

Impact of Agricultural Loans on Agricultural Productivity in Kosovo

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Abstract: - The paper examines the impact of agricultural credit on the productivity and income of Kosovo farms, a subsector that is characterized by restricted mechanization, extremely fragmented land ownership, and restricted access to finance. This paper uses a cross-section of a sample of 500 farmers from five Kosovo municipalities and different linear and hierarchical regression models to analyze the extent to which demographic variables, labor inputs, and credit access explain gross farm income. Further, the paper performs reliability testing in farmers' perceptions of credit constraints. Based on the findings, the study discovers that access to credit statistically and significantly affects income positively. As such, producers who have access to credit can gain, on average, €3,688 more than those producers without credit, given the other variables constant. Labor emerged as the pivotal variable of the income: one extra full-time worker raised the level of income by €6,892, and seasonal workers contributed €2,149. Further, the education and age factors were found to be statistically insignificant and hence cannot be said to have an impact on farm outcomes in the opposite direction. This means that real inputs like labor and capital heavily dominate over individual demographic factors in determining the outcomes of the farm. The test of reliability also indicated that collateral, high interest rates, and loan terms are being viewed as the most stringent obstacles to credit access with internal consistency ($\alpha = 0.889$). These findings align with the broader literature that highlights the fact that loans are a productive source of farm productivity, but loan design as well as overall institutional arrangements are the principal drivers of the success of the latter. Due to this, access to finance needs to go hand in hand with advisory services at the farm level, financial education and awareness at the household level, and policy for dealing with structural issues of land fragmentation and lack of mechanization in Kosovan agriculture.

Key-Words: - Agricultural loans, farm productivity, rural finance, Kosovo, regression analysis.

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1 Introduction

Agriculture is a core activity for all economies, no matter the stage of development. Given the rate of world population increase and swelling demand for foodstuffs, agricultural productivity has to be increased. One of the fundamentals of the agricultural growth enablers is access to financial resources. Agricultural finance is leading the way to help farmers have access to the inputs that they require, buy new technology, and enhance overall production in agriculture.

Agriculture in the majority of developing economies is not only a source of food security but also a basic pillar of rural livelihood and job employment. Agriculture in Kosovo remains one of the nation's strongest industries, with enormous numbers of the rural population directly employed and feeding the nation. The industry, however, has been characterized as having low productivity with

outdated technology, decentralized land ownership, and inadequate access to financial services.

Finance access is well known to be one of the primary poverty reduction as well as sustainable agricultural development instruments, [1], [2]. Loans are invested at every phase of the agriculture cycle from land preparation to mechanization and expansion, [3]. Though it is one of a most powerful instruments, financial access to loans in developing nations—most notably Kosovo—is highly constrained. Financial limitation in the form of a lack of appropriate lending products, increased interest charged, and the requirement of collateral that is incompatible with agricultural activity, [4] typically confronts the farmers. Lack of engagement of the formal financial sector in agriculture increases the vulnerability of rural households and limits investment in productive assets. Additionally, a lack of specialized financial services, agricultural

insurance initiatives, and credible data from the farm operation further inhibits access to loans.

Access to loans is among the main instruments through which farmers might break through the structural constraint of limited access to productive assets. When it exists and is utilized efficiently, the agricultural loan can support investment in high-yield inputs, irrigation systems, farm machinery, and better storage facilities. A loan may also support consumption smoothing and income stabilization against the adversities of the seasons and climatic risks. However, the efficient utilization of agricultural loans is not only about access but also the terms of lending, knowledge of finance, and the ability to absorb and utilize the investment. In most instances, the farmers are likely to utilize the loan for non-production activities, or the repayment schedule may not fit in the seasonal agricultural production pattern, and hence result in a cycle of debt and financial crisis. Financial inclusion of the farmers must hence be a main strategic item of the policies of rural development. In [5], [6], the authors reveal that incompatibility between demand and supply of the agricultural loan is one of the underlying causes of subpar performance of the agricultural sectors of most developing countries

Although the existing literature overall favours a beneficial effect of loans on farm productivity, e.g., [7], [8], [9], consensus is lacking. Some studies point to negative or insignificant effects, while others highlight U-shaped or context-specific relationships, [10], [11]. These contradictions suggest the necessity of more fine-grained and empirical research in other national contexts. The present study is an attempt in the above direction and aims at contributing to the ongoing debate through empirical analysis of the effect of agricultural loans on farm productivity in Kosovo.

Surveying 500 farmers of five municipalities, Prishtina, Peja, Gjilani, Mitrovica, and Prizren, the study defines the objectives in the following main directions:

1. To assess the impact of agricultural loans on gross farm income using robust statistical methods.
2. To examine the mechanisms linking loans with income through disaggregated productivity indicators and labor dynamics.

2 Literature Review

Agricultural productivity represents the relationship between the quantity of production and the inputs used, such as land, labor, capital, and the quantities of other inputs (such as water, fertilizers, pesticides,

etc.). Agricultural loans do not have a direct impact on agricultural production, but it is a very important resource that is used to provide inputs and new technologies to increase agricultural production. The development of the financial sector has a significant impact on reducing hunger, and this works mainly through the productivity channel, [12]. [13], concludes that access to finance reduces overall poverty. In general, we can say that the main consensus in the researchers' findings is that access to finance has a strong potential to reduce poverty among farmers in rural areas.

The importance of access to finance and its effectiveness in reducing poverty and increasing farmers' welfare is undisputed, but how agricultural loans affect farmers' productivity is the focus of this study, and many researchers have looked at agricultural loans and their impact on agricultural productivity in various developed and developing countries. Various studies show that the relationship between agricultural loans and agricultural productivity is significant and important as [7], [8], [9], [14], [15], [16], [17], [18], [19], [20], [21], [22], but there are also findings that deny this [3], [11], [23], [24]. Agricultural household models not only show that an agricultural loan is necessary with the constraints of self-financing, but also explain the level of production and the time gap between inputs and outputs. The study, [16], estimates in their study that agricultural loans have a significant impact on agricultural productivity. Similarly, [25], analyzes in their study the relationship between access to loans and its impact on farmers' income and welfare. They conclude that access to loans for soybean farmers in Togo has a positive impact on their income and well-being.

The study, [26], examines the impact of loans on agricultural productivity in Pakistan using the ordinary least squares (OLS) method. In the data that they covered from 1971-1972 until the year 2001-2002, they applied the dependent variable in the form of gross agricultural product, whereas the independent variables included agricultural production, labor force, area under production, and agricultural loan. From the data of the study, they found that a positive and significant relationship exists between loan and Gross Agricultural Product. The study, [27], examined the effect of agricultural loans on agricultural productivity in Nigeria. Four study hypotheses were employed in studying the study, and also utilized data from secondary sources between the years 1970 and 2014 for the purpose of analysis. The study was conducted with the aid of the regression equation. The conclusion is that agricultural loan and agricultural productivity in

Nigeria is found to have a significant relationship. This conclusion implies that agricultural productivity in Nigeria is capable of increasing with increased agricultural loans.

It is also quite vital to examine the time period of agricultural loans for agricultural productivity. We come across this research by [28], that sought to establish the effect of agricultural loans on agricultural productivity in Nigeria through the application of the error correction model. Their data included the time series from the years 1981-2014. From the research conducted by them, long-term agricultural loan has a positive relationship with agricultural productivity. But it is not the same with the short-term agricultural loan because the relationship between agricultural productivity and short-term loans is negative.

While agricultural credit has been researched extensively in African and Asian nations, e.g., [7], [9], [22], in the Western Balkan region and Kosovo in particular, no significant evidence exists. With the knowledge we possess, it remains the first empirical study that investigates in a structured manner the relationship between access to credit and the structure of labor and farm income in Kosovo using primary data.

The novelty of the study lies in two main aspects. First, it transcends descriptive comparisons by using multiple and hierarchical regression models to predict the marginal impact of credit, labor, and demographic variables on gross income. By doing so, the study has a more rigorous account of the relationships between credit and farm-level resources. Second, the paper uses regression analysis with a reliability test of perceived barriers to access to credit and identifies high interest rates, collateral, and credit terms as the most important barriers. By integrating the two approaches, income determinants and credit constraints, the paper gains a clearer understanding of how financial inclusion contributes to farm agricultural productivity in Kosovo.

Empirically, the study contributes new evidence from Kosovo, where agricultural production is characterized by smallholder dominance, small and fragmented land holdings with low mechanization levels. Policy-wise, the study results reveal that, whereas access to credit is positive and statistically significant in impacting income, structural restrictions in the financial system must be rectified in order to ensure that the borrowed funds are utilized for production purposes. The study is hence relevant not only in Kosovo but also in other transit economies where the issues are the same.

3 Research Methodology

A structured survey conducted in 2023 was used to gather the data for this study in five Kosovo municipalities (Prishtina, Peja, Gjlani, Mitrovica, Prizren). Five hundred farmers were sampled from five Kosovo municipalities using stratified random selection. This ensured that farmers of various farm sizes, regions, and types of production were represented in the sample. Farmers were selected randomly from agriculture registration records maintained locally by the municipalities. The survey tool was developed using past agricultural finance studies and was tailored for use in Kosovo. In this survey, we asked questions related to socio-demographic characteristics, farm resources, labor, access to credit, and financial constraints. We pilot-tested the survey tool on twenty farmers to ensure clarity and reliability before deploying it to the full sample of farmers.

To assess the determinants of farmers' gross income, a multiple linear regression analysis was conducted. The dependent variable was Gross Income (in euros). Independent variables included: Age (years), Education level (ordinal scale), Number of Full-time Workers, Number of Seasonal Workers, and Loans Access (dummy variable: 0 = no loans, 1 = with loans). This model allows us to estimate the marginal contribution of each explanatory variable while holding the others constant. In particular, the inclusion of loan access directly addresses the core research question by testing whether access to loans has an independent and statistically significant impact on farmers' gross income. For linear regression, we used the formula below:

$$Y = \beta_0 + \beta_1(\text{Age}) + \beta_2(\text{Education}) + \beta_3(\text{Full-time Workers}) + \beta_4(\text{Seasonal Workers}) + \beta_5(\text{Loans Access}) + \epsilon$$

where:

Y = Gross Income (€)

β_0 = Constant (intercept)

$\beta_1 \dots \beta_5$ = Estimated regression coefficients

ϵ = Error term

For this analysis, we have two hypotheses:

Null Hypothesis (H_0): There is no relationship between the predictor variables {Age, Education, Full-time Workers, Seasonal Workers, Loans Access} and Gross Income.

$$H_0: \beta(\text{Age}) = \beta(\text{Education}) = \beta(\text{Full-time Workers}) = \beta(\text{Seasonal Workers}) + \beta(\text{Loans Access}) = 0$$

Alternative Hypothesis (H_a): There is a statistically significant relationship between at least one of the predictor variables and Gross Income.

$H_1: \beta_i \neq 0$, where $i \in \{\text{Age, Education, Full-Time Workers, Seasonal Workers, Loans Access}\}$.

After setting up the regression model and formulating the hypotheses, the analysis was carried out step by step. In the first model, only demographic factors (age and education) were included. A second model was then estimated by adding the variables related to labor input (full-time and seasonal workers), in order to capture the effect of workforce composition on income. In the final model, loan access was introduced to test its direct influence on gross income while controlling for the other variables. This stepwise procedure makes it possible to see how the explanatory power of the model improves when new predictors are added and to identify the net effect of Loans. The premises of linear regression, which include linearity, independence of errors, constant variance, and normal distribution of residuals, were verified, and the results indicated that no substantial violations were found. The degree of statistical significance was evaluated at the 5 percent level ($p < 0.05$). All estimations were performed in SPSS.

A reliability test was performed with Cronbach's alpha to analyze the degree of internal consistency for the scale measuring financial barriers to access to loans. The scale consisted of three items relating to the key barriers indicated by farmers, which are high interest rates, collateral requirements, and loan conditions. Cronbach's alpha was used because it is the most widely used coefficient for determining if a group of items is measuring the same underlying concept. As a rule, a coefficient of 0.70 or above is technically considered acceptable, and a coefficient above 0.80 indicates good internal consistency.

4 Results

4.1 Descriptive Analysis

In the challenging area of empirical research, descriptive statistics provide a building block, establishing an exact or quantitative representation of the important variables of focus in our research study.

Table 1 provides a descriptive summary of key socio-economic indicators from the surveyed farming households. The average age of the

respondents is 48.16 years, with a standard deviation of 4.62, indicating a diverse group of participants ranging from 20 to 89 years old. This reflects a farming population composed primarily of middle-aged individuals, but with representation from both younger and older farmers.

Table 1. Socio-economic characteristics of farms

Variables	Std. Deviation	Min	Max	Mean
Age	11.77	20	89	48.16
Education	.933	4	18	12.19
Experience	4.62	1	16	10
Household size	3.59	2	35	6.56
Farm size	.972	0.5	30	1.76

Source: created by the authors

The average education level is 12.19 years, suggesting that most respondents have completed upper secondary education, with some possibly having pursued vocational or higher education. The relatively low standard deviation (0.93) indicates that most participants have similar educational backgrounds. Overall, respondents have an average of ten years of farming experience with a broad range from 1 to 16 years ($SD = 4.62$), indicating most farmers in this sample have a moderate level of experience. This level of experience is likely sufficient to reflect a reasonable understanding of the farming practices and the use of loans. Respondents have an average household size of 6.56 members ($SD = 3.60$) with a broad range from 2 to 35 members. This indicates the household structure of extended family components, which is common in rural Kosovo, where multiple generations may live and work on the same farm. The mean for farm size is 1.76 hectares, supporting our earlier conclusion that small-scale farms are most common in the region. With a standard deviation of 0.97 hectares and a maximum of 30 hectares being reported, we can conclude that the distribution of farm size observations is skewed right since one of the respondents' farms is a considerably larger farm, which likely influenced the maximum farm size reported.

To explore the contributions of agricultural loans to the financial performance of farmers, a comparative analysis was performed between two groups (those associated with single loans and those associated with no loans). Results are summarized in Table 2.

Table 2. Loans Impact Comparison Table

Indicators	With Loans	Without Loans	p-value
Average Investment (€)	€8.68	€10.78	0.033
Average Gross Income (€)	€19,199	€17,395	0.896

Source: created by the authors

In terms of loan access, across all respondents, only 25.05 % reported having access to a loan. This relatively small percentage indicates the lack of loans and also possible structural barriers to financial inclusion for the agricultural sector. In terms of investment behavior, farmers reporting not having loans (average investment level: €10,780) reported a significantly greater average investment level than those with loans (€8,684). The difference in average investment was statistically significant ($p = 0.033$), suggesting access to a loan in its existing form does not lead to higher investment. This could be related to several factors, including loans being used for non-productive purposes, high interest rates, or inadequate amounts of loans.

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In terms of gross income, farmers with loans reported a slightly lower mean income (€19,199) than farmers without loans (€17,395); however, the difference was not statistically significant ($p = 0.896$). This demonstrates that even with financial resources, a loan does not imply substantial income growth. Moreover, these results can challenge the notion that loan access creates more investment and productivity and highlight how loans should be supported with advisory services, training, and more strategic loan targeting to enable productive loans for farmers. To explore the factors that determine farm income, a multiple linear regression was estimated. The independent variable gross income was analyzed against the independent variables age, education, number of full-time workers, number of

seasonal workers, and loan access as explanatory variables. This model, in turn, helps us understand the relationships between demographic characteristics, labor contributions, and financial resources and how they affect farmer income variability. The findings show that access to credit significantly and positively affects gross income. That is, farmers who had access to credit had an average of €3,688 more gross income compared to farmers who did not have access to credit, holding everything else constant ($B = 3687.687$, $p = 0.035$). The finding implies the importance of financial access as a determinant of agricultural income.

Of the variables included in the model, full-time workers ($B = 6891.527$, $p < 0.001$) and seasonal workers ($B = 2148.698$, $p < 0.001$) are variables with strong and statistically significant positive effects. Each additional full-time worker on the farm is associated with an increase of approximately €6,892 in gross income, while each seasonal worker adds about €2,149 to income. These results underscore the importance of labor resources in increasing farm productivity and, therefore, income. In contrast, age ($B = 22.252$, $p = 0.942$) and education ($B = 2591.485$, $p = 0.580$) showed no statistically significant impacts. Therefore, although the coefficients are, overall, positive, there is not enough strength in either measure for us to rely on any of them as predictors in the model. It can be concluded from the regression results that labor resources (full-time and seasonal workers) and access to loans are the two independent variables that explained how farmers in the sample generated gross income. Age and educational characteristics do not appear to exert a significant influence on gross farm income (Table 3, Appendix).

A hierarchical regression analysis was completed in three steps to analyze the deterrents to farm income. The first model included only the demographic factors (age and education). The second model included labor variables (full-time and seasonal workers) to operationalize the degree of workforce composition. The third and final model included loan access to assess that function in an independent manner. By taking this stepwise approach, we were able to assess the amount of variance associated with the available predictive variables as a function of the different models applied.

Model 1, which included only demographic variables, explained little variation in income ($R^2 = 0.012$, n.s.). Adding labor variables in Model 2 significantly improved the model ($\Delta R^2 = 0.192$, $p < .001$), with both full-time and seasonal workers emerging as strong predictors. In Model 3, the

inclusion of loan access further increased the explained variance ($\Delta R^2 = 0.067$, $p < .05$), showing that farmers with loans earned significantly higher gross income even after controlling for demographics and labor resources (Table 4, Appendix).

In order to ensure that the items used to measure barriers to loan access form a coherent and internally consistent scale, a reliability analysis was conducted. Although the initial set of items included both financial and non-financial barriers, only the financial constraints (interest rates, collateral requirements, and loan conditions) demonstrated sufficient reliability to be retained in the final model. The results are presented in Table 5 (Appendix).

The results indicated that not all items contributed equally to the internal consistency of the scale. The items on lack of technical knowledge and social barriers showed weak correlations with the overall scale and reduced the reliability coefficient. For this reason, they were excluded from the final model. Similarly, the item on competition had only a moderate contribution and was not retained in the final version.

After removing the weaker items, the three financial barriers—high interest rates, collateral requirements, and loan conditions—formed a highly consistent scale, with a Cronbach's alpha of 0.889. This level of reliability is considered strong and demonstrates that the three items jointly capture the construct of financial barriers to loan access. The descriptive statistics show that farmers most frequently identify high interest rates ($M = 3.88$, $SD = 1.53$) and collateral requirements ($M = 3.84$, $SD = 1.51$) as the most serious constraints, followed by loan conditions ($M = 3.66$, $SD = 1.60$).

5 Discussion and Conclusion

The analysis in this study indicates the determinants of agricultural income in Kosovo and adds further understanding to how agricultural credit translates to economic income in the context of rural households. The regression results show that the variable of access to credit was statistically significant and positively affected gross farm income, respectively. Farmers with access to credit, on average, earn €3,688 more compared to farmers without access, without considering variables for labor force and demographic factors. Although this influence is supportive of access to finance, as noted in earlier literature, [7], [9], [27], it also indicates that credit alone is unlikely to increase farm income. This agrees with the arguments in [3], that farm credit by

itself will have a meaningful impact only if it is accompanied by other needs, such as adequate training and use of the appropriate types of credit.

An even more remarkable finding of this study is the striking and consistent contribution of labor inputs. Seasonal and full-time workers both proved to be significant predictors of gross income. While full-time workers averaged an increase of €6,892, seasonal workers contributed €2,149. These findings underline Kosovo's agricultural reliance on human labor and are consistent with, [8], who note that labor remains an essential driver of productivity in underdeveloped countries. The high impact of seasonal workers is especially crucial in smallholder agriculture, where family labor and short-term workers are frequently essential during peak agricultural seasons. In Kosovo, where agricultural mechanization and modern technologies are scarce and land is extremely fragmented, reliance on labor leads to greater structural constraints that continue to impact farm output.

In terms of policy, these findings have significant ramifications. On the one hand, increasing agricultural loan availability is still crucial because farmers' capacity to invest is obviously constrained by their financial situation. However, policy initiatives must concentrate on enhancing the efficacy of credit. This involves creating loan solutions that are more suited to agricultural cycles, lowering collateral requirements, and combining loans with advisory and technical help. Without these safeguards, there's a chance that loans won't boost productivity as anticipated and might even make debt accumulation worse. According to [4], it is also crucial to strengthen financial literacy and training programs for farmers because a lack of understanding of loan management and investment planning can lessen the advantages of financial access.

Finally, the findings of this study add to the broader global discussion on the role of credit in agricultural development. Numerous studies support the beneficial effects of credit, [7], [9], [28], yet other studies show inconsistent findings ranging from negligible to even harmful consequences, [10], [11]. In the middle of this spectrum, our findings show that credit is important, but not decisive. Given the prevalence of labor and the relatively small role of credit in Kosovo, structural changes in the labor market, land consolidation, and equipping farmers with adequate technology and mechanisms may be as, if not more, important than the share of agricultural credit. However, the role of credit, although limited, shows that it is an important part of the agricultural development of Kosovar farmers.

Through this study, we wanted to see if agricultural credit affects the productivity and income of farmers in Kosovo. The findings show that credit is not insignificant, but not necessarily as efficient as is often thought. Farmers who received credit generated more income than farmers without credit, but the difference was not large enough to claim that credit alone changes the performance of the farm as a whole. On the contrary, labor played a larger role: both full-time and part-time workers had positive impacts, with the largest impact coming from full-time workers. This again shows that agriculture in Kosovo, like in most less developed countries, is labor-oriented, not capital-based or mechanized.

The paper also highlights an important point. The availability of easy credit in itself will not lead to growth for the sector. Most producers are burdened with excessive interest rates, excessive collateral requirements, and repayment terms that are inconsistent with the agricultural production cycle. This hinders the efficient distribution of credit and, in some cases, forces farmers to use credit for purposes that do not contribute to productive outcomes. Other studies have found similar patterns of research in other geographic and regulatory areas, such as South Asia, for example, and West Africa, where credit has had mixed or unsatisfactory results unless supported by supportive services and the development of more adaptive products, [7], [9], [10].

Another potential source of concern is population parameters, such as education or age, which appear to have little impact on income. In other circumstances, one would think that the more educated farmers are, the better the outcomes would be, but the findings show, in the case of Kosovo, that access to finance and employment precede behavioral characteristics. This is supported by other works, [8], [22], which suggest that structural and institutional constraints within smallholder farming systems weigh significantly more heavily than demographic characteristics.

Overall, these results suggest that credit is still a useful instrument, but not a panacea. To truly and positively impact agricultural production, credit will need to be designed to fit the circumstances of smallholders – by lowering interest rates, easing collateral requirements, and structuring repayment schedules to fit the agricultural cycle. In parallel, credit should be accompanied by advisory services, grassroots policy interventions that address structural problems of Kosovo's agriculture, such as land fragmentation and lack of mechanization, and financial literacy education. This study adds to the

general discussion on agricultural financing by confirming that the Kosovo experience presents an even stronger argument: credit is promising, but only within the scope in which it is being provided and how farmers are being encouraged to benefit from it.

Declaration of Generative AI and AI-assisted Technologies in the Writing Process

The authors wrote, reviewed and edited the content as needed and verifies that none utilised artificial intelligence (AI) tools were used. The authors take full responsibility for the content of the publication.

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Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)

All authors involved in the study have accepted responsibility for the entire content of this manuscript and have given their consent for submission to the journal. All authors reviewed the results, content, and approved the final version of the manuscript. J.Sh.: Conceptualization, formal analysis, investigation, validation. F.G. and P.Y.: Review and editing. L.I.: Conceptualization, formal analysis, methodology, software, data curation, writing—original draft preparation.

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Conflict of Interest

The authors declare no conflict of interest.

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APPENDIX

Table 3. Regression Coefficients for Gross Income by Age, Education, Labor, and Loan Access

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
Age (years)	22.252	307.224	.004	.072	.942
Education	2591.485	4682.265	.029	.553	.580
Full-time Workers (number)	6891.527	1079.533	.365	6.384	.000
Seasonal Workers (number)	2148.698	600.212	.205	3.580	.000
Loan Access (0 = no, 1 = yes)	3687.687	937.438	.266	3.524	.035

Source: created by the authors

Table 4. Hierarchical Regression Models Predicting Gross Income

Variable	Model 1	Model 2	Model 3
Age (years)	22.25 (0.94)	21.78 (0.93)	20.56 (0.93)
Education	2591.49 (0.58)	2511.44 (0.57)	2433.22 (0.56)
Full-time Workers	–	6891.53*** (0.000)	6720.12*** (0.000)
Seasonal Workers	–	2148.70*** (0.000)	2099.38*** (0.001)
Loan Access	–	–	3687.69* (0.035)
R ²	0.012	0.204	0.271
ΔR ²	–	0.192***	0.067*

Source: created by the authors

Table 5. Reliability statistics for financial barriers to loan access

Item	Mean	Std. Deviation	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
High interest rates	3.88	1.53	0.766	0.857
High collateral requirements	3.84	1.51	0.859	0.776
Loan conditions	3.66	1.60	0.729	0.891
Scale reliability (α)				0.889 (N = 3)

Source: created by the authors