0213***	0,0178*
	(0,010)	(0,011)	(0,010)	(0,006)	(0,010)
Upper-middle 20%	0,0742***	0,0056	-0,0197*	0,0291***	0,0162
	(0,011)	(0,012)	(0,010)	(0,006)	(0,011)
Richest 20%	0,1186***	0,0246*	-0,0270**	0,0538***	0,0418***
	(0,012)	(0,014)	(0,012)	(0,008)	(0,014)
Country fixed effects	Yes	Yes	Yes	Yes	Yes
Survey weights	Yes	Yes	Yes	Yes	Yes
SE clustered at	PSU	PSU	PSU	PSU	PSU
Observations	22,399	22,399	22,399	22,399	22,399

Notes: Figures represent average marginal effects from logit estimations. Heteroskedasticity-robust standard errors clustered at PSU level are in parentheses. Asterisks ***, **, and * indicate significance at the 1%, 5%, and 10% levels. “HH” and “ref.” denotes household and the omitted reference category, respectively.

Source: Authors’ calculations using LiTS IV Data.

5.1 Distress Borrowing and Coping Strategies

Panel A contains the coping strategy results. Two findings stand out immediately. First, utility payment stress is the dominant predictor of any borrowing attempt, with an effect nearly twice the magnitude of food cuts and more than three times that of the COVID-19 economic impact indicator. Households with utility arrears are substantially more likely to have attempted informal borrowing, yet the coefficient on formal financial institution borrowing is small and statistically indistinguishable from zero. This reveals a lender routing asymmetry in which acute utility distress generates powerful credit demand but channels it almost entirely into informal networks, consistent with formal institutions rationing out households whose unpaid bills signal systemic rather than transitory illiquidity.

5.2 The Bifurcated Credit Market, Income, and Financial Security

Panel C of Table 2 reveals the income gradient in lender choice that underlies what we describe as the bifurcated credit market. The richest income quintile relative to the poorest is substantially more likely to hold a formal loan, more likely to have attempted formal borrowing, and more likely to have succeeded in borrowing, but significantly less likely to have attempted informal borrowing. This sign

reversal across channels, positive income gradient for formal credit and negative for informal, is the signature of a market structure in which informal borrowing operates as a necessity good consumed primarily by lower-income households excluded from formal channels, while formal credit functions as a superior good associated with higher income and perceived creditworthiness. The distributional implications are considerable, as informal lenders typically operate outside regulatory frameworks, may charge higher implicit costs, and offer weaker borrower protections than their formal counterparts.

Financial security, defined as the ability to save at least five percent of income, substantially reduces the probability of any borrowing attempt, of informal attempts, and of formal attempts alike, with all three effects significant at the one-percent level. This confirms that savings capacity functions as the primary buffer against which credit demand is calibrated.

5.3 Climate Shocks and COVID-19

A striking result in Panel C is that climate shocks generate uniformly large and significant effects across all five borrowing outcomes. Households exposed to flooding, drought, or other natural disasters are substantially more likely to have attempted borrowing from any source, to have attempted informal borrowing, to have attempted formal borrowing, and to have succeeded in obtaining credit. This cross-channel significance differs markedly from the informal-only pattern observed for food and utility stress. Climate disasters cause large-scale asset and income destruction that exceeds what social networks can intermediate, thereby necessitating recourse to formal credit. Specialised climate-linked credit products or disaster-response lending windows available in some surveyed countries may account for the formal channel significance not observed for idiosyncratic household distress.

The COVID-19 economic impact indicator increases the probability of any borrowing attempt and of informal borrowing attempts significantly, but the formal borrowing coefficient is small and statistically insignificant. This pattern is consistent with the pandemic channelling distressed households specifically toward informal sources. Bank branches were partially closed during peak restriction periods, formal application processes were disrupted, and the immediate demand was frequently for fast and untracked cash during lockdowns.

6. Policy Implications

The near-absence of formal lenders from the emergency borrowing landscape reflects a structural mismatch between formal credit design and the conditions under which distress borrowing occurs. Documentation requirements and creditworthiness assessments are largely inaccessible to households in acute difficulty, routing the most vulnerable toward informal lenders who impose higher effective costs. Addressing this requires small-value emergency credit instruments with minimal documentation and rapid digital disbursement, best originated by postal savings institutions, credit cooperatives, and NGO-affiliated microfinance entities given their existing outreach to lower-income populations.

Digital financial technologies, including mobile platforms, Big Data analytics, and open APIs, represent a promising avenue for extending formal credit access to distressed households that are currently routed into informal networks [2]. Digitalization of financial services reduces documentation barriers and enables rapid remote disbursement, directly addressing the structural mismatch identified in our findings.

Climate shocks are the only distress type generating significant effects across both formal and informal channels, indicating that formal lending responses to disasters exist but remain insufficient in scale. Parametric lending facilities, in which pre-approved credit lines disburse automatically upon measurable meteorological thresholds, represent the most operationally viable instrument for closing this gap, eliminating the administrative bottleneck that prevents conventional disaster lending from reaching affected households in time.

The large coefficient on prior loan default across all five outcomes points to a population of chronically over-indebted households engaged in repeated borrowing to service existing obligations. Addressing this requires two complementary interventions. Debt restructuring programmes that allow over-indebted households to renegotiate loan terms without triggering immediate default classifications would interrupt the cycle at the institutional level. Financial counselling services that help households understand the long-term costs of informal relative to formal credit and plan structured repayment would complement this at the household level.

7. Conclusion

This paper has examined how different forms of household economic hardship shape credit market behaviour across 28 transition economies using data from the LiTS IV. By estimating binary logit models for five distinct borrowing outcomes simultaneously, the analysis identifies not only whether distressed households seek credit but from whom they seek it and whether they succeed in obtaining it.

The central finding is that household borrowing in this setting is predominantly distress-driven and channelled almost entirely through informal networks rather than formal financial institutions. Food insecurity, utility arrears, and pandemic-related income losses all increase the probability of seeking credit significantly, yet formal lenders are largely absent from the emergency borrowing landscape for these distress types. This lender routing asymmetry reflects the structural inaccessibility of formal credit products to households under conditions of acute distress, and its distributional consequences are significant: the households facing the greatest economic vulnerability are systematically exposed to informal lenders who operate outside prudential oversight and typically impose less transparent borrowing terms [5, 28]. Healthcare-related distress and climate shocks represent the two exceptions, activating significant demand across both formal and informal channels, consistent with the lumpy and verifiable nature of medical expenditure needs and the scale of asset destruction that major climate events generate [17, 4].

The persistently large effect of prior loan default across all five borrowing outcomes implies that credit information systems in much of the sample operate with insufficient coverage or enforcement to restrict subsequent credit access among over-indebted households, consistent with debt-spiral dynamics. The strong negative association between financial security and all five borrowing outcomes confirms that savings buffer-stock capacity is the primary mechanism through which households avoid distress-driven credit demand [15, 31].

The findings carry three interrelated policy implications. First, formal emergency credit instruments with minimal documentation requirements and rapid disbursement are needed to substitute for informal borrowing among distressed households. Second, parametric climate-linked lending facilities capable of disbursing automatically in response to measurable weather thresholds are needed to absorb the cross-channel credit demand that major climate events generate. Third, strengthened credit information infrastructure and accessible debt restructuring mechanisms are needed to interrupt the debt-spiral dynamics the prior default results document. Future research exploiting panel data or instrumental variable designs would help sharpen the causal interpretation of these results.

References / Литература

1. Акаев, А.А. (2015), "Геополитические риски и бифуркация в экономике Евросоюза", *Доклады на научных форумах в СПбГУП. XV Международные Лихачевские научные чтения*, СПбГУП, Санкт-Петербург, с. 62–73. [Akaev, A.A. (2015), "Geopolitical risks and bifurcation in the EU economy", *Reports at Scientific Forums of SPbUHSS. XV International Likhachev Scientific Readings*, SPbUHSS, Saint Petersburg, pp. 62–73].

2. Акаева, А.А. и Гордеева, Н.В. (2023), "Цифровизация финансового сектора", *Экономика. Наука. Инноватика: сборник материалов конференции*, Донецк, с. 406–408. [Akaev, A.A. and Gordeev, N.V. (2023), "Digitalization of the financial sector", *Economics. Science. Innovatics: Conference Proceedings*, Donetsk, pp. 406–408].

3. Зоидов, К.Х. и Растегаев, А.А. (2024), "Структура механизма и зарубежный опыт построения системы финансирования инновационного развития национальной экономики", *Региональные проблемы преобразования экономики*, № 8(166), с. 196–214. DOI: 10.26726/rppe2024v8tsot. [Zoidov, K.Kh. and Rastegaev, A.A. (2024), "The structure of the mechanism and foreign experience in building a system of financing innovative development of the national economy", *Regional problems of economic transformation*, no. 8(166), pp. 196–214].

4. Arouri, M., Nguyen, C. and Youssef, A. B. (2015), "Natural disasters, household welfare, and resilience: Evidence from rural Vietnam", *World Development*, vol. 70, pp. 59–77. https://doi.org/10.1016/j.worlddev.2014.12.017

5. Banerjee, A. V. and Duflo, E. (2007), "The economic lives of the poor", *Journal of Economic Perspectives*, vol. 21, no. 1, pp. 141–167. https://doi.org/10.1257/jep.21.1.141

6. Beck, T. and Demirgüç-Kunt, A. (2008), "Access to finance: An unfinished agenda", *World Bank Economic Review*, vol. 22, no. 3, pp. 383–396. https://doi.org/10.1093/wber/lhn021

7. Beck, T., Demirgüç-Kunt, A. and Levine, R. (2007a), "Finance, inequality and the poor", *Journal of Economic Growth*, vol. 12, no. 1, pp. 27–49. https://doi.org/10.1007/s10887-007-9010-6

8. Beck, T., Demirgüç-Kunt, A. and Martínez Pería, M. S. (2007b), "Reaching out: Access to and use of banking services across countries", *Journal of Financial Economics*, vol. 85, no. 1, pp. 234–266. https://doi.org/10.1016/j.jfineco.2006.07.002

9. Berkouwer, S. B., Biscaye, P. E., Puller, S. and Wolfram, C. D. (2022), "Disbursing emergency relief through utilities: Evidence from Ghana", *Journal of Development Economics*, vol. 156, 102826. https://doi.org/10.1016/j.jdeveco.2022.102826

10. Carter, M. R. and Barrett, C. B. (2006), "The economics of poverty traps and persistent poverty: An asset-based approach", *Journal of Development Studies*, vol. 42, no. 2, pp. 178–199. https://doi.org/10.1080/00220380500405261

11. Chaudhuri, K. and Huaccha, G. (2023), "Who bears the energy cost? Local income deprivation and the household energy efficiency gap", *Energy Economics*, vol. 127, 107041. https://doi.org/10.1016/j.eneco.2023.107062

12. Claessens, S., Dell'Ariccia, G., Igan, D. and Laeven, L. (2010), "Cross-country experiences and policy implications from the global financial crisis", *Economic Policy*, vol. 25, no. 62, pp. 267–293. https://doi.org/10.1111/j.1468-0327.2010.00244.x

13. Claessens, S. and Tzioumis, K. (2006), "Measuring firms' access to finance", paper presented at the World Bank Conference on Access to Finance, Washington, DC.

14. Collins, D., Morduch, J., Rutherford, S. and Ruthven, O. (2009), *Portfolios of the Poor: How the World's Poor Live on $2 a Day,* Princeton University Press. https://doi.org/10.1515/9781400829965

15. Deaton, A. (1991), "Saving and liquidity constraints", *Econometrica*, vol. 59, no. 5, pp. 1221–1248. https://doi.org/10.2307/2938366

16. Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S. and Hess, J. (2018), *The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution*, World Bank Publications. https://doi.org/10.1596/978-1-4648-1259-0

17. Dhanaraj, S. (2016), "Economic vulnerability to health shocks and coping strategies: Evidence from Andhra Pradesh, India", *Health Policy and Planning*, vol. 31, no. 6, pp. 749–758. https://doi.org/10.1093/heapol/czv127

18. EBRD (2024), Household resilience in a turbulent world, Life in Transition Survey IV Report, London. Available at: https://www.ebrd.com/life-in-transition-survey-iv (Accessed 01.04.2025).

19. Fafchamps, M. and Gubert, F. (2007), "Risk sharing and network formation", *American Economic Review*, vol. 97, no. 2, pp. 75–79. https://doi.org/10.1257/aer.97.2.75

20. Fafchamps, M. and Lund, S. (2003), "Risk-sharing networks in rural Philippines", *Journal of Development Economics*, vol. 71, no. 2, pp. 261–287. https://doi.org/10.1016/S0304-3878(03)00029-4

21. Fidrmuc, J. and Hainz, C. (2010), "Default rates in the loan market for SMEs: Evidence from Slovakia", *Economic Systems*, vol. 34, no. 2, pp. 133–147. https://doi.org/10.1016/j.ecosys.2009.10.002

22. Hermes, N. and Lensink, R. (2000), "Financial system development in transition economies", *Journal of Banking and Finance*, vol. 24, no. 4, pp. 507–524. https://doi.org/10.1016/S0378-4266(99)00078-3

23. Hernández, D. and Bird, S. (2016), "Energy burden and the need for integrated low-income housing and energy policy", *Poverty and Public Policy*, vol. 2, no. 4, pp. 668–689. https://doi.org/10.2202/1944-2858.1095

24. Jappelli, T. and Pagano, M. (1994), "Saving, growth and liquidity constraints", *Quarterly Journal of Economics*, vol. 109, no. 1, pp. 83–109. https://doi.org/10.2307/2118429

25. Jensen, R. T. and Miller, N. H. (2008), "Giffen behavior and subsistence consumption", *American Economic Review*, vol. 98, no. 4, pp. 1553–1577. https://doi.org/10.1257/aer.98.4.1553

26. Josephson, A., Kilic, T. and Michler, J. D. (2021), "Socioeconomic impacts of COVID-19 in low-income countries", *Nature Human Behaviour*, vol. 5, no. 5, pp. 557–565. https://doi.org/10.1038/s41562-021-01096-7

27. Komives, K., Foster, V., Halpern, J. and Wodon, Q. (2008), *Water, Electricity, and the Poor: Who Benefits from Utility Subsidies?*, World Bank Publications. https://doi.org/10.1596/11745

28. Madestam, A. (2014), "Informal finance: A theory of moneylenders", *Journal of Development Economics*, vol. 107, pp. 157–174. https://doi.org/10.1016/j.jdeveco.2013.11.001

29. Mahmud, M. and Riley, E. (2021), "Household response to an extreme shock: Evidence on the immediate impact of the COVID-19 lockdown on economic outcomes and well-being in rural Uganda", *World Development*, vol. 140, 105318. https://doi.org/10.1016/j.worlddev.2020.105318

30. Marques, R. C., Simões, P., Machete, I. and Fagundes, T. (2023), "Water disconnection and vital flow policies: International practices in medium- and high-income countries", *Utilities Policy*, vol. 81, 101514. https://doi.org/10.3390/w15050935

31. Morduch, J. (1995), "Income smoothing and consumption smoothing", Journal of Economic Perspectives, vol. 9, no. 3, pp. 103–114. https://doi.org/10.1257/jep.9.3.103

32. Randriamaro, M. T., Espinola-Arredondo, A., Fuente, D. and Cook, J. (2024), A theoretical model of utility bill payment behavior, EfD Discussion Paper 24-01, *Environment for Development Initiative*. Available at: https://www.efdinitiative.org/sites/default/files/publications/EfD_DP-24-01.pdf (Accessed 01.04.2025).

33. Siegel, E. L., Lane, K., Yuan, A., Smalls-Mantey, L. A., Laird, J., Olson, C. and Hernández, D. (2023), "Energy insecurity indicators associated with increased odds of respiratory, mental health, and cardiovascular conditions", *American Journal of Preventive Medicine*, vol. 64, no. 5, pp. 698–706. https://doi.org/10.1377/hlthaff.2023.01052

34. Townsend, R. M. (1994), "Risk and insurance in village India", *Econometrica*, vol. 62, no. 3, pp. 539–591. https://doi.org/10.2307/2951659

35. Udry, C. (1994), "Risk and insurance in a rural credit market: An empirical investigation in northern Nigeria", *Review of Economic Studies*, vol. 61, no. 3, pp. 495–526. https://doi.org/10.2307/2297901

36. Zeldes, S. P. (1989), "Consumption and liquidity constraints: An empirical investigation", *Journal of Political Economy*, vol. 97, no. 2, pp. 305–346. https://doi.org/10.1086/261605

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