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Abstract. The Sustainable Development Goals are a global call to action to end poverty, protect the Earth's environment and climate, and ensure that people, regardless of location, can enjoy peace and well-being. Recently notice that Albanians tend to move abroad. Recent trend show that Albanians tend to move abroad. This is characteristic especially for the North of Albania. Shkodra region is a northwest part of Albania that is known for its wealth of natural recourses, culture and traditions. It is surrounded by a lake, a sea, and a river; also the people of Shkoder are called "The creedal of arts and knowledge". But the poverty indicators prove the opposite. The poverty in this region is nearly 15 %, and the unemployment level is very high. People tend to leave Shkodra. They have land and professions but they don't have the property legality and cash to exploit these natural resources. To have a sustainable development region, the government needs to take measures to help people to work their lands and to create their company. Interviewing a sample of 200 people in rural areas in Shkodra (borrowers/not borrowers) we notice that microcredit has a short-term impact in increasing their incomes and consequently contributes to reduction of immigration. Before and after is the method used for impact analysis in order to reach the above conclusion.

Keywords: Sustainable Development, Shkodra Region, poverty indicator, microcredit impact, immigration.

INTRODUCTION

The Sustainable Development Goals (SDG) are a global call to action to end poverty, protect the earth's environment and climate, and ensure that people everywhere can enjoy peace and prosperity.

19 UN Agencies are working together to support Albania's achievement of the SDGs, United Nations

Albania (UNA,2022). One of the important objectives of the SDGs is "No poverty" which means "The elimination of poverty in all its forms throughout the world".

Albania has prepared a number of strategies that address development policies in various fields of development, which focus on the socioeconomic improvement of Albania in the years 2021-2030, but based on the current situation of Albania, the urgent need is to reduce inequality between the regions regarding main areas of development, especially in the reduction of poverty. This is and the first objective of SDGs

I. Problem statement

The aim of the article is to study the assessment of the impact of microcredit on socio economic indicator of Shkoder region regarding the reduction of the level of poverty as a first objective of SDG. Access to financial services is crucial for economic development. Microcredit is a development model is a model that has been adopted in many countries of the world to provide loans to the poor who have no or little collateral. Based on the results on our analyses it was noticed the microcredit has an impact on family incomes as well as in improving health.

I.1. Poverty in Albania

The comparison of the risk of being poor for 2021, between Albania and other countries of the Region and the European Union show that: The highest value of relative poverty is recorded in Latvia (23.4%), Romania (22.6%)), Bulgaria (22.1%) followed by Albania (22%). The lowest poverty rates are recorded in the Czech Republic (8.6%), Finland (10.8%), Slovenia (11.7%), Slovakia (12.3%) and Denmark (12.3%). The average of European Union countries (27 countries) is 16.8%, Institute of statistics (IS, 2021)

According to the World Bank, from 2021 to 2023, poverty will decrease by only 1.5 % in total, even less than in the last seven years, which proves "The very slow trajectory that poverty reduction has in Albania".

What is important to emphasize is that the level of poverty, as well as other socioeconomic indicators, are different in different regions. The Shkodra region is one of the regions with the highest poverty indicators, as it is shown in Table 1

Table 1.Poverty indicators by Prefecture, 2012.

	·						
	Poverty						
District	Headcount	- Severity					
Berat	12.3	2.3	0.7				
Dibër	12.7	2.3	0.7				
Durrës	16.5	3.6	1.3				
Elbasan	11.3	2.3	0.7				
Fier	17.1	3.4	1.0				
Gjirokastër	10.6	2.4	1.0				
Korçë	12.4	2.5	0.7				
Kukës	22.5	3.8	0.9				
Lezhë	18.4	4.7	1.8				
Shkodër	15.5	3.7	1.6				
Tiranë	13.9	2.7	0.8				
Vlorë	11.1	2.4	0.8				
Total	14.3	3.0	1.0				

Source: Living Standart Measurement Survey, LSMS 2012* INSTAT

^{*} After publishing the revised data for population 2001-2014 in May 2014, the data from LSMS 2005, 2008, 2012 are revised.

The district of Shkodra does not have the highest level of poverty, but what makes us analyse this district is the fact that Shkodra is one of the districts with many natural resources, with an admirable geographical position on the border, with a tradition in education and culture, but regardless of these assets, it is ranked in the high-level poverty districts.

I.2. Shkoder district and natural resources

The district of Shkodra lies in the northern part of Albania, in a territory of 3,562 km2, with geographical limits with Montenegro in the north and northwest, with the district of Kukës in the east and with the district of Lezha in the south, while it reaches the Adriatic coast in the west and southwest. The favourable geographical position in terms of cross-border relations enables the economic and territorial connections of Shkodra with Montenegro and Kosovo, turning the city into a strategic point of the district; the climate is Mediterranean, with a mixture of continental and maritime.

In the southeast of Shkodra lies the Rozafa castle, at a height of 130 m above sea level and with an area of 3.6 ha, Shkodër District Council (SDC, 2010). To the north and northeast lays the plain of Mbishkodra, while to the north and northwest is bordered by the Albanian Alps. In the opposite direction, about 30 km southeast of the city, lies Velipoja, a beach on the Adriatic coast. Thus, within 30 km of the city there are a number of natural attractions, ranging from the high mountains of northern Albania to the Mediterranean coast of the Adriatic, from the shores of the largest lake in the Balkans to Rozafa Castle, which stands majestically on a city, where a hundred years ago there was a navigable river that brought foreign ships and passengers to its heart. Shkodra is also one of the cities with a university.

Thanks to the very good natural resources that the Shkodra region possesses and the favourable geographical position, this region has a suitable environment for the development of mountain and sea tourism, the development of agriculture and other economic activities.

I.3. Socio-economic indicators of Shkodra district

The population of Shkoder district has a decreasing trend. If we refer to the statistical data of the internal migration of the population, we will notice that the departures from the county are greater than the incoming flow. Compared to the general data, Shkodra is the fourth district in terms of population migration in the country.

Table 2.Domestic movements by county by Variable, Year and County.

Shkoder district

Year	2014	2015	2016	2017	2018	2019	2020	2021
Incoming flows	1172	1338	2239	1692	1099	1682	1559	1994
Outcoming flows	1830	2277	3409	2980	1559	2230	2367	2666
Difference	658	939	1170	1288	460	548	808	672

Source: IS

Referring to the data on GDP or DGP per capita, we note that the trend is in decline. The growth rate of Shkodra GDP in real terms is increased by - 4.6%, being ranked as the eighth district (out of 12 districts) for the contribution to the overall GDP growth.

Table 3. DGP for Shkodër region.

Indicators in region	Measuring Units	2015	2016	2017	2018	2019	2020*
Gross Domestic Product, in							
current prices	Mill. Euro	554	582	596	655	699	668
Growth Rate of Regional GDP	%	1.6	3.1	-1.0	3.5	2.3	-4.6
GDP per capita	Euro	2,616	2,784	2,888	3,214	3,471	3,363

^{*}Evaluation for the year 2020 are based on semi-final estimation of GDP

Also, the official statistics shows that starting from the 2011-2012 school year, there is a decrease in the number of students registered over the years in all the universities of the country, including the University of Shkodra. Specifically, in 2011 there are 158,963 registered students nationwide and 14,538 students registered at the University of Shkodra, which account for about 9.1% of the total number of students registered in all universities of the country. While in 2018, we have 113,277 students' registered nationwide and about 8,245 students at the University of Shkodra, which make up 7% of the total number of students. So, there is a decrease of 28.7% in the total number of students in the country compared to 2011, this also explains the decrease in the number of students at the University of Shkodra.

II. Methodology

Theoretically, a number of econometric techniques are known for impact evaluation, but their use requires appropriateness of data and the fulfilment of certain conditions.

We have considered the "Log-linear model" with an independent variable Dummy most appropriate model regarding to the type and volume of data collected for measuring the impact or effect of microcredit on the socio-economic indicators of families in rural areas, Gillespie, M. W. (1977). The Dummy variable consists of the state of the indicators "Before and after" receiving the microcredit. Dummy variable D (BEFORE-AFTER) takes the value 1 for the state before access to microcredit and the value 0 for the state after access to microcredit in the borrower group. In this way, the coefficient next to the Dummy variable shows the impact of microcredit on the variable of interest, Alba, R. D. (1987). Based on above, the Log-linear model was estimated and the corresponding coefficients were analysed for the assessment of the microcredit effects on each of the socioeconomic indicators considered in this analysis.

Through the analysis of the log linear regression coefficients it will be shown: (i) the impact of microcredit on the level of income in the rural areas of the Shkodër district; (ii) the impact of microcredit on the educational level of the inhabitants; (iii) the impact of microcredit on increasing the level of employment of the residents of the rural areas, McKernan SM (2002); (iv) the impact of Microcredit on improving the living conditions of the residents in the rural areas, Chliova, M., Brinckmann, J., & Rosenbusch, N. (2015).

II.1. Population and Sample

Based on the fact that the study refers to the Shkoder region, then the population will be the borrowers (residents of the rural areas of the Shkoder region). A sample has been chosen which consists of 200 families who are beneficiaries of a loan in one of the microfinance institutions operating in these rural areas. Data were collected before and after receiving the loan through the questionnaire prepared for this purpose.

II.2. Statistical Analysis

As we mentioned above, the data were collected through questionnaires by interviewing 200 borrowers. The sample consists of 80% men and 20% women. From the data analysis, it appears that approximately 60% of the interviewed borrowers belong to the middle level of education, 35% to the low level, and 5% to the high level of education.

95% of the interviewees are self-employed and 5% are employed in the public sector. Regarding the profession of the respondents, 75% are workers, 15% are veterinarians and 10% are agronomists.

Based on the fact that the impact of microcredit is to be evaluated, data has been collected for the indicators that will be analyzed in two main periods before and after obtaining the loan.

The period of access to microcredit is marked with T. T-3, T-2, T-1 are the periods before access to the microcredit, and T+1, T+2, T+3 are periods after access to microcredit. If there is a difference between the two periods, we will conclude that access to microcredit has an impact on the indicator that is being analyzed.

III. Results

The following table summarizes the results of processing the data collected from the selection of some key socio-economic indicators in two main periods, before and after access to microcredit.

		Unit	Before After						
			1	2	3	4	5	6	7
	Table 4. k	Key indicators "	before a	nd after"	loan in t	he b	orrower	group.	
to microcredi	t.								

		1	2	3	4	5	0	7
	Unit		Before			After		
Indicators		T-3	T-2	T-1	T	T+1	T+2	T+3
Income / family / month	(ALL)	69,550	70,012	69,813		72,020	72,593	72,901
Expenses for education/family/month	(%)	1.37%	1.45%	1.50%		1.87%	1.92%	1.98%
Expenses for social activities / family / month	(%)	2.75%	2.75%	2.75%		2.78%	2.78%	2.78%
Average number of hospital visits	(average number of medical visits / family/month)	2.6	2.4	2.3		1.95	1.8	1.75
Average number of employees	(average number of employees /family/month)	2.527	2.53	2.53		2.55	2.554	2.555
Expenses for residence reconstruction	(%)	6.69%	6.03%	6.71%		11.13%	11.56%	11.58%

Referring to the above table, it can be seen that all the indicators have an increasing trend,

starting from the period T-3 to the period T+3, exception for the number of visits to the hospital, a variable which has a negative trend. Referring to the data in Table 4, it is observed that the main indicators such as: "Income", "Employment", "Education", "Social activities" and "Living conditions" have a shift in the increasing direction after receiving the loan in comparison with the dynamics of the indicators in the period before receiving the loan. The opposite happens with the "Number of hospital visits", which moves in a decreasing direction after receiving the loan compared to the period before receiving the loan, which is evident due to the improvement of living conditions, the number of health visits is expected to decrease.

III.1. The impact of microcredit on the level of income in the rural areas of the Shkodra district

The following table shows the results of the "Log-linear model", where the independent variable is the Dummy variable itself and the dependent variable is "Income".

Table 5. Income change after access to microcredit.

Dependent Variable: LOG(TR¹)

Method: Least Squares

Sample: 1 200						
Included observations:	200					
Variable	Coefficient	Std. Error	t-Statistic	Prob.		
С	11.32933	0.042750	265.0116	0.0000		
DPARPAS	-0.195406	0.060458	-3.232085	0.0025		
R-squared	0.215628	Mean depe	11.23162			
Adjusted R-squared	0.194986	S.D. depen	0.213085			
S.E. of regression	0.191185	Akaike info	Akaike info criterion			
				0.422442		
Sum squared resid	1.388967	Schwarz cr	riterion	-		
				0.337998		
Log likelihood	10.44884	F-statistic		10.44637		
Durbin-Watson stat	1.433585	Prob(F-stat	ristic)	0.002541		

Referring to the data, it is noted that the coefficient near D is negative. This shows that after access to microcredit there is an increase in income by 1.16 percent points. When D has the value 1 (i.e. before access to microcredit), then Log (TR) = 11.33-0.195, while if D = 0, then Log (TR) = 11.33, a fact which shows that the impact of access to microcredit is approximately 1.16 percentage

From the table, it is also observed that the p-value is 0.0025 less than the significance level 0.05, which means that the coefficient is statistically significant. Meanwhile, based on the fact that R2 is around 0.22, it can be said that the model is statistically significant. Referring to the graph, there is a positive shift of the graph (change which is identified with a dashed line) through which the increase in income as a result of access to microcredit is shown.

¹ TR = "incomes".

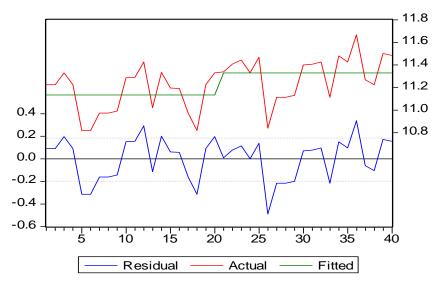


Figure 1. Income's change after access to microcredit.

Referring to the above analysis, at the 5% significance level, there is sufficient evidence to support the statement that microcredit has positive Impact on incomes.

III.2. The impact of microcredit on improving the health care level of residents in the rural areas of Shkodra district

The same methodology as above is used to evaluate the impact of microcredit on improving the health care level. Below we will present the conclusions reached from the analysis. The Dummy variable will be the same access to microcredit and the dependent variable will be the average number of visits to the hospital.

From the processing of data, it can be observed that the positive coefficient next to Dummy variable (+ 0.498) shows that access to microcredit reduces hospital expenses by 4.98 percent points. The p-value is 0.0060 less than the 0.05 significance level, which means that the coefficient next to the Dummy variable is statistically significant. Meanwhile, based on the fact that R2 is around 0.18, it can be said that the model is statistically relativly significant. In conclusion, we can say that microcredit affects the improvement of the health level.

III.3. The impact of microcredit on increasing the level of employment of residents of rural areas of Shkodra district

The Dummy variable will be the same, access to microcredit and the dependent variable will be the average number of employees.

From the data analysis, we notice that the coefficient next to the dummy variable is -0.189000. Also from the data table it is observed that the p-value is 0.4267 greater than the 0.05 significance level, which means that the coefficient next to the Dummy variable is not statistically significant. This indicates that with a significance level of 5%, there isn't sufficient evidence to support the statement that microcredit has Impact on the level of employment.

In the same way, it has been shown that microcredit has a positive impact on the improvement of living conditions.

CONCLUSIONS

Microcredit has an important role in reducing poverty and improving the standard of living of families that have had access to microcredit, and therefore it is an instrument that contributes in the short term to sustainable development, Microcredit Summit Campaign (MSC,2009).

Achieving the objectives of sustainable development requires comprehensive planning and a cross-cutting strategy to unite common policies and solve the problems that arise in the horizontal plane. Regardless of the existence of strategies and investment by the government in different areas of the economy, it is necessary to support the vulnerable population at the same time, since the impact of the macro economic regulations reaches this segment of the population later, demoralizing them.

Hubka, Ashley, Zaidi, Rida. (2005) indicate that ""Scaling up" will require increasing the scope (number of individuals reached), impact (effect on the well-being of borrowers), and depth (ability to reach the poorest of the poor) of microfinance. The idea is to make microfinance available not just to the moderate poor at whom it has traditionally been targeted, but also to the extreme poor and the vulnerable non-poor, and to expand the set of microfinancial products offered (CGAP, 2003b)" (p.6)

Refering to the above results, it is noticed that the access in microcredit increases the incomes approximately by 1.16 percent points, that is a good result for poor families. Also reduction of the hospital expenses by 4.98 percent points is another important impact of microcredit. Also Armalda Reci (2021) estimated that "Access to microcredit increases spending on the consumption of essential food products by 2.6 percentage points" (p.98).

But with regard to the problems that Albania has faced recently, immigration, it is necessary for the government to identify financial and political instruments that have an immediate impact in order to prevent the immigration of citizens from Albania. One of these instruments can be considered Exactly "Microcredit".

The creation of microcredit financial institutions in the region of Shkodra specifically for crediting or guaranteeing loans to farmers who invest in agriculture, livestock and the field of agro-processing in accordance with agricultural development policies.

The creation of training and advisory institutions and their financial support from the state, which enable counseling, training and orientation of the residents of rural areas towards appropriate and effective investments within the framework of the use of the resources they have available.

The creation of the necessary advisory and guarantee instruments by the Shkodra local or central institutions, which enable residents to benefit from the EU grants applicable for making investments in the framework of the development of rural areas.

These measures are very important because they create premises for poverty reduction, and economic development of the rural area and consequently limited the abandonment of the country.

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