

Research article

How Microcredit Programs Improve Business Household Well-being in the Local Economy? An Impact Evaluation

Ririn Nopiah^{1*}, Esti Pasaribu¹, Ratu Eva Febriani¹

¹ Faculty of Economics and Business, Bengkulu University, Indonesia

* Correspondence author email: ririn_nopiah@unib.ac.id

Article Info: Received: 07 March 2024; Accepted: 28 June 2024; Published: 30 June 2024

Abstract: Household welfare can be improved through microfinancial institutions' support by providing microcredit programs. The shock of the COVID-19 pandemic caused the impact on household welfare to decrease by 2.6% in 2020 in Bengkulu. This study aims to evaluate the impact of the People's Business Credit (KUR) program on the welfare of business households in Bengkulu Province through the National Socio-Economic Survey of the Central Bureau of Statistics (SUSENAS) for the 2022 wave using the propensity score matching (PSM) method. The study results show that microcredit influences household welfare in Bengkulu. Households receiving KUR had higher expenditures of 8.89% than groups not receiving the KUR program. In addition, age, number of households, education, savings account, marital status, and agricultural business influence KUR program recipient participation. The KUR program is expected to improve the quality of MSMEs and provide recommendations for enhancing KUR program services to related financial institutions.

Keywords: micro-credit, people's business credit, household welfare, impact evaluation

JEL Classification: G21, D02, D60

Abstrak: Kesejahteraan rumah tangga dapat ditingkatkan melalui dukungan lembaga keuangan mikro melalui pemberian program kredit mikro. Guncangan pandemi COVID-19 menyebabkan dampak kesejahteraan rumah tangga menurun sebesar 2,6% pada tahun 2020 di Provinsi Bengkulu. Penelitian ini bertujuan untuk mengevaluasi dampak program Kredit Usaha Rakyat (KUR) terhadap kesejahteraan rumah tangga usaha di Provinsi Bengkulu melalui Survei Sosial Ekonomi Nasional Badan Pusat Statistik (SUSENAS) periode gelombang 2022 dengan menggunakan metode propensity score matching (PSM). Hasil penelitian menunjukkan bahwa kredit mikro berpengaruh terhadap kesejahteraan rumah tangga di Provinsi Bengkulu. Rumah tangga penerima KUR memiliki pengeluaran lebih tinggi sebesar 8,89% dibandingkan kelompok tidak menerima program KUR. Selain itu, umur, jumlah anggota rumah tangga, pendidikan, kepemilikan rekening tabungan, status perkawinan, dan usaha pertanian mempengaruhi kepesertaan penerima program KUR. Program KUR diharapkan mampu meningkatkan kualitas UMKM dan memberikan rekomendasi peningkatan pelayanan program KUR kepada lembaga keuangan terkait.

Kata kunci: kredit-mikro, kredit usaha rakyat, kesejahteraan rumah tangga, evaluasi dampak

How to Cite:

Nopiah, R., Pasaribu, E., Febriani, R. E. (2024). How Microcredit Programs Improve Business Household Well-being in the Local Economy? An Impact Evaluation. *Jurnal Ekonomi Pembangunan*, 22(1), 51-64. DOI: 10.29259/jep.v22i1.23074

1. INTRODUCTION

The COVID-19 phenomenon has attracted great attention which creates global economic shocks so that most economies experience contraction. This resulted in the activities of the entire community stopping due to restrictions on face-to-face activities and interactions between individuals as well as a decrease in income, especially for business actors. Community welfare has decreased drastically due to the impact of the pandemic meanwhile welfare is an important thing

in the development of a country. All policies implemented lead to achieving social welfare. Achieving a person's well-being can be realized through a level of happiness, having their needs met, a peaceful soul, feeling that there is justice in life, and being free from the looming poverty (Thu & Goto, 2020).

Microcredit is an instrument that can be used to overcome problems in a country's economic development, one of which is the problem of poverty. Increasing household income and assets is the real impact of microcredit. Microloans or microcredit are also a form of financing service offered by microfinance institutions and are intended for people who meet the requirements to be given microcredit (Tahmasebi & Askaribezayeh, 2021). Microloans can provide opportunities to change household economic conditions and improve the welfare of middle and lower-class households (Nopiah & Islami, 2018; Sarker, 2013). In terms of terms, micro-loans provided by micro-financial institutions will be identical to the amount of small-scale credit loans provided to customers who have low incomes to develop their businesses. Therefore, microcredit plays an important role in community development, especially in achieving the Sustainable Development Goals (Garcia et al., 2020). In Indonesia, Microfinance Institutions are divided into two, namely Formal microfinance institutions (MFIs) (People's Credit Banks and Bank Rakyat Indonesia Units) and Informal MFIs (Cooperatives, Pegadaian, etc.). Micro, Small, and Medium Enterprises (MSMEs) are an important supporting pillar in Indonesia in supporting economic resilience, especially during the recovery period after the COVID-19 pandemic or as an economic buffer in times of crisis. Based on a report from Bank Indonesia, micro-credit distribution in December 2021 grew by 12.3% (year on year), or to 1,147.3 trillion.

One of the provinces that falls into the category of quite high poverty levels is Bengkulu Province. Bengkulu Province is listed as seventh nationally in terms of the percentage of poor people. Since the recovery of economic activity after the impact of COVID-19, it has led to a reduction in poverty levels in Bengkulu Province. In the September 2021 period, the percentage of poor people decreased by 14.4% compared to the previous year in Bengkulu Province. However, the decline in the poor population has not been accompanied by a decline in the poverty line in Bengkulu Province. The published report data from Bank Indonesia (2021), it states that credit distribution has a quite significant portion of the total credit market share to MSMEs in Bengkulu Province. Since the first quarter of 2020, MSMEs credit has experienced an increasing trend. Apart from that, it was recorded that there was a 38.25% increase in credit market share in the fourth quarter of 2021 compared to the previous year of 35.53% of total credit distribution. The increase in MSME credit was due to increased credit distribution to micro-scale MSMEs. Micro-scale MSME credit growth in the fourth quarter of 2021 was 61.59% (yoy) or an increase compared to the previous quarter which contracted by 20.38% (yoy).

The distribution of MSME credit distribution is dominated by the trade business sector and the agricultural sector which reaches 80% of the total MSMEs credit distribution in Bengkulu Province. Furthermore, donations came from the business sectors of the processing industry, services, construction, and others. Providing microcredit positively impacts the development of MSMEs as one of the priorities of sustainable development policies and encourages increased household welfare. However, the magnitude of the impact of microcredit is still not conclusive. This is demonstrated by several empirical study results providing different outputs. Several studies provide positive output that microcredit increases household income and assets (Aktaruzzaman & Farooq, 2017; Hsu, 2014; Ouertani et al., 2018), reduces poverty (Abera, 2019; Hossain, 2012; Nopiah & Islami, 2018; Thu & Goto, 2020; Yergin et al., 2015). However, some studies also show the opposite results that microcredit is not always profitable, does not reduce household poverty levels significantly (van Rooyen et al., 2012), and has no effect on increasing household income and assets (Ahlin & Jiang, 2008; Ali et al., 2017; Montgomery & Weiss, 2011; Thanh et al., 2019).

The influence of financial flows from microcredit was found to have both positive and negative influences (Loubere, 2018; Loubere & Shen, 2018; Weber & Ahmad, 2014). The correlation between microcredit and the income and assets of farming households is positive that access to micro-credit for farming households creates changes in asset values and increased household income (Ouertani et al., 2018). Studies conducted in China, participation in microcredit programs increases income

levels when loans are used for activities that generate additional income (income-generating), and microcredit programs become effective when borrowers are fully involved in the program (Hsu, 2014). A study using primary data conducted by Adju et al. (2023) found that providing people's business credit programs significantly affected the income of MSMEs in Gorontalo City for Bank Rakyat Indonesia (BRI) customers. KUR effectively distributes micro-enterprise assistance for developing MSMEs and poverty alleviation (Ulfa & Mulyadi, 2020). In agricultural households, it was found that the microcredit program had a significant positive impact on per capita income (Dao, 2020). The findings from Akotey & Adjasi (2016) show that households that use microcredit accompanied by microinsurance experience a significant increase in welfare. This is because micro insurance can provide benefits to poor people if risks occur in micro credit. Besides, Crépon et al. (2015) found that the microcredit program not only led to increased investment in assets for entrepreneurial activities and increased profits but also reduced the income of freelancers in Morocco.

However, Félix & Belo (2019) also indicated that microcredit reduces poverty as measured by the headcount index, poverty gap, employment, and education. Amanor et al. (2023) found that although the development of microcredit is improving welfare, yet there is a welfare gap in the provision of microcredit based on gender. Men tend to receive larger loan amounts than women, so there is a need to improve portfolio quality and strengthen the benefits of microcredit access. Besides, microcredit programs can alleviate poverty and contribute to the rural economy but also have unintended consequences such as adverse impacts on children's education (Bhuiya et al., 2019).

Poverty alleviation in Bangladesh through microfinance programs is ineffective as a result of high interest rates, insufficient loans, unproductive use of loans, corruption and poor skills of microfinance Institution staff, weekly repayment schedules, and physical and mental abuse of poor women (Ali et al., 2017). In Vietnam, studies at the micro level found that microcredit benefits entrepreneurship more than other household economic activities. Prominent results from macroeconomic analysis reveal that unlike expected, the effect of microcredit on increasing output is not that great (Thanh et al., 2019).

Using the propensity score matching method, in Vietnam it was found that microcredit improved the standard of living of households, especially in rural Vietnam, by increasing household income and consumption. However, for poor rural communities, microcredit only increases consumption without increasing income, so microcredit does not provide benefits for poor households. Other indicators such as age, education level, leadership status of the head of the household, number of household members, dependency ratio, house value, and geographical location influence participation in microcredit programs (Duong & Thanh, 2014; Thanh et al., 2019). Luan et al., (2015) found that subsidized credit was successful in targeting the poor with the number of customers reaching 24.10% and 83% of ethnic minority households in Vietnam. Apart from that, subsidized credit is also influenced by ethnicity, the age of the head of the household, the number of household members, savings ownership, and the magnitude of the impact on economic shocks. Subsidized credit recipients earn 2.61% and 5.93% higher total income in the agricultural sector compared to non-subsidized credit recipient households in Vietnam.

Micro-credit, such as people's business credit, is a potential target for poverty alleviation because it is often seen as a tool to help low-income households improve their economic conditions. However, there is still a gap in the literature regarding the positive and negative impacts of microcredit programs in improving welfare. The study results can help stakeholders and related microfinance institutions in designing more effective and efficient micro-credit programs to improve household welfare. Therefore, this study conducted a study of the impact of people's business credit on the welfare of households in Bengkulu Province.

2. RESEARCH METHODS

This study uses quantitative descriptive and explanatory study. Therefore, this study will analyze in depth the impact of a program on household-level economic conditions in a particular area. The data source for this study uses secondary data obtained indirectly (third party) published

by the Central Statistics Agency (BPS) of Bengkulu Province. The data used is in the form of micro statistical data, namely the national socio-economic survey (SUSENAS) in the form of pooled cross-section data with a survey wave period of 2022. This data includes individual, household and consumption expenditure data at the Bengkulu provincial level. This study aims to analyze the impact of people's business credit on household welfare in Bengkulu Province. This is because people's business credit has an impact on improving household welfare with household expenditure parameters. Based on this, the operational definition of the variables used in the study is included in Table 1.

Table 1. Operational Definition of Variables

Variables	Definition	Units
Micro-credit	Households that receive credit (people's business credit, commercial bank credit other than foreign exchange, credit from people's credit banks, and credit from cooperatives) which is proxied by people's business credit.	Dummy
Household expenditure per capita	Total household expenditure per capita as a welfare parameter per month or year per province	Rupiah
Education level	Length of Education	Years
Age	Age of respondents	Years
Marital Status	Marital status (married or not/ yet married)	Dummy
Number of Household Members	Total of household members	Nominal
Gender	Gender of the respondent (Man/ Woman)	Dummy
Agriculture business	Working status in the agricultural and non-agricultural sectors	Dummy
Saving	Ownership of savings in one's name or jointly in a financial institution (banking or cooperative)	Dummy
Work Status	The main job or field of work status	Dummy
Urban	The domicile of the head of the household (urban/ rural)	Dummy
Micro business assistance	Individuals/members of HH who receive micro-business assistance	Dummy
Employment status	An individual who has the status of a civil servant	Dummy

Sources: data processed by author, 2024

This study uses data analysis tools through the Stata 17.0 program with a quasi-experimental approach. The analytical method used in this study is Propensity Score Matching (PSM). The PSM method is used as an appropriate method for estimating the effect or impact of a program and accommodates the possibility of selection bias (Putra & Pujiyanto, 2020). Propensity Score Matching (PSM) with a cross-section data pattern where PSM tries to form a control group that is as similar as possible to the participant group based on the observed characteristics (Garrido et al., 2014; Jeffrey M. Wooldridge, 2013). In addition, PSM forms a comparison group based on a probability model, namely the probability of an individual participating in the program based on observed characteristics with a large number of observations so that the number of similar observations (match) meets the requirements for estimation. PSM is a semiparametric method, which means there are few limitations in determining the specifications of the program participation model, including the assumption of normality and error term distribution (Christopher F. Baum, 2006; Jeffrey M. Wooldridge, 2013).

Propensity score matching has two steps, namely selecting a model and selecting variables that must be in the model. In selecting the PSM model, it can be binary logit, probit, multinomial logit, and probit. Several steps fulfilled in the PSM method include (Duong & Thanh, 2014; Thanh et al., 2019). The first step is analysis of the determinants of accessibility to the people's business credit program, and then participation is estimated using the probit model regression method. The equation is written as follows:

$$\Pr(Cr_i = 1) = \Phi(\beta_0 + \beta_1 Z_i + \varepsilon_i) \tag{1}$$

where, Cr_i is an indicator of participation in the people's Business credit program; and Z represents the determinants of program participation. The estimated probability of participation or matching score for each household can be calculated from equation (1).

In the second step, each household will be paired with one or more non-users of the program. Then, differences in results such as per capita expenditure for each program recipient and non-recipient are compared. This difference will reflect the impact of the people's business credit program on each household. The average results of all individual differences will be calculated to obtain an average value as a reflection of the impact of the KUR program on the respondents. The average effect of treatment for the treated (ATT) can be written as follows:

$$ATT = E(Y_{1i} - Y_{0i} | Cr_i = 1) = E(Y_{1i} | Cr_i = 1) - E(Y_{0i} | Cr_i = 1) \tag{2}$$

where, Y_{1i} shows the potential unit of the *outcome of treatment* and Y_{0i} shows the potential unit of the outcome of controls.

Apart from that, PSM is the best choice in the analysis technique for evaluating the impact of a program. The variable of interest in this study is access to financial services through the use of people's business credit services and the outcome assessed is household welfare with the parameter of household expenditure per capita. The groups of KUR and non-KUR recipients are carried out by looking at the distribution between groups to find out how much data overlaps. This method carries out matching by weighting groups that receive people's business credit compared to groups that do not receive people's business credit (Garrido et al., 2014; Jeffrey M. Wooldridge, 2013; Thanh et al., 2019). After the probit estimation process, then each observation in the treatment and control groups is matched (matching) which has the same propensity (tendency) score value.

$$ATT = E(Y_{1i} - Y_{0i} | Cr_i = 1) = E(Y_{1i} | Cr_i = 1) - E(Y_{0i} | Cr_i = 1) \tag{3}$$

$$Y_i = D_i Y_{1i} + (1 - D_i) Y_{0i} \tag{4}$$

where, $D_i \in \{0,1\}$ denote a dummy symbol for group treatment (*treatment*). Y_i denote an outcome indicator, namely household expenditure per capita as a parameter measuring household welfare. Y_{1i} is the outcome or expected result when the household (i) is a recipient of people's business credit with a value of 1 (prosperous) and Y_{0i} is the expected result as a result of the household (i) not being a recipient of people's business credit, namely the result of control or when D_i is equal to zero (0).

3. RESULTS AND DISCUSSION

People's Business Credit is credit or financing for working capital and/or investment to individual debtors, business entities, or business groups that are productive and viable but do not have additional collateral or the additional collateral is not sufficient. In general, the KUR programs in Bengkulu Province tend to experience a significant increase. Based on the report from the Directorate General of Regional Treasury of Bengkulu Province, it is stated that the value or progress of KUR distribution in the April 2024 period was IDR 1.11 trillion, experiencing growth of 80.93% compared to the previous year in the same period, as well as the number of debtors growing by 81.20%.

This study emphasizes impact evaluation analysis which is analyzed using a propensity score mathematics approach at the household (micro) level. Using national socio-economic survey data (SUSENAS) for Bengkulu province in 2022, a description of the study data is outlined in Table 2. Based on the data description, this study had a total of 9971 individual respondents with the respondent analysis unit having an age range of 17 – 93 years. The average age of respondents is

around 42 years old. This study focuses on the KUR program where study data shows that an average of 15.56% of respondents received the KUR program. Apart from that, 2.8% of respondents received micro-business assistance, 48.1% had a bank account, 98.6% had working status, 2.5% had civil servant status, and 29.3% lived in urban areas. The average number of household members a respondent has is 4 people, with a minimum number of household members being 1 person and the highest number of household members being 10 people. The variable length of education that respondents have taken is an average of junior high school or 9 years. Respondents who had the highest education were at the doctoral level (S3) and the respondents with the lowest education were no school.

Table 2. Data Description

Variable	Obs	Mean	Std. Dev	Min	Max
Expenditure per capita (ln)	9971	13.88	0.525	12.445	16.726
People's Business Credit (KUR)	9971	0.1556	0.363	0	1
Dummy Men	9971	0.623	0.485	0	1
Age	9971	42.03	13.13	17	93
Age (Square)	9971	1938.55	1175.59	289	8649
Productive age	9971	0.95	0.213	0	1
Dummy Civil Servant	9971	0.025	0.154	0	1
Dummy Micro-enterprise assistance	9971	0.028	0.166	0	1
Dummy agriculture business	9971	0.535	0.498	0	1
Total of Member Household	9971	3.855	1.357	1	10
Dummy Urban	9971	0.293	0.455	0	1
Years of Education	9971	9.212	4.368	0	22
Dummy Ownership of bank account	9971	0.481	0.499	0	1
Dummy married	9971	0.129	0.336	0	1
Dummy work	9971	0.986	0.115	0	1

Sources: data SUSENAS is processed by author, 2023

Figure 1 shows the percentage of respondents who received the KUR program in 2022. Based on processed SUSENAS data, it shows that as many as 15.60% or 1555 respondents received the People's Business Credit Program and 84.40% or 8416 respondents did not receive the People's Business Credit Program. Meanwhile, Figure 2 shows the percentage of respondents who received the People's Business Credit program based on respondent demographics, namely domicile, gender, and business field (agricultural and non-agricultural). The results of the data description illustrate that as many as 29.65% or 461 respondents live in urban areas and 70.35% or 1094 respondents live in rural areas.

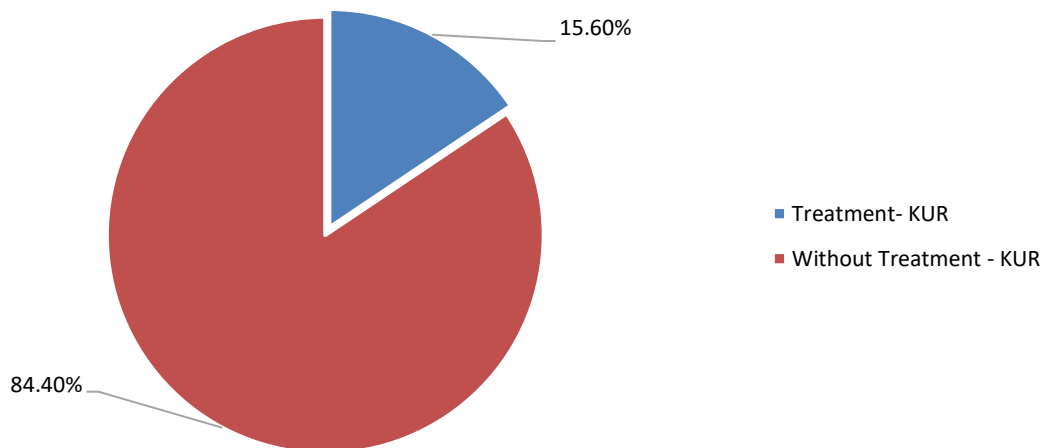


Figure 1. Percentage of *People's Business* Credit recipients in 2022

Source: data SUSENAS is processed by author, 2023

Additionally, male respondents tend to receive more People's Business Credit programs compared to women. Figure 2 shows that there are 62.89 % or 978 male respondents receiving KUR and 37.11% or 577 female respondents receiving KUR out of a total of 1555 respondents. Furthermore, respondents in the study were also divided based on their business field ownership, namely agricultural and non-agricultural business fields. In business fields in the agricultural sector, there were 48.42% or 753 respondents who received the KUR program and 51.58% or 802 respondents received the KUR program in business fields in the non-agricultural sector.

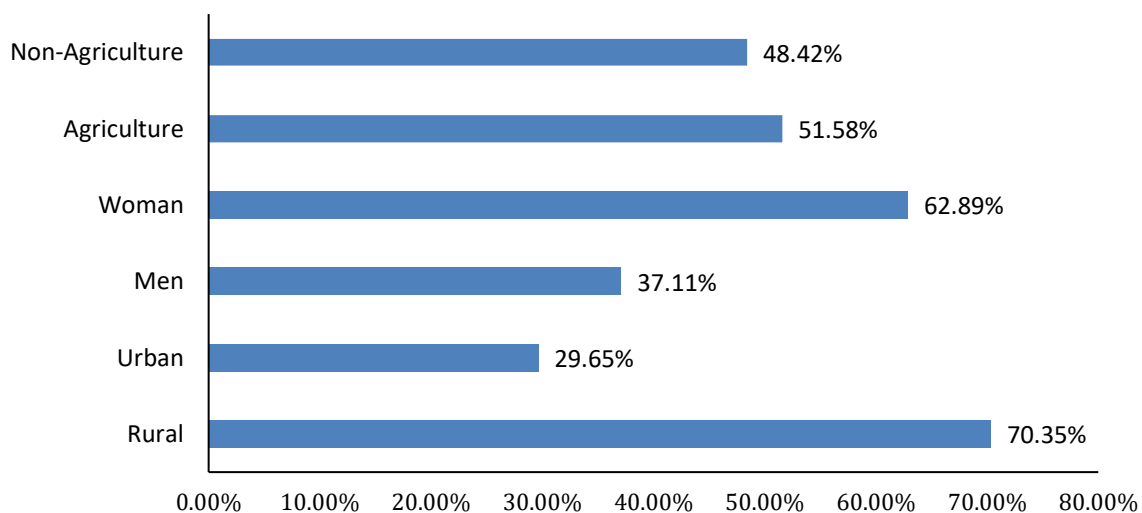


Figure 2. Percentage of KUR recipients based on domicile, gender, and business field, 2022

Sources: data SUSENAS is processed by author, 2023

This study uses impact evaluation analysis, namely propensity score matching to eliminate endogeneity problems and appropriate analysis to evaluate the impact of a program or policy. Table 3 reports the results of the total sample treated and the results of the significance of the propensity-matching treatment. The results showed that 1555 respondents were treated in the program (receiving KUR) and 8416 respondents who did not receive the KUR program. The results of the propensity matching treatment also show that this data can be carried out in the next stage with a significance value (Prob > χ^2) of 0.000.

Table 3. Propensity matching treatment assignment (Common support)

Ps-match: Treatment assignment	Ps-match: Common Support on Support		
Untreated		8416	
Treated		1555	
Total		9971	
Sample	Ps R ²	LR χ^2	P > χ^2
Unmatched	0.036	309.56	0.000
Matched	0.002	8.31	0.000

Sources: Data SUSENAS is processed by author, 2023

Table 4 reports the second approach, the same results as the first approach were obtained. Based on the results of the Average Treatment Effect on the Treated (ATET), it is 0.0889 with a significance level of $0.000 < 0.05$ and a positive coefficient relationship. So, from these results, it can be said that households that receive the KUR program will increase their household welfare by 8.89%. From these two results, it can be concluded that the KUR program will have an impact on household welfare in Bengkulu Province in 2022.

Apart from that, the influence of KUR credit also contributes to increasing household welfare in the short term as shown in Table 5. The results of multiple linear regression as an interpretation of short-term analysis show that KUR credit has a positive and significant influence on increasing household welfare in Bengkulu Province.

Table 4. Impact Evaluation of KUR Program toward Welfare by Propensity Score Matching

Impact Evaluation: A propensity score matching using “ps-match”						
Variable	Sample	Treated	Controls	Difference	S.E.	t-Stat
InY	Unmatched	13.957	13.87	0.087	0.0144	6.04
	ATT	13.957	13.87	0.092*	0.0224	4.09
Impact Evaluation: A Propensity score matching using “t-effects”						
InY	Coeff.	AI Robust S.E	Z	P > z	[95% conf. interval]	
ATET KUR Program (KUR Program vs without KUR Program)	0.0889*	0.0187	4.75	0.000	0.0522	0.1257

Note: Total observation of 9771 respondents, significance level *0.1 (10%); **0.05 (5%); and *** 0.01 (1%).

Sources: data SUSENAS is processed by author, 2023

Individuals or households who receive KUR credit have an opportunity to increase their welfare by 8.5% compared to individuals or households who do not receive KUR credit in Bengkulu Province. Apart from that, other control variables such as demographic and other factors also contribute to welfare, including domicile, marital status, age, bank account ownership, micro business assistance, number of household members, years of education, and type of business field being run.

Table 5. Short-term Regression – Effect of KUR Program toward Welfare in 2022

Dep. Variable = Expenditure per Capita		
Variables	Coeff. (S.E)	Significantly Level P> t
Dummy Credit -KUR	0.085*** (0.012)	0.000
Dummy Urban	0.074*** (0.011)	0.000
Dummy Married	0.153*** (0.017)	0.000
Dummy Men	0.0015 (0.009)	0.874
Age	0.015*** (0.0027)	0.000
Age Square	-0.00008*** (0.00003)	0.005
Productive Age (15-64 years old)	0.130*** (0.032)	0.000
Dummy Civil Servant	0.068** (0.031)	0.026
Dummy Ownership Bank Account	0.1967*** (0.0098)	0.000
Dummy Micro-enterprise Assistance	0.0557** (0.0268)	0.038
Total of Household	-0.1311*** (0.0034)	0.000
Years of Education	0.0269*** (0.0012)	0.000
Dummy Agriculture	-0.1388*** (0.011)	0.000
Constanta	13.49*** (0.055)	0.000
F-Stat	0.000	
Prob>F	0.000	
Number of Observation	9971	

Note: significance level *0.1 (10%); **0.05 (5%); and *** 0.01 (1%).

Sources: data SUSENAS is processed by author, 2023

However, it is necessary to know the determinants of participation in the KUR program. This is necessary to find out which households participate in the KUR program due to any factors to make it easier for policymakers and financial institutions to make decisions on regulations, market targets, administration, and others. These results are shown in Table 6 estimates show the same relationship and influence results. The results show that the factors of age, number of household members, education level, savings account ownership, marital status, and employment sector (agricultural and non-agricultural) influence households to participate in the People's Business Credit program. The higher the level of education, the lower a person's participation in the KUR program will be. As the number of household members increases, participation in the program also increases. Married status and having a savings account increase the probability that someone will receive the KUR program. Individuals who work in the non-agricultural sector have a higher probability of receiving or participating in the KUR program.

Table 6. Determinants that determine whether someone will receive the KUR program in 2022

Dependent: KUR Program	Estimation Results	
	Multiple Linier Regression (Short-term)	Impact Evaluation (Long-Term)
Dummy gender (Man)	0.006711 (0.00725)	0.02087 (0.02866)
Age	-0.003943** (0.00144)	-0.01377** (0.00599)
Age (Square)	0.0000227 (0.0000153)	0.00006 (0.000064)
Urban (dummy rural)	-0.022446 (0.007356)	-0.000064 (0.02860)
Total of Household	0.024115*** (0.002159)	0.10027*** (0.00855)
Years of Education	-0.002748** (0.00083)	-0.00814** (0.0033)
Dummy Ownership Bank Account	0.159251*** (0.006169)	0.61060*** (0.02443)
Dummy Married	0.060749*** (0.00934)	0.28390*** (0.0412)
Work Status (dummy Agriculture)	-0.042509*** (0.007246)	-0.16055*** (0.02819)
Prob > F or χ^2	0.0000	0.0000
Observation	16652	16652

Note: significance level *0.1 (10%); **0.05 (5%); and *** 0.01 (1%).

Sources: data SUSENAS is processed by author, 2023

Microcredit, in this case, the people's business credit program, is a capital assistance program for micro business actors who need additional capital to increase the quantity and quality of their business. People's business credit is given to micro, small, and medium enterprises (MSMEs) or business cooperatives with adequate criteria but insufficient collateral to carry out non-KUR credit (Adju et al., 2023). Testing through impact evaluation analysis found that microcredit has an impact on the welfare of business actors' households. A p-value of 0.000 and a coefficient of 0.088 in Table 5 means that every household that receives the People's Business Credit program will increase welfare by 8.8% in households receiving the KUR program compared to non-KUR program recipient households.

This identifies that the KUR provision encourages an increase in household welfare. Providing KUR encourages business actors to increase the quantity and quality of their production and business competency (Adju et al., 2023). Besides that, Studies conducted in China, participation in microcredit programs increases income levels when loans are used for activities that generate additional income (income-generating), and microcredit programs become effective when borrowers are fully involved in the program (Hsu, 2014). KUR is an effective form of distributing

micro-enterprise assistance for the development of MSMEs and poverty alleviation (Ulfa & Mulyadi, 2020); (Dao, 2020). Besides, Crépon et al., (2015) found that the microcredit program led to increased investment in assets for entrepreneurial activities and increased profits, but also reduced the income of freelancers in Morocco.

Table 7. Significance Result Based on Regency/City Cluster

Variable dependent: Welfare	Significance Result by District									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Credit -KUR	(+)**	(+)**	(+)**	(+)**	(+)**	(+)**	(+)	(+)	(+)**	(+)
Married	(+)**	(+)*	(+)**	(+)*	(+)**	(+)**	(+)*	(+)**	(+)**	(+)
Gender	(+)	(-)	(-)	(-)	(-)	(-)*	(+)	(+)	(-)	(-)
Age	(+)**	(+)**	(+)	(+)**	(+)**	(+)*	(+)**	(+)**	(+)	(-)
Age Square	(-)**	(-)	(-)	(-)*	(-)**	(-)	(-)	(-)**	(-)	(+)*
Productive Age	(+)**	(-)	(+)*	(-)	(+)	(+)	(+)	(+)**	(+)	(+)**
Civil Servant	(+)	(-)	(+)	(+)	(+)	(+)*	(+)	(+)	(+)**	(+)
Ownership	(+)**	(+)**	(+)**	(+)**	(+)**	(+)**	(+)**	(+)**	(+)	(+)**
Bank Account										
Micro-enterprise Assistance	(+)	(+)	(+)	(+)**	(+)**	(+)**	(+)	(+)	Omitted	(-)
Total of Household	(-)**	(-)**	(-)**	(-)**	(-)**	(-)**	(-)**	(-)**	(-)**	(-)**
Years of Education	(+)**	(+)**	(+)**	(+)**	(+)**	(+)**	(+)**	(+)**	(+)**	(+)**
Business Field (Agriculture)	(-)**	(-)**	(-)**	(-)**	(-)**	(-)**	(-)**	(-)**	(-)**	(+)

Note: Significant level $p > |t|$: ***<1% (0.01); **<5% (0.05); *<10% (0.10).

Code of district : (1) Bengkulu Selatan; (2) Rejang Lebong; (3) Bengkulu Utara; (4) Kaur; (5) Seluma; (6) Muko-muko; (7) Lebong; (8) Kepahiang; (9) Bengkulu Tengah; (10) Kota Bengkulu

Sources: data SUSENAS is processed by author, 2023

Apart from that, empowering household business actors through providing people's business credit programs can also reduce poverty. This is because the KUR program stimulates an increase in sales turnover and business income. Therefore, one way to achieve sustainable economic development is through policies from policymakers that focus on improving the real sector of the economy such as Micro, Small, and Medium Enterprises. The results of this study are in line with studies from Crépon et al. (2015); Hossain (2012); Loubere (2018); Loubere & Shen (2018); Adju et al. (2023); Nopiah & Islami (2018); Thanh et al. (2019); Ulfa & Mulyadi (2020); and Weber & Ahmad (2014). However, several studies also show the opposite results, namely that microcredit is not always profitable, does not reduce household poverty levels significantly (van Rooyen et al., 2012; Ali et al., 2017), and does not affect increasing household income and assets (Ali et al., 2017; Thanh et al., 2019). In addition, microcredit programs can alleviate poverty and contribute to the rural economy but also have unintended consequences such as negative impacts on children's education (Bhuiya et al., 2019).

4. CONCLUSIONS

This study found that the People's Business Credit program has an impact on welfare through increasing per capita household expenditure as a proxy for the welfare of households that receive the program even though the KUR program is not said to have a large impact. Apart from that, the impact of people's business credit on household expenditure in rural areas is not significant. Therefore, rural households need to receive support in the form of training in entrepreneurship,

business, how to run production optimally with minimal risk, and promotion/marketing training so that households who receive the KUR program can more effectively improve their welfare. The KUR program can improve household living standards by increasing household expenditure, where the higher the household consumption, the more prosperous it can be. This study also found that age, number of household members, education level, savings account ownership, marital status, and employment status in the agricultural sector influence households to participate in receiving the People's Business Credit program. The People's Business Credit program helps increase household business actors. To maximize the effectiveness and efficiency of the program, pro-poor policies are needed between financial institutions and households, especially poor rural households, in the form of easy loan granting procedures and other related institutions for providing training and business assistance.

ACKNOWLEDGMENTS

The researcher would like to thank the Central Statistics Agency (BPS) of Bengkulu Province which has collaborated and contributed to helping provide microdata from the publication of the 2022 National Socio-Economic Survey (SUSENAS) data in Bengkulu Province at the individual and household level so that this study could be completed well.

REFERENCES

- Abera, W. H. (2019). Micro-Credits Work As An Effective Anti-Poverty Program For Poverty Eradication? Evidence From Ethiopia. *Socio Economic Challenges*, 3(2), 31–53. [https://doi.org/10.21272/sec.3\(2\).31-53.2019](https://doi.org/10.21272/sec.3(2).31-53.2019)
- Ahlin, C., & Jiang, N. (2008). Can Micro-Credit Bring Development? *Journal of Development Economics*, 86(1), 1–21. <https://doi.org/10.1016/j.jdevec.2007.08.002>
- Akotey, J. O., & Adjasi, C. K. D. (2016). Does Microcredit Increase Household Welfare in the Absence of Microinsurance? *World Development*, 77(2012), 380–394. <https://doi.org/10.1016/j.worlddev.2015.09.005>
- Aktaruzzaman, K., & Farooq, O. (2017). Does Microcredit Increase Borrowers' Savings? A Fuzzy Regression Discontinuity Design Approach. *International Review of Applied Economics*, 31(4), 495–507. <https://doi.org/10.1080/02692171.2016.1263607>
- Ali, I., Hatta, Z. A., Azman, A., & Islam, S. (2017). Microfinance as a Development and Poverty Alleviation Tool in Rural Bangladesh: A Critical Assessment. *Asian Social Work and Policy Review*, 11(1), 4–15. <https://doi.org/10.1111/aswp.12106>
- Amanor, K., Oteng-Abayie, E. F., Osei-Fosu, A. K., & Frimpong, P. B. (2023). A Decomposition Analysis of Microcredit Welfare Gaps in Ghana. A gender analysis. *Social Sciences and Humanities Open*, 7(1), 100464. <https://doi.org/10.1016/j.ssaho.2023.100464>
- Bhuiya, M. M. M., Khanam, R., Rahman, M. M., & Nghiem, S. (2019). Microcredit Participation and Child Schooling in Rural Bangladesh: Evidence From a Cross-Sectional Survey. *Economic Analysis and Policy*, 64, 293–301. <https://doi.org/10.1016/j.eap.2019.09.005>
- Christopher F. B. (2006). *An Introduction to Modern Econometrics Using Stata*. Christopher F. Baum - Google Books.
- Crépon, B., Devoto, F., Duflo, E., & Parienté, W. (2015). Estimating the Impact of Microcredit on Those Who Take It Up: Evidence from a Randomized Experiment in Morocco. *American Economic Journal: Applied Economics*, 7(1), 123–150. <https://doi.org/10.1257/app.20130535>
- Dao, N. D. (2020). Does The Microcredit Intervention Change The Life of The Low- and Middle-Income Households in Rural Vietnam? Evidence from panel data. *World Development Perspectives*, 20(September), 100259. <https://doi.org/10.1016/j.wdp.2020.100259>
- Duong, P. B., & Thanh, P. T. (2014). Impact Evaluation of Microcredit on Welfare of The Vietnamese Rural Households. *Asian Social Science*, 11(2), 190–201. <https://doi.org/10.5539/ass.v11n2p190>
- Félix, E. G. S., & Belo, T. F. (2019). The Impact of Microcredit on Poverty Reduction in Eleven Developing Countries in South-East Asia. *Journal of Multinational Financial Management*, 52–

- 53(December), 100590. <https://doi.org/10.1016/j.mulfin.2019.07.003>
- Garcia, A., Lensink, R., & Voors, M. (2020). Does Microcredit Increase Aspirational Hope? Evidence From a Group Lending Scheme in Sierra Leone. *World Development*, 128, 104861. <https://doi.org/10.1016/j.worlddev.2019.104861>
- Garrido, M. M., Kelley, A. S., Paris, J., Roza, K., Meier, D. E., Morrison, R. S., & Aldridge, M. D. (2014). Methods for Constructing and Assessing Propensity Scores. *Health Services Research*, 49(5), 1701–1720. <https://doi.org/10.1111/1475-6773.12182>
- Hossain, M. K. (2012). Measuring the Impact of BRAC Microfinance Operations: A Case Study of a Village. *International Business Research*, 5(4), 112–123. <https://doi.org/10.5539/ibr.v5n4p112>
- Hsu, Y. C. (2014). Efficiency in Government Health Spending: A Super Slacks-Based Model. *Quality and Quantity*, 48(1), 111–126. <https://doi.org/10.1007/s11135-012-9753-9>
- Jeffrey M. W. (2013). *Introductory Econometrics: a Modern Approach*. 5th. In South-Western Cengage learning.
- Loubere, N. (2018). Indebted to Development: Microcredit as (de)Marginalisation in Rural China. *Journal of Peasant Studies*, 45(3), 585–609. <https://doi.org/10.1080/03066150.2016.1236025>
- Loubere, N., & Shen, Q. (2018). The Policy and Practice of Microcredit in Rural China: Toward a Relational Understanding of Heterogeneous Implementation. *Modern China*, 44(4), 418–452. <https://doi.org/10.1177/0097700417753734>
- Luan, D. X., Bauer, S., & Anh, N. T. L. (2015). Poverty Targeting and Income Impact of Subsidised Credit on Accessed Households in The Northern Mountainous Region of Vietnam. *Journal of Agriculture and Rural Development in the Tropics and Subtropics*, 116(2), 107–121.
- Montgomery, H., & Weiss, J. (2011). Can Commercially-Oriented Microfinance Help Meet the Millennium Development Goals? Evidence from Pakistan. *World Development*, 39(1), 87–109. <https://doi.org/10.1016/j.worlddev.2010.09.001>
- Adju, N. Y., Blongkod, H., & Panigoro, N. (2023). Pengaruh Pemberian Kredit Usaha Rakyat Terhadap Pendapatan Usaha Mikro Kecil dan Menengah. *Jurnal Ekonomi*, 28(1), 119–135. <https://doi.org/10.24912/je.v28i1.1402>
- Nopiah, R., & Islami, P. A. (2018). Dampak Sosial-Ekonomi Koperasi Difabel dan Perwujudan Microfinance Access. *Inklusi*, 5(2), 217-238. <https://doi.org/10.14421/ijds.050204>
- Ouertani, M. N., Naifar, N., & Ben Haddad, H. (2018). Assessing government spending efficiency and explaining inefficiency scores: DEA-bootstrap analysis in the case of Saudi Arabia. *Cogent Economics and Finance*, 6(1), 1–16. <https://doi.org/10.1080/23322039.2018.1493666>
- Putra, G. W., & Pujiyanto, P. (2020). Evaluasi Dampak Program Keluarga Harapan Terhadap Pemanfaatan Fasilitas Pelayanan Kesehatan untuk Layanan Persalinan di Indonesia (Analisis Data SUSENAS tahun 2018). *Jurnal Ekonomi Kesehatan Indonesia*, 5(1). <https://doi.org/10.7454/eki.v5i1.3898>
- Sarker, D. (2013). Microfinance for Disabled People. *Research Journal of Finance and Accounting*, 4(9), 118–125. <https://doi.org/10.7176/rjfa/4-9-118>
- Tahmasebi, A., & Askaribezayeh, F. (2021). Microfinance and Social Capital Formation- a Social Network Analysis Approach. *Socio-Economic Planning Sciences*, 76, 100978. <https://doi.org/10.1016/j.seps.2020.100978>
- Thanh, P. T., Saito, K., & Duong, P. B. (2019). Impact of Microcredit on Rural Household Welfare and Economic Growth in Vietnam. *Journal of Policy Modeling*, 41(1), 120–139. <https://doi.org/10.1016/j.jpolmod.2019.02.007>
- Thu, V. H., & Goto, D. (2020). Does Microfinance Improve the Household Welfare of Ethnic Minorities? Evidence from Bac Kan Province, Vietnam. *Progress in Development Studies*, 20(1), 65–83. <https://doi.org/10.1177/1464993419886230>
- Ulfa, M., & Mulyadi, M. (2020). Analisis Dampak Kredit Usaha Rakyat pada Sektor Usaha Mikro terhadap Penanggulangan Kemiskinan di Kota Makassar. *Aspirasi: Jurnal Masalah-Masalah Sosial*, 11(1), 17–28. <https://doi.org/10.46807/aspirasi.v11i1.1294>
- Van Rooyen, C., Stewart, R., & de Wet, T. (2012). The Impact of Microfinance in Sub-Saharan Africa: A Systematic Review of the Evidence. *World Development*, 40(11), 2249–2262. <https://doi.org/10.1016/j.worlddev.2012.03.012>

- Weber, O., & Ahmad, A. (2014). Empowerment through Microfinance: The Relation Between Loan Cycle and Level of Empowerment. *World Development*, 62, 75–87. <https://doi.org/10.1016/j.worlddev.2014.05.012>
- Yergin, H., Mercan, M., & Erol, A. (2015). Assessment of Efficiency and Effectiveness of Micro Credit Application From Socio-Economic and Political Perspectives: The Case of Hakkari. *Procedia Economics and Finance*, 23(October 2014), 176–179. [https://doi.org/10.1016/s2212-5671\(15\)00405-0](https://doi.org/10.1016/s2212-5671(15)00405-0)

THIS PAGE INTENTIONALLY LEFT BLANK