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An Impact Estimator Using Propensity Score Matching: People's Business Credit Program to Micro Entrepreneurs in Indonesia

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Abstract

People's business credit program (KUR) has been launched to alleviate poverty through provision of micro financing to micro entrepreneurs in Indonesia This study aims to estimate the impact of KUR program using cross-sectional data and propensity score matching technique (PSM). The survey was conducted on 332 household entrepreneurs, consisting of 155 KUR receivers and 177 non-KUR receivers. Results show that KUR has impacts on increasing profits, total revenues, number of employees, and asset ownerships. KUR program also has impacted on reduction of food spending share. As such, KUR can play an important role to alleviate poverty and unemployment.

Keywords: Micro financing, Households, Poverty, Cross-sectional, Propensity Score Matching.
JEL Classification: F61, H31, I32, C21.

1. Introduction

Microfinance has led to the development of some innovative business and management strategies, however, its effect on reducing poverty is still doubted (Chowdhury, 2009). Meanwhile Banerjee, Duflo, Glennerster, and Kinnan (2015) found that the effect of microfinance has been heterogeneous. Nevertheless, microfinance has had no impact on health, education and empowering women as decision

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makers. In Indonesia, there had been much business credit disbursed based on project or program approach and with top-down approach. These approaches have not reflected the aspirations of the lower class, thus they have not met the people's needs. The current credit schemes are becoming unsustainable due to failures in making any impact and also in term of repayment. Such credits are usually just sectoral-based.

Learning from past experiences, the Indonesian government has launched a micro-financing program known as the people's business credit (*Kredit Usaha Rakyat*/KUR), which is intended for micro entrepreneur households. The amount of realized KUR disbursement is a potential factor to increase economic activityy and productivity that would raise earnings and reduce poverty. KUR claims to have positive impacts on micro entrepreneurs as more of it has been disbursed every year. Most preliminary evaluations of microfinance were positive (Goldberg, 2005), but with no evidence of having impact on poverty and earnings (Bateman, 2011).

Considering the above, this study aims to see how far the KUR disbursement impacts the performance of micro entrepreneur households. This research relies on the micro-level data or household-basis data, as was done by Arun, Imai, & Sinha (2006) and Khandker (2003).

Micro entrepreneurs are the dominating sector in Indonesia with over 50 million entitles. The most common issue is regarding capital. In Indonesia, it has been stated that the main problems encountered by micro and small businesses are the lack of access to working capital and difficulties in marketing (Tambunan, 2007).

This paper begins with an overview of KUR and continues with a discussion on micro entrepreneurs' impact, using propensity score matching.

2. Overview of the People's Business Credit Program (KUR) in Indonesia

The people's business credit (KUR) has been launched since 2007. KUR aims to provide credit for micro entrepreneurs that are viable but not yet bankable for working capital and investment. The maximum approved loan is up to IDR 20 million, and maximum interest rate is up to 22% per year. The payment period is 3 years for working capital and 5 years for investment. All funds are provided by the executing banks which are

Bank Nasional Indonesia (BNI), Bank Rakyat Indonesia (BRI), Bank Mandiri, Bank Tabungan Negara (BTN), Bank Bukopin, Bank Syariah Mandiri (BSM), BNI Syariah and 26 regional development banks (Bank Pembangunan Daerah/ BPD). The government's role is to provide a guarantee of 70-80 % on the disbursed funds. The guarantee is insured by the following insurance companies; PT Jamkrindo, PT Askrindo, PT Jamkrida Jatim, and PT Bali Mandara Jamkrida.

From the total disbursed KUR, BRI is the only KUR executing bank that prioritizes on micro entrepreneur households, which reaches 59.75 % of its total disbursement, and its total customers served has reached 11.3 million or 93.25 % of the total customers in Indonesia. The average credit is IDR 8.4 million per debtor. Compared to other KUR executing banks, BRI has the lowest NPL rate of 1.8 %. Thus, micro KUR disursement is dominated by BRI because it is a state bank with the largest network throughout Indonesia. Of the total KUR disbursement in Indonesia, the largest geographical spread can be ranked as follows: Central Java (16.1 %), East Java (15.22 %), West Java (12.97 %), South Sulawesi (5.38 %), North Sumatra (4.9 %) and the rest are spread throughout the other 28 provinces in Indonesia.

KUR program so far has been disbursed in an increasing rate and its non-performance loan (NPL) have been below the advised limit. Table 1 below shows the development of KUR and also the non-performance loan rate.

Table 1: KUR Disbursement and NPL Rate, 2014

Month	KUR disbursement (Rp trillion)	NPL (%)
January	127.46	3.1
February	130.16	3.5
March	133.18	3.3
April	136.09	3.4
May	139.64	3.7
June	143.27	3.7
July	146.32	3.7
August	149.36	3.9
September	152.71	3.6
October	155.85	3.4
November	159.17	3.2
December	162.46	3.1

Resource: KUR-Committee

3. Literature Review

Micro entrepreneurs mostly rely on informal lending such as money lenders with very high interest rate. Thus, the profit margins of micro entrepreneurs become even smaller so that it is hard to improve their welfare. Banks formal financing is hard to be obtained, because these micro entrepreneurs are considered highly prone to failures and they have no guarantee. However, with KUR, the interest rate is much lower and the prerequisites are much easier, thus the program is expected to reach a wider scope and be able to improve the earnings of micro entrepreneurs. The more profitable micro entrepreneurs become the more likely for them to invest and reduce unemployment. A micro entrepreneur in this case is defined as a household business with less than 5 employees and a sales turnover of less than IDR 300 million per year. This research comprises micro entrepreneurs in various sectors such as manufacturing, service, retail, agriculture, farming, and fisheries.

There have been many studies done on the impact of microcredit, for instance Wadud (2013) looked into the impact of microcredit on the productivity of agricultural farm in Bangladesh. The earnings of the farmers who received micro credit showed positive effects. The average earnings of farmers who received micro credit were 9.46 % higher than those who did not receive. In Pakistan, Noreen, Imran, Zaheer, & Saif (2011) examined on the impact of microfinance in reducing poverty by measuring the levels of child education, housing, food resilience, household spending and household assets. Micro-financing also gave positive impact and increased household earnings and spending of the borrowers, as was proven by Akram & Hussain (2011) in Pakistan and Hossain (2012) in Bangladesh. Another reasearch in Pakistan, by (Shirazi & Khan, 2009), looked into the positive impact of microcredit that has alleviated poverty by 3.05 percent during the research period and saw that the borrowers tend to move into a higher income group. Household credit has had positive and significant impact on the Vietnamese household economy, as seen by the increasing consumption rate per capita on food and non-food (Quach, Mullineux, & Murinde, 2005).

Bao Duong & Tien Thanh (2014) researched the impact of micro credit on the welfare of households in rural Vietnam. The results

showed that microcredit increased the living standards from the aspects of earnings and consumption. For the poor, however, there has been no evidence that shows any impact on earnings, unless on consumption.

Women are often neglected in micro financing and therefore are constrained. Awunyo-Vitor, Abankwah, & Kwansah (2012) observed that women who used microcredit in their businesses had higher revenues compared to those who did not. Micro-financing had a positive impact on poverty reduction efforts among women's business in South Nigeria (Ifelunini & Wosowei, 2012).

4. Methodology

Propensity Score Matching (PSM) has been applied on various fields in evaluating an impact, which is usually done on experimental researches. The usage of PSM to evaluate non-experiment program or observations in developing countries is relatively few (Ravallion, 2007) but recently there have been some, as was practiced by Awunyo-Vitor et al. (2012), Bao Duong & Tien Thanh (2014) and Ifelunini & Wosowei (2012) in examining the impact of microfinance. The evaluation of the impact of policies, in particular that of KUR's, using this PSM approach, has not been done in Indonesia.

The PSM method compares between the treatment variables (using KUR program) with the control variables (without using KUR program) by using observable characteristics in order to perform a better analysis on the results can be achieved. The PSM method was first introduced by Rosenbaum & Rubin (1983) and developed by Heckman, Ichimura, & Todd (1998).

The reason of using the propensity score to evaluate the impact is to lessen the selection bias, because observation researches always encounter a problem in drawing a conclusion due to the confounding potential. Because of this, it's not quite accurate if two conditions (treatment variables and control variables) are compared, and despite of adjustments through regression, there is always potential for bias. The propensity value is a probability value of the subject if not exposed, while the fact is that the subject is exposed (counter factual).

The study was conducted in provinces in Indonesia with the largest KUR disbursements and used the formula of Slovin, $n = N / (1 + N$

$(e)^2$). This obtained a number of samples amounting to 155 households as the treatment group, and also 177 households as the control group. Thus, the total respondents sum up 332 households. The primary data was obtained through questionnaires. The sampling technique for the treatment groups was done with purposive sampling. The number of samples for control groups, according to Caliendo & Kopeinig (2008), should be more than treatment group. In this technique, the sample was selected based on the judgment or convenient sampling.

The procedures or steps in PSM are *first* regarding the model to be used to estimate, and the variables to be inputed into the model. The model used for the matching process of the PSM score is probit regression with variables as summarized in Table 2 below. According to Caliendo & Kopeinig (2008), the result from the logistic regression is similar with that from the probit regression model. In this research, the probit model is also able to estimate the probability of reasons for accessing KUR. The model is as the followings:

$$P(Y_i = 1 \mid X_i) = \phi(\beta_0 + \beta_1 X_{i1 + \ldots +} \beta_p X_{ip}) = \int_{-\infty}^{(\beta 0 + \beta 1 Xi1 + \ldots + \beta p Xip} \Phi(Z) \qquad (1)$$

Table 2: Description of Variables in Probit Model

Variable Name	Variable Type	Description
$P(Y_i)$	Binary	Access to KUR (1= access KUR, 0= not)
Borrower characteristics;		
Gender (X1)	Binary	Gender of micro entrepreneur/ME (1 = man, 0 = otherwise)
Age (X2)	Continuos	Age of ME
Marital status (X3)	Binary	(1 = married, 0= otherwise)
Education (X4)	Continuos	1 = primary school 2 = yunior elementary, 3= senior elementary, 4= university/college
No. of dependant (X5)	Continuos	Number of children
Business line (X6)	Continuos	(1=retail, 2=service, 3 manufacturing, 4 otherwise)
Business length (X7)	Continuos	How many years business built (in years)
Distance to bank (X8)	Continuos	Business location to bank (in km)
No. of working hours (X9)	Continuos	How long working hours per week
Business barrier (X10)	Binary	Obstacles faced by ME (1= capital, 0 otherwise)
Bank account (X11)	Binary	Bank account owner (1= yes, 0 = otherwise)
Side job (X12)	Binary	1 = have a side job, 0 = otherwise
Spouse working (X13)	Binary	Does spouse have a job, 1 = yes, 0= otherwise
Other loan sources (X14)	Binary	Having other loan source?, 1 = yes, 0 only KUR

Second, is to choose a matching algorithm, with Nearest Neighbor Matching (NNM), or with caliper matching and Kernel matching (Heckman et al., 1998), or with stratification to calculate the Average Treatment Effect on the Treated (ATT). This research will only show the nearest neighbor matching. The NNM method chooses the closest score from the covariate of the control group. The NNM process is good for treatment group and control group that tend to be similar (Becker & Ichino, 2002).

Third, is to find the overlap and the common support between the treatment group and the control group. In this step, several observations have been discarded due to having too high or too low scores. Concurrently, the balancing test is done to check the averages of the PSM so that they are not too different between the two groups. Afterward, the difference between the outcome variables are derived, which reflects the impact of the treatment and is known as the Average Effect of Treatment for the Treated (ATT).

Fourth, is to assess the match quality. Rosenbaum & Rubin (1983) recommend the standardized bias (SB) and the t-test. If the X covariates are randomly distributed, then the pseudo-R^2 value should be fairly low.

To measure the impact using PSM approach, The ATT developed by Diro & Regasa (2014) is applied on the outcome variables, such as working capital, sales, profit, savings, side income, total revenue, food expenditure, employment, house conditions and asset ownership condition. To estimate the difference between treatment group and control group according to Rubin (1973) as the followings:

$$\Delta_i = Y_i^1 - Y_i^0 \qquad (2)$$

Δ_i is the impact of treatment on the individual i, i = 1,2, …,N.

Y_i^1 and Y_i^0 is the potential yield of the treatment group and control group. Equation (2) uses cross section data and should calculate the yield difference between before and after treatment each micro entrepreneurs. However, it is not feasible to calculate directly using sections cross data. Therefore, equation (2) is modified by estimating the average treatment effects on the treated, $\Delta_{TT,}$ as follows;

$$\Delta_{TT} = E(\Delta|D=1) = E(Y^1|D=1) - E(Y^0|D=1) \qquad (3)$$

Δ_{TT} measures the difference between the expected results in KUR participants with hypothecal result of micro entrepreneurs without KUR. Equation (3) is used to answer the question of counterfactual what if micro entrepreneurs who received KUR did not obtain KUR. This is a selection bias of the equation, because $E(Y^0|D=1)$ was not observed in this study. Suppose $E(Y^0|D=1) = E(Y^0|D=0)$ is used then micro entrepreneurs without KUR can be used as a comparison or control group. This observation bias scenario raises self-selection bias, thus the micro KUR receiver is not be enacted as a participant at the same time as the receiver and as non partisipants before receiving KUR. Rosenbaum & Rubin (1983) recommend propensity score matching (PSM) to address selection bias in this case because it can address the multi-dimensional problem, which arises from the matching procedure with many covariates including unobservable biases. This bias could be the difference between results of KUR entrepreneurs and businesses without KUR, which can be formulated as follows:

$$Bias = E(Y^1|D=1) - E(Y^0|D=0) \quad (4)$$

Equation (4) is able to capture the impact of treated participant, thus we discard the impact of non-treated participant as follows;

$$E(Y^0|D=0) - E(Y^0|D=1) \quad (5)$$

The following equation (6) defines the micro-entrepreneurs who do not receive KUR. As such, the bias is the difference between the impact on the treated participants (KUR receivers) and the difference between the impact on participants who did not receive treatment or non-treated participants.

$$\Delta_{TT} - [E(Y^0|D=0) - E(Y^0|D=1)] =$$
$$E(Y^1|D=1) - E(Y^0|D=1) - E(Y^0|D=0) + E(Y^0|D=1) \quad (6)$$
$$\Delta_{TT} - [E(Y^0|D=0) - E(Y^0|D=1)] = E(Y^1|D=1) - E(Y^0|D=0) \quad (7)$$

Ideally bias = 0 which implies the

$$E(Y^1|D=1) - E(Y^0|D=0) = 0 \Leftrightarrow E(Y^1|D=1) = E(Y^0|D=0) \quad (8)$$

Therefore Δ_{TT} can overcome self selection problem by using equation (8). PSM estimate by Rosenbaum is formulated as the followings;

$$P(D=1|X) = P(X) \quad (9)$$

Then this model uses logistic or probit as the followings;

$$P(D=1|X) = p(Y^*>0|X) = P(\mu>-X\beta|X) = 1 - G(-X\beta) = G(X\beta) \quad (10)$$

where $0< G(X\beta)<1$, for all values of covariates X, $X\beta = \sum_{j=1}^{k} \beta_j X_j$ and G is a standard cumulative normal function. Equation (7) is therefore a non-linear because estimation method using maximum likehood estimation. Therefore PSM estimation of Δ_{TT} free of selection bias, and the PSM estimation is formulated as the followngs;

$$\Delta_{TT}^{PSM} = E_{P(X)|D=1}\,[E(Y^1|D=1,P(X)) - E(Y^0|D=1,P(0))] \quad (11)$$

5. Results and Discussion

The variables in Table 3 below are those that affect the household to access KUR. These variables also function as covariates in determining the propensity score between the two groups. There are 14 variables that are used, among which affect significantly and comprise gender, type of business, length of business, business barrier, bank account ownership, and other loan alternatives (Farida et al., 2015).

Table 3: Probit Estimation for Propensity Score

Variables	Coeffisien	Z	P> | z |
Gender	0.514993	2.86	0.004***
Age	-0.0037549	-0.33	0.743
Marital status	0.3875013	1.14	0.255
Education	-0.1047917	-1.04	0.297
No of dependents	-0.0069678	-0.10	0.922
Business type	0.1600514	1.75	0.080*
Business length	-0.039715	-2.41	0.016**
Distance to bank	-0.0059691	-0.25	0.799
Working hours	-0.0011672	-0.34	0.737
Business barriers	0.4538475	2.59	0.010***
Bank account	0.662692	3.98	0.000***
Side job	-0.2532719	-1.33	0.184
Spousal working	0.1244723	0.71	0.477
Other loan source	-0.5099271	-3.51	0.000***
No of observations : 332			
LR chi^2 (14) : 105.70			
Prob>chi^2 : 0.0000			
Pseudo R^2 : 0.2304			
Log likehood : -176.54466			

***significant 1%, ** significant 5% dan * significant 10%

By using the nearest neighbor matching with no replacement, the closest propensity score value can only be used for one matching. The ATT value can be obtained as a distinct value in Table 4 and the ATT value after balancing test on Table 6.

Table 4: Impacts of KUR Using Propensity Score Matching

Variables	Sample	KUR	Without KUR	Difference	S.E	T-*test*
Working capital	Unmatched	3748193	2163429	1584764	512109	3.09
	ATT	2695432	2499530	195901	579418	0.34
Sales	Unmatched	4541145	2645480	1895664	553966	3.42
	ATT	3305277	3054567	250709	630880	0.40
Profit	Unmatched	792951	482050	310900	68745	4.52
	ATT	609845	555037	54808	79421	0.69
Savings	Unmatched	165000	97824	67175	21533	3.12
	ATT	130308	103827	26481	29150	0.91
Side job	Unmatched	56903	43022	13880	15755	0.88
	ATT	40185	40370	-185	14926	-0.01
Spouse	Unmatched	112548	128395	-15847	18947	-0.04
Income	ATT	13827	136666	2160	27737	0.08
Total	Unmatched	962403	653468	308934	66705	4.68
Income	ATT	788858	732074	56783	75738	0.75
Share on food	Unmatched	27,1628	38,1043	-10,9414	1,71	-6,40
Expenditure	ATT	29,3879	35,8391	-6,4511	2,41	-2.67
No of	Unmatched	0.980645	0.429378	0.55126	0.12385	4.45
Employees	ATT	0.728395	0.604938	0.12345	0.18399	0.67
House	Unmatched	5.12280	4.87056	0.2525	0.09255	0.79
Condition	ATT	4.97530	4.86419	0.1111	0.14024	2.94
Assets	Unmatched	2.12258	1.79096	0.33162	0.11263	2.94
Ownership	ATT	2.0246	2.06172	-0.03707	0.161322	-0.23

Unmatched = before matching, ATT = Average treatment on the treated

On Table 4, the impact of KUR on working capital before matching has a difference of IDR 1.58 million, however, after matching, the difference shown on the ATT is around IDR 195,901. From this result, working capital for micro entrepreneurs who received KUR experienced an increase. The table above, shows that KUR also gives impact on sales, profits, and savings but not significantly. For the impact on earnings from side jobs, before matching there was a difference of IDR 13,880, however, after matching, the impact of KUR on earnings of side jobs decreased to IDR 185. The total earnings increased due to KUR, however the share of spending on food decreased. The total absorption of work force and condition of residence increased, but the indicator of asset ownership experienced to decline. In the matching process of PSM, the amount of covariates that got paired in the matching or that got common

support (Table 5) are 258 units out of 177 for control group and 81 units for the treatment group. About 74 units of treatment group were discharged in the matching.

Table 5: Number of Covariates Used

Covariates	Not used	Used	Total
Non-KUR	0	177	177
KUR	74	81	155
Total	74	258	332

The average difference on the initial phase of Table 4 needs to be examined to see the bias of each variable used in the matching process, or balancing test between the two groups. Based on the balancing test, there is still a significant difference between the two groups, despite the matching.. The biases are still very high among all the variables, thus the high biases (especially if negative) are discarded from the matching process. Therefore, the variables to be used for propensity score matching analysis is gender, level of education, number of dependents, type of business, working hours and side jobs. Only by using six variables, the new ATT is shown on Table 6 below.

The covariates used for the nearest neighbor in the matching process amount to 276 units consisting of 99 participants and 177 non participants. There were 56 units disposed in the matching process.

Tabel 6: KUR's Impact after Balancing Test

Variables	Sample	KUR	Without KUR	Different	S.E	T-test
Working capital	Unmatched	3,748,193	2,163,429	1,584,764	512,109	3.09
	ATT	3,575,092	2,566,157	1,008,935	734,842	1.37
Sales	Unmatched	4,541,145	2,645,480	1,895,664	553,966	3,42
	ATT	4,315,532	3,127,037	1,188,495	788,171	1.51
Profit	Unmatched	792,951	482,050	310,900	68,745	4.52
	ATT	740,439	560,879	179,560	86,374	2.08**
Saving	Unmatched	165,000	97,824	67,175	21,533	3.12
	ATT	141,157	117,453	23,703	23,868	0.99
Side job	Unmatched	56,903	43,022	13,880	15,755	0.88
Income	ATT	61,990	34,027	27,962	21,937	1.27
Spouse	Unmatched	112,548	128,395	-15,847	18,946	-0.84
Income	ATT	129,074	128,287	787	23,868	0.03
Total	Unmatched	962,403	653,468	308,934	66,075	4.68
Income	ATT	931,504	723,194	208,310	82,434	2.53**

Variables	Sample	KUR	Without KUR	Different	S.E	T-test
Share on	Unmatched	27.16	38.10	- 10.941	1.710	-6.4
Food exp.	ATT	28.26	36.92	-8.671	2.046	-4.2***
No. of	Unmatched	0.98064	0.429378	0.55126	0.123	4.45
Workers	ATT	0.88888	0.509259	0.37962	0.158	2.4**
Housingi	Unmatched	5.12280	4.870056	0.25252	0.093	2.7
Condition	ATT	5.0	4.861111	0.13888	0.1237	1.12
Assets	Unmatched	2.12258	1.790960	0.33162	0.1126	2.94
Ownership	ATT	2.15740	1.907407	0.25	0.1421	1.76*

***significant 1%, ** significant 5% dan * significant 10%

Unmatch = before matching, ATT = Average treatment on the treated

The results of Table 6 show the impact of KUR with 1% significance level is on the share of food expenditure. KUR also have impacts on profits, total revenues, and number of workers a significant value of 5%. Meanwhile, KUR's impact with a significant level of 10 percent is on asset ownership.

Profit. The profit difference after matching was IDR 179, 560, where the profit of treatment group was IDR 740,439 and the control group's was IDR 560,879; which means that KUR had an impact on improving the profit of micro entrepreneurs by 32% compared to those without it.

Total Income. KUR had an impact on increasing the revenues of micro entrepreneurs that received KUR by IDR 208,310; where the total income of micro entrepreneurs with KUR was IDR 931,504 while the total income of micro entrepreneurs without KUR was IDR 723,194;, or in other words, the income of treatment group went up by 28.8% compared to control group. This study is in line with that done by Diro & Regasa (2014) and Hossain (2012). Diro & Regasa found that the participants of microcredit in Ethiopia had a significant increase on revenues by 1%. Hossain also discovered that the income of borrowers improved after joining BRAC in Bangladesh.

The Share of Food Expenditures. The impact of KUR on the share of food expenditure in this study showed a negative impact with 1% significance. The share of food expenditures for the control group was 36.92% of the total income. As income improved, the share of food expenditures for the treatment group was only 28.26% or smaller by 8.67 percent compared to the control group. The result is in-line with the Engel law that stated that the more a person earns then the

share of expenditure on food would decrease. The micro entrepreneur households do not belong to the social group below the poverty line, therefore their spending on food is far above; on average of 2-3 meals a day with an average expenditure of IDR 136,000 to 218,000 per week. Thus, the more their income improved, their spending on food would not increase significantly any more.

This finding contradicts with previous research that shows positive impact of microcredit on increasing the food expenditures (Berhane & Gardebroek, 2012; Diro & Regasa, 2014; Gobezie & Garber, 2007; Hossain, 2012). The objects of their research were the poor social strata whose needs were not fulfilled yet, thus when incomes improved, then their food expenditures increased significantly along with the fulfillment of basic needs.

The difference of research results was perhaps also due to the different way of thinking between entrepreneurs households and non-entepreneurs households that were the research objects. Entrepreneurs would reduce on spending to have savings so that it can pay off its loans or to improve its capital turnover in order to gain more income. A household without a business would tend to be more consumptive.

Another KUR impact indicator with a significant level of 5 % is the amount of workers by KUR receivers, which increased by 0.37 workers. This is consistent with the research of (Diro & Regasa, 2014), which stated that microcredit is able to absorb the work force. The ability of entrepreneur households to absorb more work force indicate that the role of KUR able to reduce poverty through reducing unemployment.

Asset Ownership also had a significant level of 10%, which means that KUR had an impact on asset improvement. Treatment group had an increase on asset by 0.25 units compared to control group. Asset ownership in this case is the proxy of owning a new vehicle, cell phone and cattles. On the other hand, the study of Noreen et al., (2011) stated that micro-credit did not have significant impact on asset ownership.

The research shows that KUR does not give a significant impact, but it has a positive tendency in improving working capital, sales, savings, and domicile condition of micro entrepreneurs.

6. Conclusion

KUR gives positive impacts and increases profits, total income, number of employment and asset ownership. KUR also has an impact to lessen the share of spending on food.

A good policy or program should be sustainable and should achieve its target. A policy is considered successful if its program could have positive impacts on all parties (both executing banks and KUR recipients).

Banks as the executing of KUR need to be efficient, low non performance loan and gain profits. Disbursed KUR have NPL on average of 3 percent. Meanwhile micro entrepreneurs are able to increase profits so that their economy and asset ownership can also improve.

In relation to its goal to reduce poverty, thus through the absorbed work force by the empowerment of micro entrepreneurs, this goal is achieved and government must continue the program.

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