

Intermediary Function of Rural Financial Institutions In Supporting
Agricultural Finance In West Java

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Abstract

Nowadays there are various rural financial institutions (RFI), but unfortunately farmers and agribusiness SMEs still face lack of capital. In general, risk averse attitudes among RFIs upon agricultural and rural sectors were still dominant, so intermediary function of RFI was not running

well. The research was conducted in West Java both at macro and micro level using panel regression analysis and the Structural Equation Model (SEM) respectively. The results at the macro level show that RFI intermediation function was affected by TPF, NPL and the SBI. Amount of credit disburse reduce poverty level, so that poverty in West Java was difficult to be reduced as long as intermediary role of RFI was not well functioned. On the micro level the intermediary function reflected on the quality of service which turns a positive effect on business performance and sustainability of farmers and agribusiness SMEs.

Keywords: intermediary function, sustainability, poverty.

Introduction

Importance of credit agriculture development in Indonesia is related to farmers' typology which is largely small farmers with a narrow land ownership, so that it is impossible to invest capital for new technologies. Whereas as cited from De Sotro (2000) : "investment is the engine for economic growth. Access to financial services can provide access to the production means required to increase agricultural productivity and scale that lead to higher incomes". Narrow ownership and rigid financing for farmers and small-medium enterprises caused agricultural society can not access formal financing sources easily, so this sector tend to be overlooked. This condition can be seen from the data that only 2-3% credit was spent for agricultural sector, as well as if it is segmented to small and medium enterprises, the percentage is only around 3 percent.

Actually in the urban area there are development of non formal institutional forms (Uphoff, 1986; Hastuti & White, 1979) like output traders, input traders, social gathering and so on but potential of formal financing institution should be optimized because this

institution has duties and obligations which charged by government as agent of trust and agent of development. Agent of trust is the intermediary institution which served all of needs from and for society. Agent of development means that the institution stand to lead advance through credit facilities, payment and withdrawal simplicity in transaction which conducted by economic actors. Hence, it is interesting to observe : (1) How financial institutions carry on their intermediation function and what are the factors influencing it (2) how credit as intermediated object affects poverty (3) How customers' appraisal to service quality of Rural Financial Institution as intermediation function proxy and its effect to business performance and sustainability of farmers' business and small-medium enterprises agribusiness.

State of The art

Economic activity in rural areas is still dominated by micro-enterprises and small scale with the main actors of the farmers, farm laborers, traders and agricultural inputs, agricultural processors, artisans, workers and retailers. This sector has great potential and is too valuable to be ignored (Burhanuddin Abdullah, 2006), but still contested with the classic problem of the lack of capital. De Soto (2000) stated that investment is the engine for economic growth. Access to financial services can provide access to the production means required to increase of agricultural productivity and scale that lead to higher incomes.

Limited capital to support increase production and living standards of the rural population can limit the movement of the agricultural sector and rural activities. In the long run, capital scarcity can be an entry point for the chain cycle of poverty in rural

communities that are difficult to break. Microfinance Institutions (MFIs) has an opportunity to take an active role as an institution of "alternative" in the provision of venture capital for low-income groups and poor families who are not served by commercial financial institutions (banks) because these institutions are demanding guarantees and preconditions that cannot be met by group of small and micro enterprises.

The presence of rural financial institutions (RFI) is required as one of the instruments in order to address poverty and the development of rural financial markets. SMEs and farmers do not only take credit, but also have the potential to save money, and / or can empower their ability to save. Thus, there is great potential in the rural financial market in terms of offers of funds (savings) and demand of funds (credit). There is a link between poverty and the existence of financial institutions as institutions perform the intermediation function.

Loans are considered capable of deciding "vicious cycle" of poverty in rural areas, as evidenced by the experience of Grameen Bank in Bangladesh, which is currently expanding its business without leaving their owners (the poor). This form is referred as Social Business. Increased access to financial institutions as well as be used as efforts to introduce market economy (money) later referred as monetization. The basic question is how financial institutions can develop SMEs and improve rural economic development.

Methodology

Object that being observed here is the formal financial institution because this institution has function as an agent of development. This research is executed in West Java on the reason that farmers' average share of agricultural loans to total loan in 3 last years in

this area is about 3.8% (Indonesian Bank, 2009), whereas West Java is one of the major rice production centers national harvest area (1.950.203 ha with total production of 11.322.681 tons (BPS, 2009). Moreover the residents who are working in agricultural sector have highest proportion of 40% from overall economic sector (Indonesian Bank, 2010). However, West Java as the closest province to nation's capital has a total of 4.983.570 poor people (11,96%) in March 2009 and those who are living in rural areas reached 49,21%.

Furthermore, for the benefit of the micro approach, location determination of the research was done by using multistage cluster sampling method, which consists of clusters based on similarity criteria (Nan Lin, 1976). Selected Indramayu district consists of sub-districts Haur Geulis and Loh Bener; Garut District consist of subdistricts Cisurupan and Cikajang.

Analytical techniques used for macro approach using panel regression with bank performance variables, namely LDR, TPF, NPL, SBI (t-1) during the period 2004-2009 per tri quarter banks data; credit for the impact on poverty use district cross section data from 2004-2009. For micro approach, analysis of SEM (Structural Equation Modelling) is used with sample of 225 people.

Findings and Interpretation

4.1 Performance of Bank in West Java in Undertaking Intermediation Function

Based on West Java GDP in 2010, the highest contribution is coming from industrial and processing activities (26%), trade, hotels and restaurants (17%), while agriculture was at the third rank. It means that agriculture still has significance for West Java economy

(West Java BPS, 2010). Nevertheless, when this condition associated with employment which still holds a large share (40%), it indicates that agricultural labor productivity is still low. Low productivity is due to the low education level and skill technology adaptation, which in turn is related to the ability to raise the capital.

According to Agrawal (2001), a country's economic growth will be largely determined by developments in financial sector. This is because the financial sector plays an important role in undertaking its intermediary function between the parties in order to bridge the funds excess to those who need it. Intermediation function of the world banking is shown from LDR (Loan to Deposit Ratio), which its mechanism is influenced by the other performance named deposits, NPL, SBI. The analysis result can be seen in Table 1.

Table 1. Regression Model Estimation Results to Factors Affecting Intermediation Function

Variable	Estimation	t-statistic	Prob	Remarks
C	124,41	7,546991	0.0000	Significant at $\alpha = 5\%$
TPF	$-8,52 \times 10^{-7}$	-3,897151	0.0002	Significant at $\alpha = 5\%$
NPL	-1,94	-3.274911	0.0015	Significant at $\alpha = 5\%$
SBI	-0,48	-1,631082	0.1066	Significant at $\alpha = 10\%$
AR (1)	0,95	39,23363	0.0000	
Fixed Effects (Cross)				
~A-C	47,37	Additional constants for state-owned Bank Group		
_B-C	18,52	Additional constants for the National Private Bank Group		
_C-C	-54,24	Additional constants for Foreign Private Bank Group + Mix		
_D-C	-11,65	Additional constants for BPR Bank Group		
R ²	0,91			
F-statistic 1256,23 Durbin-Watson stat 2,14				
Prob (F-statistic) 0000				

Description :

TPF = Third Party Funds

NPL = Non-performing loans

SBI = Bank Indonesia Certificates

Variable number of Third Party Funds, non-performing loans, and the interest rate of Bank Indonesia can simultaneously explain the effect on the lending level, seen from the value R² which is equal to 0.91 or 91%, while the remaining 9% is explained by other

factors which is not examined in this study, such as the interest rate of each bank, the amount of bank capital and bank profitability. For the influence of each Third Party Funding variable, non performing loan and interest rate of BI to credit distribution, we execute partial t-test or can be seen from its probability. The result shows that each three variable has significant influence.

Constants at 124,41 percent demonstrated average lending if number of third party funds, non performing loans, and the Bank Indonesia interest rate equals to zero. Empirically this condition can occur at any bank in the early stages of establishment in order to attract customers when TPF was zero so it depends on the capital itself. Value of NPL gives an indication of management reputation, and also risk management condition of financial institution.

Partial statistic test for SBI by 0,48 percent on 10 percent error rate was decided to reject H_0 and H_a accepted. It means that when SBI increased by 1 percent, then the LDR decreased 0,48 percent. Nevertheless, the actual transmission mechanism of monetary policy in the form of SBI takes time (time lag). If banks see the risk of the economy is high, the response of banks to decrease BI rate is usually slow. Also if the banks are consolidating to improve capital, lower interest rates on loans and credit demand has not necessarily responded by raising lending immediately.

Regression equation in the model is autoregressive AR (1) by 0,95 percent. Means that the previous LDR affects current LDR by 0,95 percent. Furthermore, analysis of the effect of bank grouping can be executed by differentiation of its function model constants regression. In this research, banks were given the notation from A to D. The model equation interprets there was an effect of ownership i.e state-owned bank (SOE)

willingness level to lend is highest, followed by national private bank, bank of BPR and foreign private banks and joint venture. Thus, it is necessary for BI to give a boost to group of banks in extending their credits. For BPR, although their additional constant value is negative, but it is still greater than 100 percent of its accumulation, presumably because the capital is still low, so their lending capacity is also low. In West Java, when this research was executed, the consolidating process of BPR is still running. This process included management restructuring and entry of BJB as principal owner of local government BPR (51%).

Different constant value also shows that ownership affects the performance of the bank, including the LDR. There is a slight difference with BI research result for 131 banks in Indonesia range, which indicates that performance of the bank has only little connection with the ownership structure and more influenced by management (Hadad M., et.al, 2003). Berth, Caprio Jr. and Levine (2001) in their research result said that in 60 countries concluded that the ownership of bank has absolutely no connection with the performance of the bank. Therefore, the key to success of the bank in making management compliance to owners begin from the management choosing. The results analysis Effect of credit distributed on poverty loans is described in Table 2.

Table 2. Regression Model Estimation Results Factors Affecting Poverty (in lon)

Variables	coefficient	t-statistic	probability	Information
C	15,11	14,62206	0.0000	Significant at $\alpha = 5\%$
Credit	-0,22	-4,542087	0.0000	Significant at $\alpha = 5\%$
JLK	-0,015	-0,415414	0.6788	0,6788 not significant
GDP	-0,013	0,148717	0,8821	0,8821 not significant
AR (1)	0,526	9,732046	0,0000	Significant at $\alpha = 5\%$
R-squared	0,99			
Prob (F-statistic)	0,0000	DW	2,13	
F-statistic	374,78			

Value of R^2 is equal to 0.99 or 99%, means that the credit, number of financial institution, and the GDP per capita can simultaneously explain the impact on lending at 99% while the remaining 1% is explained by other factors which are not examined in this study. Simultaneous hypothesis testing shows that the amount of credit, number of financial institutions, GDP per capita has influence on poverty. Furthermore, to determine the effect of each variable on the dependent variable, the t-test was used. The results obtained show that only amount of credit affect poverty levels significantly in error rate of 5%. The number of financial institution and GDP per capita particularly apparently has no effect on poverty.

Panel regression equation in table 2 can be interpreted as follows : constants 15,15 shows the average of poor is 15,15% of overall population if outstanding loans, the number of offices of rural financial institution and GDP per capita equals to zero. This results consistent with the fact that poverty in West Java in 2010 amounted to 12,74% of the highest and lowest in Bogor regency and Kotif Banjar respectively. This is also supported with the evidence from regression analysis results which show the highest constants extra turns per district is in Bogor regency by 1,47% and the lowest is in Kotif Banjar (-2,81%). The test result of AR (1) influence against the poverty rate 52,3% partially positively affected by previous poverty significantly.

The results of the panel regression analysis shows that the credit affect poverty rate, thus in line with the new paradigm of monetary theory which said credit availability (quantity of credit), not quantity of money that affect economic activity)Stiglitz and Greenwald, 2003). Therefore, bank is important in determining behavior of the overall economy (institutional economics) an an institution which has intermediary function

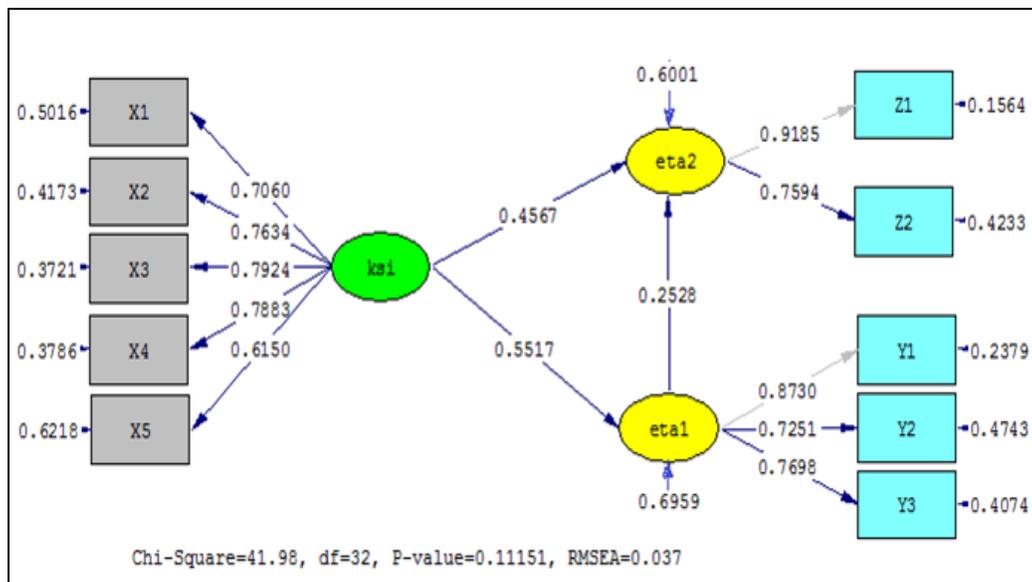
between the party with surplus funds and the party with deficit of funds. Related to credit role in reduce poverty, there is requirement to carefully monitoring the process to avoid misuse (fungibility). In addition, the effect of credit in the transmission process takes time and the presence of credit will attract economic activity which will increase the demand for labor. Thus it will increase also the purchasing power that could support families out of the poverty. The phenomenon in which credit investment show the long term effect also occurred in South Africa and in several other countries (ADB, 2001; Allen and Ndikumana, 1998).

Insignificancy effect of GDP indicates that high GDP does not guarantee equal distribution of income because this GDP is an average calculation. Thus, it also does not affect poverty. Number of financial institution which do not provide significance indicates that people still do not have access to banking services despite the number of banks has increased. One research executed by Pie Guo in China (2009) even states that financial institution in China seems has robbed the poor to lend money to rich people in urban area, until finally there is a policy reformation which shows a better results : the emergence of competitive service from financial institution to rural population. Therefore, the phenomenon of financial institution invasion to rural area needs to be addressed properly and wisely, with proportional control accompanied by Bank Indonesia.

4.2 Analysis of Effect of Financial Institution Intermediation Function on Business Performance and Customer Business Sustainability

In micro level, influence of intermediation function was proxied by customers' assessment to those financial institutions service quality. Assumption testing shows that

the data of intermediation function, performances and sustainability variable are valid and reliable. Multivariate normality test data shows abnormal p-value ($<0,05$). Consequently the estimation method suitable for testing the effect of intermediation on sustainability through business performance variable as intermediate variable is robust maximum likelihood method. Model compatibility testing (goodness of fit) depicts that the model is acceptable, means that the model obtained can be used to examine research hypothesis that has been set. The results of analysis is shown in Figure 1.



Intermediation function (ksi) provides explanation of $(0,5517^2 \times 100\%) = 30,44\%$ of the agricultural-based small-medium enterprises and farmers performance (eta1) and the remaining 69,56% is explained by other factors out of examination in this study. Altogether intermediation and business performance provide an explanation for 39,99%

of the farmers' business and agricultural-based small-medium enterprises sustainability (eta2), while the remaining 60,01% is explained by other factors contributing to sustainability which is not examined in this study. It means that SEM model which refers to the intermediation function is good and significant although it only provide 30-40% explanation because in fact there are many factors influence the performance of business and its continuity.

Conclusion

1. a. Intermediation function of financial institutions at the macro level in west java in the period 2004-2009 gives an indication of the distribution of funds to financial instruments other than loans or to other sectors (capital flight). Even there is indication of credit rationing seen from deposit (third party funds) which negatively related to LDR. Nonperforming loan (NPL) variable as risk indicator affects the intermediation function with negative relationship, as it will contribute to the health of the bank. Similarly, the BI rate (Bank Indonesia certificate interest rate) as a policy instrument is still used as a bank reference even it needs time in the transmission (time lag).
- b. Intermediation of state-owned bank is better than the private bank, which is in line with agency theory which state that institution orientation depend on owner's (principal's) orientation.
2. Intermediation function of financial institution shown in amount of distributed credit has negative impact to poverty, the greater value of outstanding loans leads to

reduction of poverty. This indicates a strong relevance with Nurkes theory which state that investment (in this case through the credit) can break the chain of poverty.

3. Based on an assessment of the customers, intermediary function of rural financial institution in providing the best service to the public in a professional manner among BRI Unit, BPR and Cooperative is BRI Unit. Success key for BRI Unit is due to the “Mantri” as the spearhead (agents) that bridges the connection between BRI Units with customers. In this intermediary function, the relationship of agency is not only occur between financial institution owners and management but also between financial institution with their customers. In this study, it can be said that the intermediary function at the macro level (proxied from LDR) were considered not good but is good enough at the micro level.
4. Intermediation function influence positively on business performance especially in strengthening capital and productivity but is not well-reflected for improvement of technology. Intermediation function and business performance has either direct or indirect positive effect on business continuity primarily to increase their profits.

Policy Implications and Directions for Further Research

1. LDR needs to be improved (especially for branch banking system) by providing assurance to financial institution by involving credit guarantee agency (CDA). Credit subsidy can be reallocated to the interests of capital guarantees to RFI The interest rate charged to credit needs to be pressed down to reduce the spread between deposit rates, while it can be reallocated from corporate social responsibility funds of financial institution.

2. To maintain existence of RFI, this institution should improve their service quality to win the competition with new players by improving their empathy attitude towards customers. Therefore the role of agent such as “Mantri” (in case of BRI) needs to be improved. In addition, the RFI needs to implement more flexible loan repayment depend on the type of customer’s business. Implementation of “yarnen” credit payment technique on agriculture business needs to be developed with appropriate adjustment to the time of loan.
3. Saving mobilization as capital resource is also educational resources for community to life-saving and increase capital accumulation. Besides to strengthening TPF, saving deposits can also help strengthen local ownership for member-based organization decentralization.
4. By the enactment of agency theory with influence of ownership, the asymmetric information and the existence of credit rationing, the theoretical implication needs more detail analysis on the factor that influence the occurrence of credit rationing. It also necessary to do deeper analysis approach to see impact of credit on reducing poverty in terms of credit type and poverty criteria.

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