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DETERMINANTS OF THE DISCOURAGED BORROWERS IN TRANSITIONAL ECONOMIES

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ABSTRACT

Accessing credit always appears to be crucial for firms' development. However, some businesses self-excluded them in the credit markets because of the fear of rejection. The problem is believed to be more severe in underdeveloped countries. With the aim of having a better understanding of the issue, the authors focus on learning potential determinants from firms' sides in various transition economies, which are always believed to create more obstacles in accessing credit. Using an initial sample of 9,979 observations at firm-level database across 17 transitional economies, we uncover several influences of different elements from the firm's side in the case of being "discouraged borrowers." Through the regression results, interesting findings have emerged. Firms' financial conditions, perceptions, and social capital play a pivotal role in determining the problem. From that viewpoint, managerial implications are made to better support firms to improve their accessibility and lessen the probability of discouragement in the credit market.

Keywords: *Discouraged borrowers, Credit constraints, Credit access, Transitional economies.*

INTRODUCTION

Capital is believed to play one of the most important roles in the development of businesses. In the world, firms, especially small and medium ones, often have to struggle to get resources from formal credit channels. Subsequently, enterprises always have the perception that access to financial services is especially difficult in developing countries. This fact leads to the need to find ways to improve the credit access of firms and lessen the case of being rejected.

However, in the credit market, there is always an unbalanced situation between the demanders and suppliers of funds (Akerlof, 1978). As explained, the theory on asymmetric information and lemon problems by Nobel winner Akerlof (1978) is always used. The imperfection in the market makes lenders reluctant to give funds to borrowers, which creates circumstances called credit constraints. To be more specific, the case of credit constraints can normally be divided into two small subsamples: (1) involuntarily excluded and (2) voluntarily excluded in the credit market. Regarding the first, involuntary exclusion comes from being rejected by lenders or being accepted but with a lesser amount of funds. Meanwhile, the latter scenario comes into effect when borrowers (both good and bad) are disqualified or withdraw themselves due to fear of rejection by lenders. In terms of lenders' perspective, bad borrowers are apparently rationed as they cannot meet the basic requirements. However, if borrowers are of good quality, rationing

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them could also make lenders suffer from missed opportunities for profitability. Besides, the existence of transaction costs could also be contemplated. If the cost is from higher interest rates and the troublesome application procedures, good borrowers tend to find sources with fewer regulations and exclude from formal channels (Kon & Storey, 2003). Market dysfunction can lead to several negative outcomes, not only for borrowers but also for lenders in particular and the whole economy in general.

In transitional countries, accessing credit is even more severe for firms with a higher level of asymmetric information between borrowers and lenders, greater application and processing costs, and many obstacles from the legislature system, corruption, and bribery. Aware of the problems, we try to add to the literature regarding the involuntary exclusion of borrowers, which are normally known as discouraged borrowers, with the focus on the transitional economies using BEEPS VI databases of WBG-EIB-ERBD, which covers the initial sample of 9,979 observations at firm-level around 16 countries. Our research is trying to fill in the research gap with a synthesis of the literature on determinants of discouraged borrowers and empirical research on several transitional economies in the world. From this viewpoint, we aim to make conclusions on discouraged borrowers and, therefore, suggest several managerial and governance implications.

The rest of the paper is structured as follows. Section 2 represents related literature on discouraged borrowers; Section 3 displays research designs, data collection, variable descriptions, and econometric models. Section 4 commences with explaining the results, and Section 5 concludes with several recommendations.

Literature Review

Overview of Discouraged Borrowers

Long before the term "discouraged borrowers" emerged, Stiglitz and Weiss (1981) mentioned a framework explaining why banks could deny potential borrowers even when they still have adequate funds to lend (Stiglitz & Weiss, 1981). After that, Diagne (1999) explains the situation when firms do not choose to borrow as follows: (1) they do not need funds or (2) they expect to face several limits or high costs of getting capital (Diagne, 1999).

The phrase "discouraged borrowers" was first developed by Kon and Storey (2003). The authors suggest discouraged borrowers as good borrowers excluded themselves in the credit market as they are afraid of being rejected by lenders. It must be noted that there are differences between being discouraged and being constrained. If the first mentioned self-rationing mechanism is from fund demanders, the latter refers to the situation of credit rationing coming from fund suppliers. Even though both cases lead to the inability to access credit, differentiating them has several implications. First and foremost, as for asymmetric information, borrowers are normally gathered into a pooled source, where exists together credible and unreliable ones. As it is hard for lenders to define who is whom and due to numerous unobservable factors, lenders have the tendency to put limits in lending procedures on both types of borrowers, which creates market imperfection. The exclusion of good borrowers in the credit market will have negative consequences for both fund demanders and lenders, which further improve the informal credit channel. In developing countries, this could cause various concerns. Second, differentiating borrowers could help banks and other lenders better access the good fund demanders and help

bad ones improve their situation. Consequently, deeper research on the issue could bring fruitful managerial implications.

Determinants of Discouraged Borrowers

There are a lot of approaches that can be used to evaluate the potential factors affecting discouraged borrowers. Similar to evaluating the accessibility of firms in the credit market, discouraged borrowers are also put into the same context. Empirical studies focus on the characteristics of both lenders and borrowers and the relationships between them, which will be synthesized below. Another way to examine the determinants is that researchers divide them into observable and unobservable ones. Whatever approaches are used, the empirical evidence shows several results in common. After examination, we propose a framework for determinants of discouraged borrowers, as in **Figure 1.**

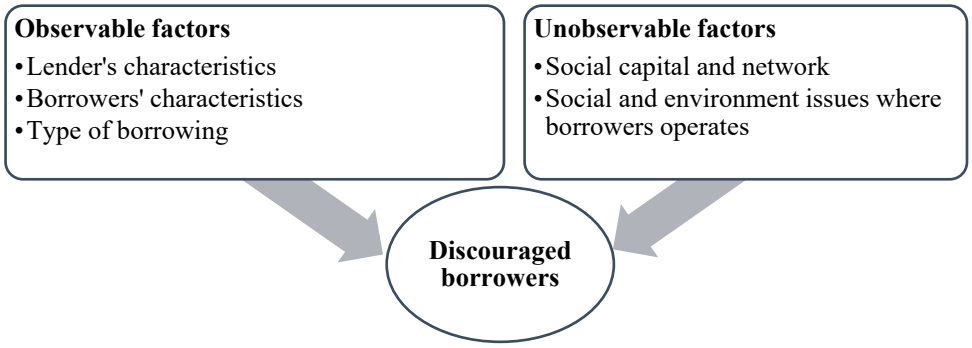

Figure 1. Potential factors affecting borrower's discouragement
(Source: Authors' collection)

Analyzing from the lender's side, Kon and Storey (2003) propose that banks' level of screening procedures inadequacy and the spread between banks' rates and other lenders' rates are reasons for the level of discouragement. Brown *et al.* (2011) confirm the results through 8,387 observations at the firm level in 20 different countries across Europe. The type of bank lending could also help explain the case of discouragement for borrowers. Specifically, relationship bank lending is indicated to lessen the problem as it reduces information asymmetry (Berger & Udell, 1998; Berger & Udell, 2006; Chakravarty & Xiang, 2013). Moreover, the foreign ownership structure is also mentioned in literature. The basic notion underlying the results is that foreign banks tend to lend to the bigger firms – the ones with better financial statements, higher levels of transparency, and healthier financial conditions. In addition, countries with lesser development levels with high existence of foreign banks could make the situation of credit discouragement worse (Brown *et al.*, 2022).

Meanwhile, in terms of borrowers' side, several factors have been put into consideration. As discouraged borrowers could come from the fear of being rejected, borrowers' perceptions should be paid due attention to. Using a matching database between the SAFE survey and Amadeus, which covers 11,886 firms across European countries, Ferrando and Mulier (2015) point out that the perception of constraints could make the problem severe. Galli *et al.* (2017) also confirm the existence of the variable and the corruption-fighting policy at the macro level

(Galli *et al.*, 2017). Besides, using the 2002/2003 Enterprise Surveys of the World Bank with a focus on 10 developing countries covering 4 continents, Chakravarty and Xiang (2013) show that firms' characteristics (firm size, firm age), their competition scale and connection between firms and banks and other financial institutions are likely to impact the credit discouragement, which again confirms results presented in various studies such as of Cavaluzzo *et al.* (2002), Han *et al.* (2009) (Chakravarty & Xiang, 2013). Elements related to firms' liquidity, profitability, indebtedness status, ownership structure, and the environment in firms' work can also apparently explain the case as they imply the ability of loan repayment (Cavalluzzo *et al.*, 2002; Han *et al.*, 2009, Mac a Bhaird *et al.*, 2016). The most accepted fact is that, the better firms' financial conditions, the lesser probability of being discouraged (Ferrando & Mulier, 2015). Innovative activities of a firm are likely to be negatively correlated with credit dissuasion as an adverse perception of rejection and unwillingness to take on added risk. What is more, the negative discernment of economic conditions is in line with positive discouragement (Brown *et al.*, 2022). It must be noted that, when taking all firms' characteristics into account, mixed findings are shown as some variables can be considered as "stronger" than others in different countries studied.

Last but not least, several impacts from the environment that firms work in are mentioned in several scientific articles. The level of country development, the impact of trust and networks in the regions, corruption, and bribery are elements determining the discouraged borrowers. In less developed countries, problems of being discouraged in credit markets are often witnessed. More specifically, with developing economies, corruption, bribery, and informal gifts still prevail in the market. In this case, informal institutional factors such as social norms, social values, and trust issues play a more important role. McCabe *et al.* (2003) propose the bank-firm relation is a kind of mutual trust, and SMEs with a higher level of trust from loan managers could enjoy better access to credit, as well as lower probability of being rejected or discouraged (Tang *et al.*, 2017, Tang *et al.*, 2018, Howorth & Moro, 2012, Moro & Fink, 2013, McCabe *et al.*, 2003).

MATERIALS AND METHODS

Study Designs and Data Collection

Using the cross-sectional database, which was retrieved from the BEEPS VI survey, which was taken during 2018-2020 in several countries in the world, we sorted out 16 transitional economies with a total number of 9,979 observations initially. Even though there are several literatures on discouraged borrowers, to our understanding, there are few studies on countries with transitional phases of development. Moreover, with the most recent wave of the BEEPS database by ERBD-WB, the study aims to deliver a more recent view on the issue, especially in the fast-changing globalization and integration with various economic downturns due to external shocks such as COVID-19. The list of countries includes Albania, Bosnia and Hertz, Montenegro, North Macedonia, Serbia, Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Russia, Tajikistan, Uzbekistan and Ukraine. These countries are considered in "transition," which means that they are changing from post-Soviet Union to more market-oriented countries. As such, the incompletion in infrastructure, regulation, and legislation systems and low level of development are normally witnessed. However, in recent

years, transitional countries have experienced various positive changes such as better life satisfaction, positive attitudes of citizens, and more fairness level between males and females in attaining education services. However, corruption still exists, and the institutional trust level of people tends to decrease.

Considering the case of discouraged borrowers, we utilize the concept mentioned by Kon and Storey (2003). We also based on a literature review to add potential variables related to firms' characteristics in this paper. The list of variables used is shown in part 3.3.

Econometric Models

As the main objective of this paper is to find factors that could have an impact on credit discouragement from the firms' side, we add on the econometric models with several groups of factors, such as the firms' characteristics (firm size, establishment type: owned by foreigners, domestic private individuals or State ones, innovation level, the verification of auditors); firms' financial conditions (the sales and growth of firms); managerial characteristics (gender and experience of managers); firms' indebtedness status (having informal or informal loans) and social connection (firm-government bonds). The fixed effect on country, sector, and years is also put in the model to make sure that our results are not determined by misplaced variants from specific nations or segments. The main equation is as follows:

$$discouraged_i = \alpha + \beta social\ connection_i + \gamma firm\ characteristics_i + \delta managers'\ characteristics_i' + \vartheta financial\ conditions_i + \rho indebtedness_i + FE\ (country) + FE(\ sector) + FE(\ year) + \varepsilon \quad (1)$$

As discouraged take binary values, we perform probit regression in most models. Furthermore, we also detangle the case between big and small firms, as well as the ones that have current formal loans or not, to better evaluate the differences between firms. The reason underlying that comes from our understanding that discouraged borrowers often aim at the good ones who are excluded themselves. Big firms are normally considered better borrowers because of their scale while having loans in formal channels means that businesses are successfully going through the screening and monitoring of formal institutions. Both cases can also refer to the "good" companies.

Variables Description

Table 1 illustrates the variables used in the model. According to that, we group them into different categories to better understand the situation of discouraged borrowers. Notably, we only aim at the firms' perspective in this study.

Table 1. Variable description

Variables	Description and measurement
discouraged	=1 when facing discouragement; =0 otherwise
Social connection	
govern-connect	=1 if having a connection with government; =0 otherwise
Firms' characteristics	

perception	=1 if having a perception of being rejected; =0 otherwise
size	=1 if firms are big; =0 if firms are SME
foreign_estab	=1 if being owned mostly by foreigners; =0 otherwise
private_estab	=1 if being owned mostly by private individuals; =0 otherwise
state_estab	=1 if being owned mostly by the state or government; =0 otherwise
innovative	=1 if firms have innovative activities; =0 otherwise
verify	=1 if being audited by external auditors; =0 otherwise
	Managers' characteristics
female	=1 if the manager is female; =0 otherwise
experience	Experiences of manager (in years)
	Firms' financial conditions
ln-sales	Natural logarithm of firms' last sales
sales_growth	=1 if firms experience increases in sales; =0 otherwise
	Firms' indebtedness situation
informal	=1 if having informal loans; =0 otherwise
formal	=1 if having formal loans; =0 otherwise

(Source: Authors' collection)

With the explanation of variables, we also perform the summary descriptive, which is illustrated in **Table 2.** It is notable that firms who are discouraged have a higher perception of difficulty in accessing credit through comparing means of non-discouragement and discouragement cases. Furthermore, dejected borrowers tend to have lower financial conditions compared to others.

Table 2. Descriptive summary

Variable	All					Non-discouraged		Discouraged	
	Obs	Mean	STD	Min	Max	Mean	STD	Mean	STD
govern-connect	9,869	.205	.403	0	1	.279	.448	.187	.392
perception	9,705	1.208	1.312	0	4	1.430	1.401	2.166	1.377
foreign_estab	9,897	.065	.247	0	1	.065	.245	.045	.208
private_estab	9,899	.906	.291	0	1	.896	.305	.909	.287
state_estab	9,900	.019	.137	0	1	.030	.171	.045	.208
female	9,896	.314	.464	0	1	.309	.462	.308	.463
experience	9,708	16.717	22.613	1	70	18.325	44.227	14.573	9.114
lnsales	8,679	17.359	2.980	7.6	30.7	17.992	3.040	16.583	2.469
sales_growth	9,453	.616	.486	0	1	.664	.473	.581	.495
innovative	9,899	.328	.469	0	1	.449	.498	.195	.398
verify	9,802	.278	.448	0	1	.3797	.485	.240	.429
informal	9,297	21.878	30.175	0	100	31.376	33.376	19.828	29.069

formal	9,832	.339	.473	0	1	.791	.407	.331	.472
size	9,906	.211	.408	0	1	.292	.456	.165	.373

RESULTS AND DISCUSSION

We run both OLS and Probit at firms on the whole data to have an overall look at the determinants of borrowers' discouragement. Notably, in both OLS and Probit regression results, similar results emerged **(Table 3)**. As our expectation, the connection between firms and the government shows a negative relation with discouraged. The simple explanation for the case comes from the fact that connection with the State authorities and officials can reduce the problem, as these firms are believed to have a better understanding of how procedures could run, what actions to take, and which hindrances could appear. Firms' sales, innovation level, and indebtedness status also experience a significant negative coefficient in the regression, which implies that they could reduce the difficulties for borrowers. On the contrary, firms' perception of the difficulty accessing credit could obstruct them from attracting more capital from the bank and other formal credit sources. The results are consistent with the research of Ferrando and Mulier (2015) and Brown *et al.* (2022).

Table 3. Multivariate regression on the whole data

OLS			Probit	
	Robust		Robust	
discouraged	Coeff.	SE	Coeff.	SE
govern-connect	-.0225**	.0105	-.286*	.156
perception	.009**	.0042	.121***	.042
foreign_estab	.008	.023	-.004	.314
private_estab	.003	.019	-.071	.258
state_estab	.092	.039	1.210	.387
female	-.003	.011	.0249	.131
experience	-.0001**	.00004	-.0179**	.007
lnsales	-.0106***	.004	-.111***	.036
sales_growth	.0081	.012	.066	.127
innovative	-.044***	.010	-.534***	.132
verify	-.010	.010	-.081	.134
informal	-.0002*	.0001	-.004*	.002
formal	-.147***	.0197	-1.177***	.143
size	.020	.0130	.156	.192
Observations	1,832		1,611	
R-squared	0.1520			
Pseudo_R2			0.3184	

Country FE	YES	YES
Year FE	YES	YES
Industry FE	YES	YES

*: Significant at 10% level.
**: Significant at 5% level.
***: Significant at 1% level.
(Source: Authors' collection)

We also perform the regression on firms with different sizes, with results shown in **Table 4.** Notably, even though the signs of the coefficient from such variables as perception, experience, ln-sales, innovation, informal, and formal appear to be the same across distinctive firm sizes, the level of impact is different. Particularly, the experience of managers, the sales of firms, and having formal loans are more severe for small firms, while innovative activities and perception of difficulty in accessing credit tend to be higher for big firms. This could be explained as follows: bigger firms are likely to undertake more innovations, and the need for credit could be higher. Even bigger ones have more creditworthiness, but they could also fear rejection, as taking more innovations means incremental risk. Markedly, the only negative significant result of informal loans is witnessed in the case of small firms, which confirms the impact of indebtedness status on reducing credit dissuasion but varies across different types of firm size.

Table 4. Regression on discouraged borrowers with several indications

Probit	**Big**		**Small**		**Have formal loan**		**No formal loan**	
	Robust		**Robust**		**Robust**		**Robust**	
discouraged	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
govern-connect	-.360	.385	-.289	.184	.107	.196	-.564**	.252
perception	.171*	.089	.117**	.048	.269***	.069	.048	.064
foreign_estab	-1.641	.791	-.066	.393	-.469	.443	-.486	.581
private_estab	-1.338	.772	-.082	.309	-.577	.348	-.506	.524
state_estab	.3687	.852	1.618	.627	.880	.450	.632	.767
female	.3281	.313	-.077	.151	.022	.190	-.019	.214
experience	-.032**	.011	-.016**	.008	-.013	.009	-.028**	.010
lnsales	-.147**	.111	-.112**	.041	-.145***	.052	-.110**	.055
sales_growth	.328	.345	.029	.147	.051	.173	.147	.212
innovative	-.277**	.369	-.687***	.149	-.572**	.208	-.742***	.221
verify	-.012	.261	-.155	.169	-.045	.160	-.186	.231
informal	-.0004	.005	-.006**	.002	-.0006	.003	-.007*	.004
formal	-1.809***	.409	-1.223***	.166				
size					.262	.253	.266	.327
Observations	316		1,166		958		412	

Pseudo R2	0.3931	0.3416	0.2477	0.3283

*: Significant at 10% level.
**: Significant at 5% level.
***: Significant at 1% level.
(Source: Authors' collection)

Last but not least, for businesses without formal loans, the negative sign of the coefficient is observed, which again confirms that government links could reduce the case of being discouraged. Consequently, Non-formal-loans owners tend to rely on the connections and understanding of the procedures to prevent themselves from discouragement. *Lnsales* and *innovation* have a negative significant coefficient with discouraged, confirming our expectations. Experiences of managers and informal loans existence also show a significant negative relation to self-deterrence in credit markets for having having-no-formal-loans businesses, which indicates that in the cases when firms are hard to show they are "good borrowers," firm-specific characteristics and social capital appear to have more impact.

CONCLUSION

Through the evaluation across 17 transitional economies, the study uncovers several elements that could influence discouraged borrowers. Notably, the perception of being rejected in the credit market has a positive relation with a probability of discouragement. Besides, firms' financial conditions and innovation level can partially explain the case. Therefore, improving firms' awareness of credit access should be paid due attention by firms' managers in particular and policymakers in general. It must be noted that, as different levels of impact could vary between countries and firms, a deeper investigation of factors from the lenders' side and other unobservable elements should also be put into consideration to gain better insight into the issue.

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