

## Transaction cost of micro and small enterprises financing

Ghana Atma Sulistya<sup>1</sup>, Darwanto<sup>2</sup>

<sup>1,2</sup> Faculty of Economics and Business, University Diponegoro  
 E-mail: [ghanaatma@hotmail.com](mailto:ghanaatma@hotmail.com); [darwanto@undip.ac.id](mailto:darwanto@undip.ac.id)

### Article Info

#### Article history:

Received : 20 July 2016  
 Accepted : 19 August 2016  
 Published : 1 October 2016

#### Keywords:

Institutional Economics, Transaction Cost, Micro and Small Entrepreneur, Group Lending, Sequential Exploratory Design

#### JEL Classification:

D23, D83, O17

#### DOI:

[10.20885/ejem.vol8.iss2.art9](https://doi.org/10.20885/ejem.vol8.iss2.art9)

### Abstract

High transaction costs have become one of the obstacles for the micro and small enterprises (MSEs) to access financial loans to the bank. In order to minimize the transaction costs, group lending scheme become an alternative, so that both sides pay lower transaction costs, and MSEs are able to improve their welfare. This study aims to analyze the credit process and transaction costs incurred on the model of individuals and groups lending and to compare the magnitude of transaction costs in both models. A mixed method analysis is used to analyze the component of transaction costs and the magnitude of the transaction cost in both models. The analysis results indicate that there are differences in transaction costs incurred on both schemes. In the amount of the transaction costs, the overall group scheme allows for greater ones compared to that of individual schemes, and that it was dominated by the cost of the disbursement. Even so, the per member group transaction cost is much smaller than that of the individual schemes.

### Abstraksi

Biaya transaksi yang tinggi menjadi salah satu penghambat pelaku usaha mikro dan kecil (UMK) untuk mengakses kredit perbankan. Guna meminimalkan biaya transaksi, skema kredit kelompok menjadi sebuah alternatif sehingga kedua belah pihak mengeluarkan biaya transaksi yang lebih rendah dan pelaku UMK mampu meningkatkan kesejahteraannya. Penelitian ini bertujuan untuk menganalisis proses kredit dan biaya transaksi yang timbul pada model pinjaman individu dan kelompok dan mengkomparasikan besaran biaya transaksi pada kedua model tersebut. Analisis campuran (Mixed Method) digunakan untuk menganalisis komponen biaya transaksi dan besarnya pada kedua model pinjaman tersebut. Hasil penelitian ini menunjukkan terdapat perbedaan biaya transaksi yang ditimbulkan pada kedua skema. Secara jumlah biaya transaksi, skema kelompok secara keseluruhan masih memungkinkan untuk lebih besar dibandingkan dengan skema individu dan didominasi oleh biaya transaksi pada tahap pencairan dana kredit. Meski begitu, biaya transaksi per anggota kelompok jauh lebih kecil dibandingkan dengan skema individu.

### Introduction

Various barriers are encountered by the micro and small entrepreneurs (MSEs) to grow. The problems that they face are those related to raw materials, regulatory, funding process, and macro economic condition. Kongolo (2010) reveals the problems of access to bank credit for MSEs. Irijayanti and Azis (2012) state that there are ten major barrier faced by Indonesian MSEs, including financial access.

The problems related to credit financing through banks is still a major problem in the development of MSEs, especially developing countries, and Indonesia is one of them. Table 1 shows that the micro, small, and medium enterprises (MSME) loan is the smaller compared to the credit of non-SMEs. The small amount of MSMEs loans is shown by the net expansion of credit financing to SMEs that is still low in comparison with the net credit expansion for non-MSMEs. During the five years of its development (2011-August 2015), credit financing for MSMEs is relatively smaller compared to non-SME loans and bank loans.

Inconvenient and expensive provisions of loans granted by the bank are some of the obstacles for MSEs to obtain financial credit from the Bank. Therefore, the transaction cost for credit becomes high. Duan et al. (2009) revealed that there are three things that are not favorable for small and medium businesses in filing financial assistance to banks, 1) high transaction costs; 2) the information is not perfect; 3)

small businesses are in an inferior position in the credit infiltration; 4) the risk to small businesses is greater for short-term credit.

**Table 1:** Net credit expansion micro, MSME banking (in billion rupiah)

Net Expansion	2011	2012	2013	2014 (up to Dec)	2015 (up to August)
MSMEs Credits	85,587.6	72,339.5	87,245.4	67,990.3	45,416.5
Non-MSMEs Credits	363,016.3	446,755.4	518,027.6	327,893.6	178,692.0
Banking Credits	448,604.0	519,094.9	605,273.0	395,883.9	224,108.5

Source: Bank Indonesia, 2015

The OECD report reveals that there are three obstacles to SME funding through formal financial institutions, such as banks:

"First, SMEs are considered by the bank or creditors and investors as high-risk borrowers due to insufficient assets and low capitalization and susceptibility to market fluctuations and high bankruptcy rate. Second, related to asymmetric information in which SMEs do not mmemiliki accounting records and reports are inadequate or difficult business plans for the lender or investor to assess creditworthiness. Third, the cost of administration/transaction of borrowing is high" (OECD, 2004, p.23).

Transaction costs play an important role in credit. Research De Guia-Abiad (1991) states:

"The transaction costs play an important role in credit demand and credit rationing between classes of borrowers. In addition, transaction costs have a regressive impact on borrowers." (De Guia-Abiad, 1991).

The group is formed to intermediate banks and MSEs. There are three reasons why the intermediary or linkage system through groups needs to be done, especially MSEs, namely the information is asymmetric; the presence of transaction costs; and the presence of regulatory factor (Swamy & Tulasimala, 2011).

The linkage between banks and groups are considered very helpful for MSEs development. The linkage scheme helps the MSEs to reduce transaction and travelling costs to the bank, so they can reduce losses in wages (Kar, 2010). Another study reveals that the linkage scheme between generates a positive impact on the development of entrepreneurship and improvement of welfare (Attanasio et al., 2011). Funding through the linkage scheme resulted in lower transaction costs compared with conventional MSEs financing model by using the individual loans (Swamy & Tulasimala, 2011).

Although the group allows it to act as a mediator between MSEs and the bank, but the impact is not always positive. Besley and Coate (1995) reveal that there are positive and negative effects of the formation of a group as an intermediary for MSEs:

"The positive effects are a group of members of the successful role is to provide incentive pay for the loan of the group members. The negative impact is when all members of their group to default or not able to refund the payment." (Besley and Coate, 1995).

In addition, borrowers using the linkage system of contracts tend to get smaller loan funds compared to individual lending scheme for small loan size and riskier for the bank (Madajewicz, 2004).

The linkage model generates a positive impact on SMEs. Credit linkage with the bank and the group is thought to reduce transaction costs in the credit process model than the individual SME loans (Kar, 2010; Attanasio, 2011; Swamy & Tulasimala, 2011). Even so, the group loan scheme is considered a disadvantage because the loan obtained tends to be smaller compared to loans on an individual's credit (Madajewicz, 2004). Based on the aforementioned background, this paper wishes to answer the following questions. First, what the transaction cost that appears on the credit process are. Second, whether the group credit scheme really able to cope with large transaction costs. Third, whether the group credit schemes have lower transaction costs than individuals.

### Transaction cost: NIE, concept, and its role in banking credit transaction

New Institutional Economics (NIE) emerges as a complement for the old institutional theory or Old Institutional Economics (OIE). OIE approach assumes that the institution is a key factor that affected the economic performance of a country. However NIE assume that institutions alone are not enough to determine the performance of the economy of a country. NIE introduces an importance of the role of institutions, but still argued that this approach can be used using the framework of neoclassical economics.

NIE develops the idea that institutions and organizations sought to achieve efficiencies by minimizing the costs (including transaction costs). The concept of "zero" transaction costs from the neoclassical is a utopia, so that need coercion of absolute contract (Furubotn & Richter, 2005, p. 14, p. 32). The Formal and informal institutions are needed to reduce the amount of the transaction costs (North, 1992, p.3; Menard & Shirley, 2005, p. 1).

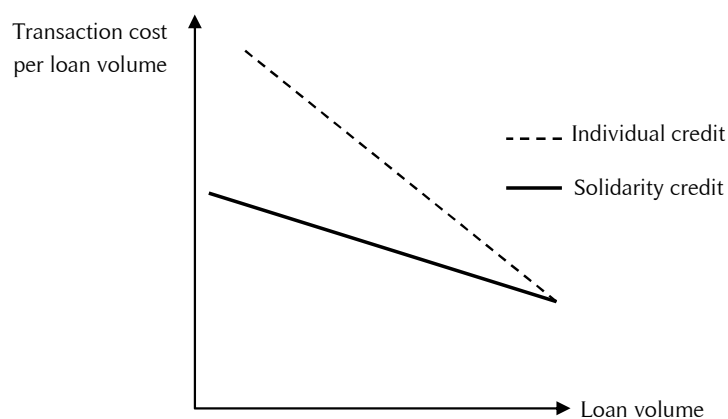
Economist Ronald Coase is the originator of the definition of transaction costs. Ronald Coase defines transaction costs as a charge to use market mechanisms or the cost of the transaction by way of exchange on the open market. As described by Wang (2003, p. 1), the original formulation of transaction costs by Ronald Coase (1937, 1961) represent the costs for the use of market mechanisms or funding to conduct transactions by way of exchange on the open market. Coase (1960: 5) confirms the transaction costs are costs incurred because of market transaction. Another definition explains that transaction costs are the costs for using coercion, protection and transfer contract of the property rights, and running the economic system (Arrow, 1969; Barzel, 1997; and Thrainn Eggertson in Benham & Benham, 2001: 2)

As the unit of analysis, there are six important points why transaction costs can be used as a unit of analysis. Williamson (1985, p. 18) states six important points of transaction costs as the unit of analysis, 1) the transaction costs analysis is more microanalytic; 2) transaction costs analysis are more aware about the presence of behavior assumptions (bounded rationality and opportunistic behavior); 3) introduce and develop the economic importance of specification assets; 4) more rely on comparative institutional analysis; 5) define the business as a 'government' rather than the production function; 6) placing greater weight to the ex post agency contract.

On the credit transaction, transaction costs are considered as a costs that incurred by the lender and the borrower during the loan process. De Guia-Abiad (1991) defines transaction costs on the loan process as non-interest burden incurred by the lender to evaluate, distribute, and collect loans and fees to apply, get approved, and pay the loan made by the borrower. There are several components of transaction costs on the borrower side of which is 1) an application cost of borrowing; 2) the cost of preparing documents; 3) the cost of travel; 4) the opportunity cost; 5) the cost of setting up a guarantee; 6) security costs; 7) the cost of monitoring and controlling; 8) other costs (Masuko & Marafuru, 2003; Hosseini et al., 2012; Llanto & Chua, 1996).

### Microcredit: Group lending model and its role in reducing transaction costs

By the term, microcredit is defined as small loans. Specifically, microcredit is a loan given to the poor that focus on poverty reduction and social change with non-governmental organizations (NGOs) as a major role (Armendariz and Morduch 2010: 15). Grameen Bank became the first in applying microcredit models. Its application, Grameen Bank introduced a system of group lending. This system requires clients (especially women) who are poor that formed a group of at least five members. Risks due to credit or loan will not be borne by one person alone, but also all the members, so the problem of credit risk in banks generally do not restrain them (Counts 2008: 14). Not merely that, each person in the group also has the same opportunity to apply for a business loan and will be given assistance in the form of training and counseling about the efforts by NGOs who have been working with the Bank (Counts 2008: 15). This concept is the early formation of the concept of Self-Help Group (SHG).



Source: Fachini et al. (2008), modified

Figure 1: Transaction costs incurred in group credit scheme

Figure 1 shows the transaction costs of loans through the group are lower than the individual credit schemes. Clearly, at the first loan, transaction costs of group lending are lower compared to loan individual model. However, along with the increase in volume of loans, the curve on the group lending looks more sloping than the individual model. It indicates that the larger the loan from group lending scheme, transaction costs tend to be lower, but the decline of it not as much as the individual credit scheme. Furthermore, in Fachini et al. (2008), the main point of the mechanisms of solidarity loans (group lending) is the agent transferred the transaction cost to the group. In result, the risks will be borne jointly with this group lending scheme.

Various studies on the transaction costs in MSEs credit financing groups, individuals as well as comparisons between the two have been done. Adams & Ladman (1979) reveal that the lending group has five advantages, 1) rate of increase; 2) reduced borrowing costs; 3) technical assistance costs are reduced; 4) the poor can be served and access to credit for businesses; 5) borrower expend resources cheaper to get a loan. Masuko & Marafuru (2003) to the case at a bank in the State of Zimbabwe states that the number of loans and loan experience is a factor that determines the size of transaction costs on SME loans. Madajewicz (2004) compares between groups with individual credit loans that generate transaction costs on group loans tend to be lower than the individual loans but the loan funds obtained tends to be low. Ghatak (1999) investigates the matter for the banks, and finds that the loan group can achieve high returns even without a strong guarantee. Fachini et al. (2008) and Swamy & Tulasimala (2011) reveal that transaction fee on the borrower group is lower than that of individual loans. Attanasio et al. (2011) reveal that the bank linkage scheme with the group generates a positive impact for the development of entrepreneurship and improvement of well-being. Shatrugom and Bayer (2013) conclude that joint liability lending potentially improve social welfare even without social capital, but if the group members can overcome the free-riding it can improve social welfare as well as lower transaction costs. Kiragu and Sakwa (2013) finds out that In Kenya, the group lending mechanisms were effective in ensuring timely access to funds, instilling supervision and administration traits among the entrepreneurs as well as enhanced the stability and the development of the enterprise.

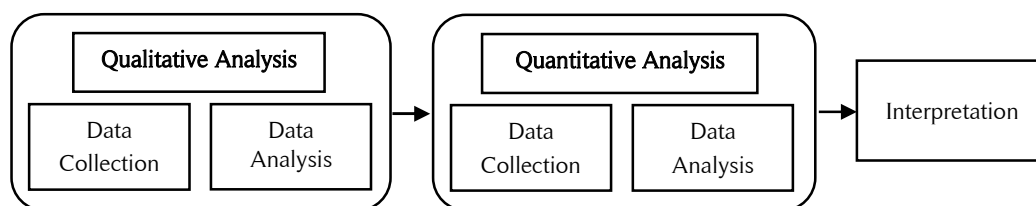
## Method

This research was conducted on customers of a bank in the Semarang City. The Data was obtained using snowball sampling method. Snowball sampling is a method to identify and choosing a sample to a case in a network or group (Neuman, 2007, p. 144).

The total of respondents in this study are 32 respondents, which is 16 respondents are customers of individual loans, while 16 respondents subsequently a group lending scheme customer denoted as group A and group B. The group lending scheme customer is shaped as Posdaya. Interviews, documentation, and direct observation using a semi-open and open questionnaire are used to obtain the data.

A mixed method is used to analyze the transaction costs incurred during the application process until the disbursement of individual and the group loan. Based on Creswell (1999), a mixed method is the use of two methods of analysis in the study, namely the qualitative and quantitative analysis (Creswell, 2003: 53). Sequential strategy is the one of the strategy for the analysis of this mix method.

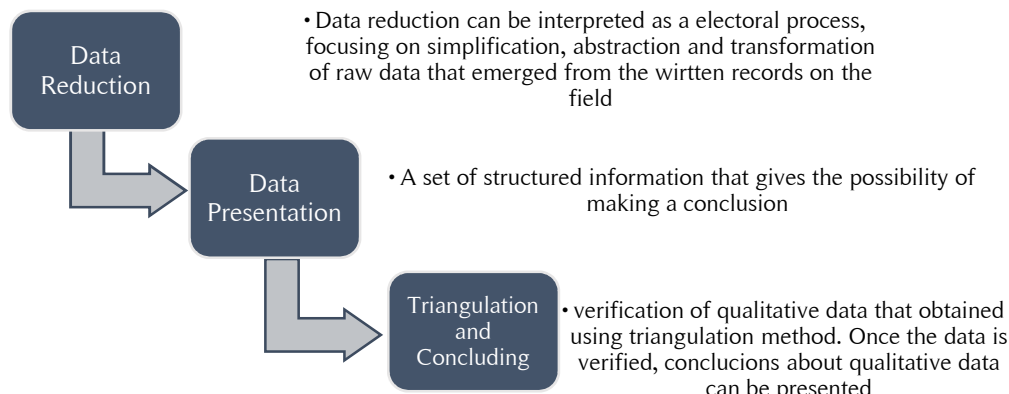
Sequential exploratory strategy is a mixed methods strategy used to analyze the transaction costs incurred and the amount of transaction costs in this study. An important point of this strategy is to use quantitative data and the results of quantitative analysis to support the interpretation of qualitative analysis with qualitative analysis as the primary analysis (Creswell, 2011: 215). The first stage in this research is qualitative data collection and analysis, followed by the quantitative data collection and analysis to strengthen the results of qualitative analysis. Qualitative and quantitative analysis that used in this study is a descriptive qualitative analysis with case studies approach and descriptive quantitative analysis.



Source: Creswell (2011:213)

**Figure 2:** Sequential exploratory design strategy stages

Here are the steps in analyzing qualitative data (Miles & Huberman, 1994, P. 10-12):



Source: Miles & Huberman (1994, p.10-12), modified.

Figure 3: Process for qualitative analysis

Quantitative analysis is used to analyze the transaction costs incurred during the ongoing process credit transactions on both models. Here is the equation of the transaction costs:

$$TCE = InfoCost + CredProp + NegoCost + DisbTravel + Disburs$$

where

- TCE* = Total of Transaction Cost;
- InfoCost* = Cost of Searching Information;
- CredProp* = Cost of Collecting Document;
- NegoCost* = Cost of Submitting Document Credit and Negotiation;
- DisbTravel* = Cost of Travel for Loan Disbursement;
- Disburse* = Cost of Loan Disbursement.

**Result and Discussion**

**Transaction cost of individual scheme**

***Individual schemes: Stage for Searching Information***

At this stage, the prospective clients get the information from both formal and informal way. Formally, the prospective clients can go to the Bank Branch Office while Informally, then they obtain the information through a third party (such as neighbor, friends, or family) or to contact and visit micro credit analyst (MCA) to ask for more information. MCA became one of their own-advantages for these individual credit schemes. Here is the figure of the stage of looking for information:

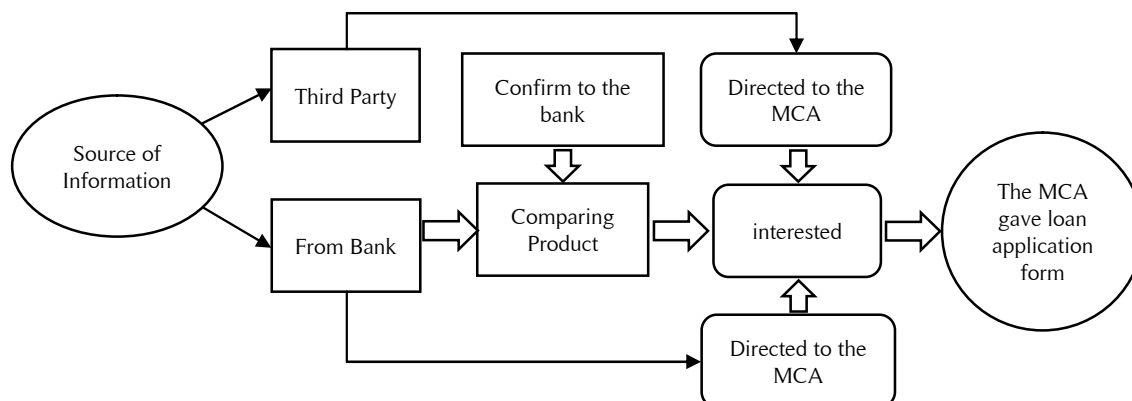


Figure 4: Stages of finding information of individual credit scheme

The following is a equation of the transaction costs of information search stage:

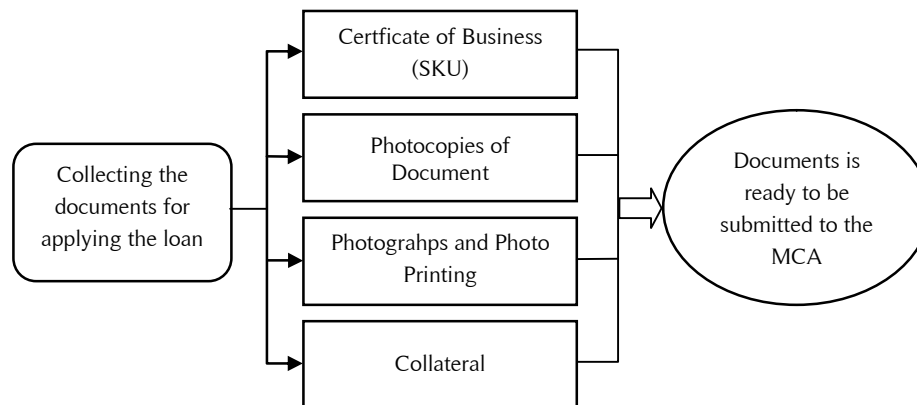
$$\text{InfoCost} = \text{Tr} + \text{Etc} \quad 1)$$

$$\text{Tr} = \frac{\text{Cost of Gas Consumption Per Day}}{\text{travel time}} \times \text{Distance} \quad 1.1)$$

*InfoCost* are transaction costs incurred during the search of information regarding these individual credit schemes. (*Tr*) is the average cost of transport per customer. (*Etc*) is the average cost asides from transportation cost (*Tr*) that are accidentally incurred by each client. Opportunity costs tend to be non-existent. The absence of the opportunity costs due to the flexibility of MCA who voluntarily come to the prospective clients or just contacted by telephone to explain the credit scheme. Another cause of it due to the prospective client at that time in a state holiday or do not work and their business are closed.

#### ***Individual scheme: Stage of documents preparation***

At this stage, the prospective customer will collect the documents in accordance with the requirements set by the Bank. Documents that need to be prepared is as follows, 1) Copy of identity cards (KTP); 2) 3x4 color photograph of husband - wife (2 sheets); 3) A bank –that related with this research- account; 4) photocopy of family card (KK); 5) attach a letter of business (SKU) from local municipality; 6) Submit the collateral (land certificate or vehicle reg). Here is the figure of the stage of preparation of documents on individual schemes:



**Figure 5:** The process of collecting documents

The following is a equation of transaction costs at the stage of preparation of the loan documents:

$$\text{CredProp} = (\text{Copy} + \text{Tr}) + (\text{Photo} + \text{Tr}) + (\text{SKU} + \text{Tr}) + \text{Etc} \quad 2)$$

*CredProp* is the total of the transaction costs at the stage of preparation of the documents. (*Copy + Tr*) is the average total cost of photocopies of documents plus the cost of transportation to a photocopier. (*Photo + Tr*) is the average total cost of photo and photo printing plus the cost of transportation. (*SKU + Tr*) is the average total cost of obtaining a certificate of business to the local office plus the cost of transportation. (*Etc*) is the average total other cost that are accidental incurred by each prospective clients.

#### ***Individual scheme: Stage of submitting credit document and negotiations***

Figure 6 shows an overview of submission stage of the loan documents, survey, and negotiation. At this stage, the prospective customer will be surveyed by the MCA to later determining the feasibility of the proposed business as well as the collateral. The submission of loan document is made informally during MCA make a visit to their store. Prospective customers are not required to come to the office in person for the submission of this document, so that in this process the customer does not pay any costs. Moreover, the friendly treatment from the MCA and does not demand any additional money to be the reason why the transaction costs in this process do not exist. Flexibility of the MCA greatly assist prospective customers in reducing transaction costs, so at this stage the prospective customer does not incurred any transaction costs.

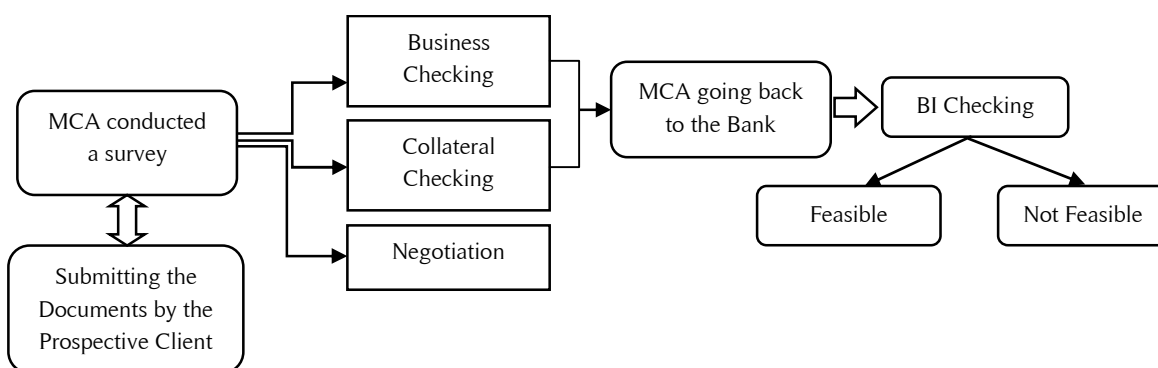


Figure 6: Overview of credit document submission phase, survey, and negotiation

**Individual scheme: Stage of travel to bank for loan disbursement**

The next stage is that the prospective client is heading to branch offices related to the process of loan disbursement. After the documents are collected, the survey and BI checking, the consideration of the loan application based on collateral and the condition of their business, so they deserve to be funded, MCA will contact the prospective clients to visit to the Bank to hold a disbursement of loan funds. This process is done formally at branch office of the related Bank. MCA asked the prospective clients to bring the Rp 6,000 stamps. The following figure is a description on the stages of travel to the Bank for loan disbursement:

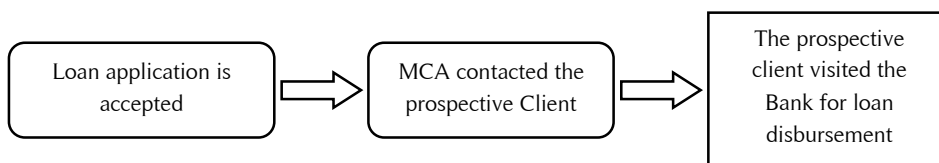


Figure 7: Overview of the stage of travel to the bank for loan disbursement

The following is a calculation of transaction costs at the time a prospective client to travel to the branch offices of the Bank to perform the disbursement of credit:

$$DisbTravel = Tr + Etc \tag{3}$$

$$Tr = \frac{Cost\ of\ Gas\ Consumption\ Per\ Day}{travel\ time} \times Distance\ of\ the\ Bank \tag{3.1}$$

*DisbTravel* is total transaction costs that incurred by the prospective clients to go to a bank branch for a loan disbursement process. (*Tr*) is the average total transportation costs incurred by the prospective clients, whereas (*Etc*) is the average total accidental costs that are not classified in transportation costs.

**Individual scheme: Stage of loan disbursement**

The next stage is the loan disbursement. This phase should be done at the Bank branch office. At this stage, the clients will make the disbursement of the loan fund in front of MCA. This process involves several things, among them 1) AKM explain additional provisions and processes to be performed; 2) if the use of collateral in the form of certificates of land or buildings, collateral delivery before the Bank Notary; 3) the signing of the contract; 4) registering a bank account helped by MCA, if not already have a bank account; 5) hand over the loan fund to the customer (taken in cash or deposit into a savings account). Overall, the disbursement process is quite fast. The fastest is lasts for 30 minutes and the longest is 1.5 hours. Here is a figure of the stage of loan disbursement to individual schemes.

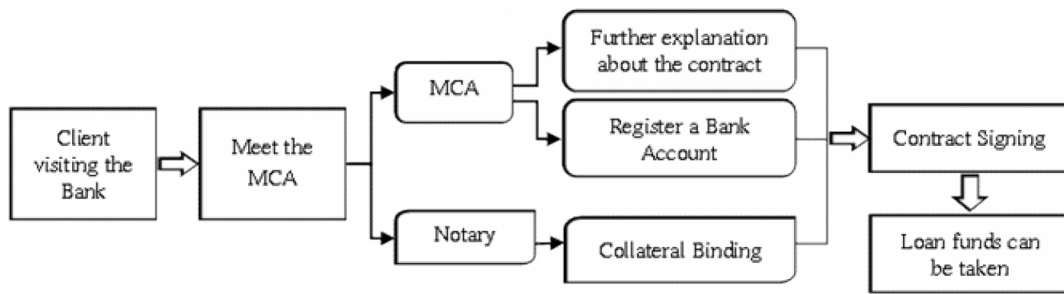


Figure 8: Overview of the stages of loan disbursement

Transaction costs on the loan disbursement process can be formulated as follows:

$$Disburse = Admin + Collateral + Stamp \tag{4}$$

*Disburse* is the total of the transaction costs the incurred by the client of individual lending scheme for a loan disbursement. *Admin* is an administration fee which is fixed Rp 100.000,00 per client. *Collateral* is the average total cost of the binding of collateral in front of a notary and MCA, and notarized. *Stamp* is the average total cost of the Rp 6.000 stamps for a binding agreement.

**Group lending transaction cost**

**Group lending scheme: stages of searching information**

There are differences between the groups with individual schemes. The main difference is in the group scheme assisted and supervised by *Lembaga Penelitian dan Pengabdian Masyarakat* (LPPM). In group A, the search for information on group lending scheme is obtained directly from the LPPM represented by collegers who were doing *Kuliah Kerja Nyata* (KKN). Once the information is valid, chairman of the group held a brief meeting with the members regarding their availability to take this group loan scheme. In the process, the group A proposed a funding for five (5) of its members who have micro and small businesses. The following figure is a description of the stage of information search for group A:

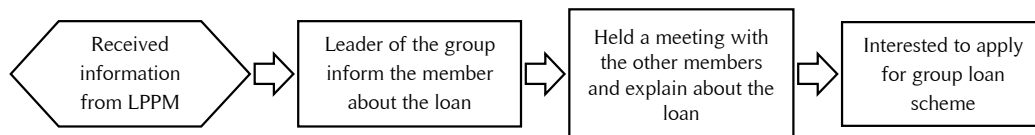


Figure 9: Overview of the stage of information search: group A

In contrast to group A, group B, received the information of this group lending schemes from the chairman of the group A as the adviser of group B. After being informed and got a recommendation from the chairman of the group A, group B held a meeting with the core committee to disseminate information to the members of group. After willingly submits this group lending schemes, group A contacted LPPM, ask for assistance for group B. Group B proposed a funding for twenty-five (25) members who have micro and small businesses. The following figure is a description of the searching for information phase in group B:

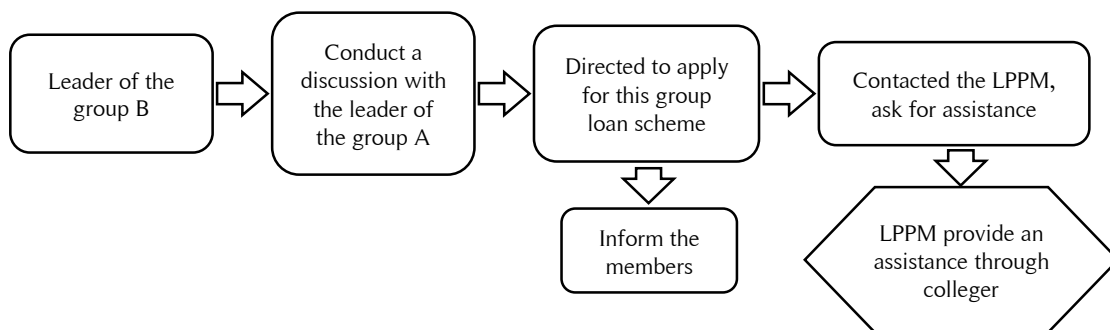


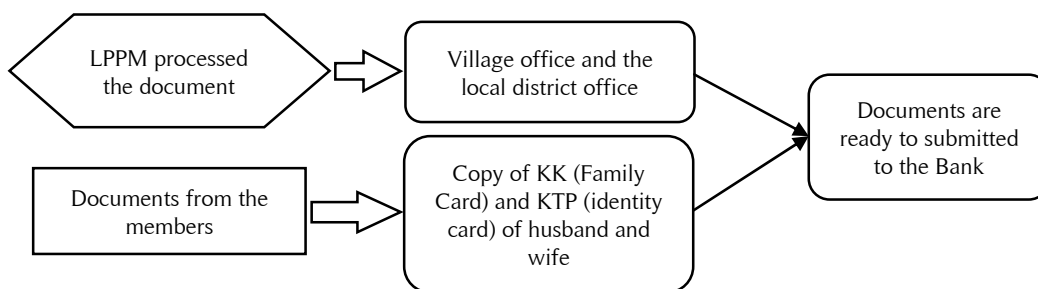
Figure 10: Overview of the stage of information search: group B



At this stage, these two groups do not spend any costs to obtain the information. In group A, the absence of transaction costs due to all the information about the credit scheme was obtained from LPPM, while in group B, the absence of transaction costs due to volunteerism from the head of the group A who want to come to the chairman of the group B to provide information about the this group lending scheme.

**Group lending scheme: stage for loan document preparation**

There are no differences between the group A and the group B at the stage of preparation of the document. Both groups were assisted and supervised by the LPPM to take care of a letter from the district office and for making the loan application letter. Members are only required to submit a photocopy of identity card of wife and husband (KTP) and Family Card (KK) of the members. Here is a schematic representation of the stages of preparation of loan documents in group A and group B:



**Figure 11:** Overview of the stages of preparation loan document: group A and group B

At this stage, the group only cost photocopies of documents KK and ID cards (KTP) carried by each member who applying a loan. There are no opportunity cost, due to the members did not leave their business or close down to make photocopies of the required documents. Transaction costs that occur at this stage are as follows:

1. Costs photocopying, photocopying KK and KTP by members;
2. The cost of transportation, gasoline consumption spent by each member to make photocopies of documents (ID cards and KK).

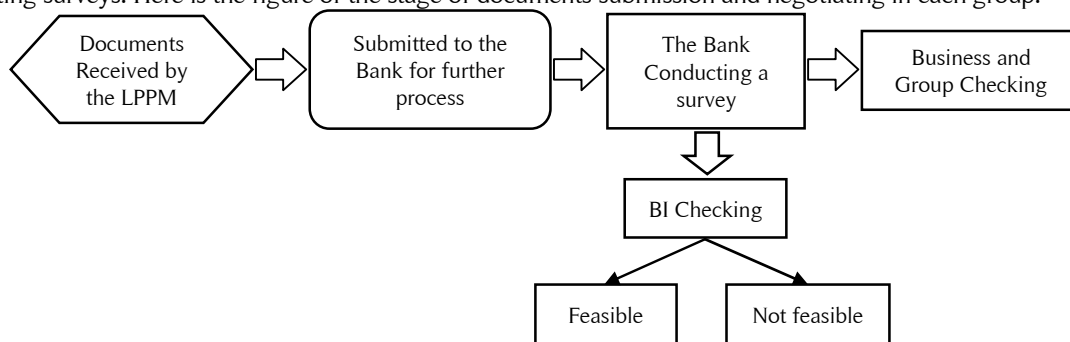
Here is the equation of the stage of preparing the loan documents in each group:

$$CredProp (Membership) = (Copy + Tr) \tag{5}$$

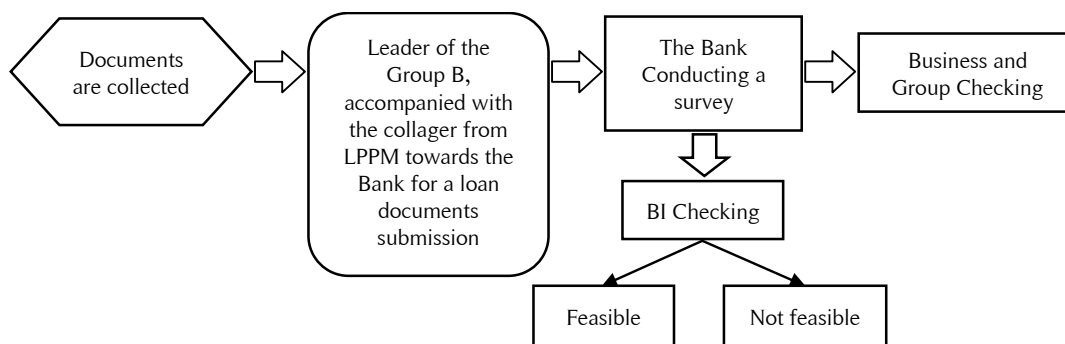
*CredProp* is the total transaction costs by the members of the group to prepare the documents. (*Copy + Tr*) is the average of total transaction costs for photocopies of documents plus the expenses of transportation towards to the photocopies store.

**Group lending scheme: stage of document submission, survey, and negotiation**

In group A, the process of submission documents is assisted by LPPM, while in group B, the submission of the documents is made by the chairman of the group itself. Furthermore, the Bank will come to review the business and assess whether the business is feasible or not to be funded. Negotiation occurs when the bank been conducting surveys. Here is the figure of the stage of documents submission and negotiating in each group:



**Figure 12:** Overview of stage of document submission and negotiation: group A



**Figure 13:** Overview of stages of document submission and negotiation: group B

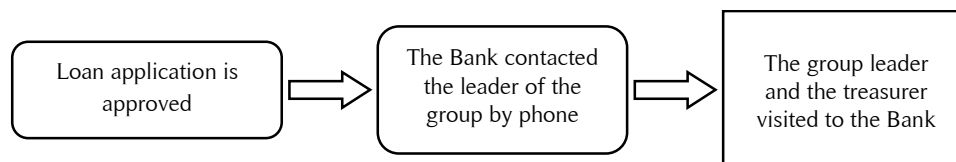
Transaction costs for the documents submission and negotiation are issued only by group B. The existence of transaction costs in group B due to the group leader submitted its own documents to the Bank Branch Office. Here are the transaction costs incurred for group B:

$$NegoCost = Tr + Opp \tag{6}$$

*NegoCost* represent the transaction costs that incurred to perform submitt documents to the bank branch office and to negotiate. (*Tr*) is the transport to travel to the bank which is calculated using the cost of gaso-line to travel to the bank. (*Opp*) is opportunity cost incurred by the leader of the group for doing loan documents submission. The emergence of the opportunity costs due to the group leader and the treasurer of the group left their work to take care of the submission of loan documents to the Bank.

**Group lending scheme: Stage of travel to bank for loan disbursment**

This stage is not much different from the individual schemes. Once the document is received by the Bank is valid, and based on a survey and BI checking group is eligible for funding, the Bank will contact the group leader. Chairman of the group along with the group’s treasurer will come to the Bank to make a trip to the disbursement of the loan. In this process, there is no difference between group A to group B. Here is the process of traveling to the Bank for the disbursement of funds for groups A and B:



**Figure 14:** Overview the stage of travel to bank for group loan disbursement

There is a difference occurs in the transaction costs incurred in both groups. In group A, the transaction costs incurred transport costs only (*Tr*) and other costs (*Etc*). In contrast to group A, group B issued in the form of transaction costs of transportation costs (*Tr*), the opportunity cost (*Opp*) and other expenses (*Etc*). Here is the equation for calculating the transaction fee each - each group:

$$DisbTravel A = Tr + Etc \tag{7}$$

$$DisbTravel B = Tr + Opp + Etc \tag{8}$$

**Group lending scheme: stage of loan disbursement**

At this stage of the disbursement of credit, in the process, there is no difference between group A to group B. The process of loan disbursement include, 1) further explanation by the marketing department? Bank on a credit agreement; 2) signatories to the loan agreement and the contract; 3) creation and registration of bank accounts; 4) submit the loan fund through savings accounts; 5) distribute to members. No submission of collateral because the loan scheme does not oblige the group to submit collateral or guarantee. Here is the process of disbursement of credit funds in both groups:

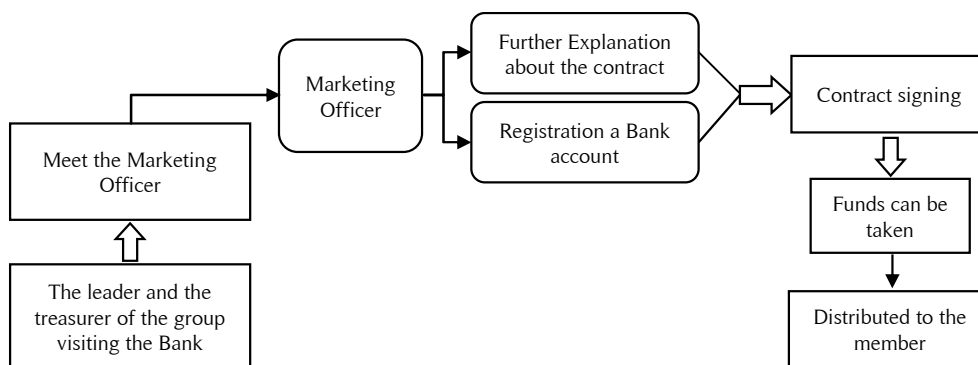


Figure 15: Overview of the stage of loan disbursement group: group A and group B

Generally, the transaction costs that incurred in this phase are almost identical. Even so, there is a difference that can be found. In general, transaction costs incurred during the phase of disbursement of loan funds (Disburse) are including an administration fee of Rp 150,000 (Admin), provision cost of 1% of the total credit funds (Prov), and stamp duty (Stamp). While in group B, issued an opportunity costs (Opp) as a result of the group leader and treasurer of the group who left their jobs for a while to do this process. The following is the equation of transaction costs for loan disbursement process in both groups:

$$Disburse A = Admin + Prov + Stamp \tag{9}$$

$$Disburse B = Admin + Prov + Stamp + Opp \tag{10}$$

Based on the qualitative analysis with a case study approach, we encounter some differences between the transaction costs incurred in both schemes, listed in Table 2.

Table 2: Comparison of transaction costs between individual scheme and group scheme

Stages	Individual Scheme	Group Scheme	
		Group A	Group B
1 Searching For Information	1. Cost of transportation; 2. Other cost ( <i>accidental</i> )	(No expenses)	(No expenses)
2 Document Preparation	1. Cost of business registration; 2. Cost of copying document; 3. Cost of photograph and printing photos; 4. Transportation costs incurred in each process of registering businesses, photocopying, and printing photo.	Cost of copying document (members)	Cost of copying document (members)
3 Document submission, surveys, and negotiation	(No expenses)	(No expenses)	1. Transportation costs; 2. Opportunity costs; 3. Other costs ( <i>accidental</i> )
4 Travel to the Bank	1. Transportation costs; 2. Other costs ( <i>accidental</i> )	1. Transportation costs; 2. Other costs ( <i>accidental</i> );	1. Transportation costs; 2. Opportunity costs; 3. Other costs ( <i>accidental</i> ).
5 Loan Disbursement	1. Administration costs; 2. Collateral costs; 3. Stamp costs.	1. Administration costs; 2. Stamp costs; 3. Provision costs.	1. Administration costs; 2. Stamp costs; 3. Provision costs; 4. Opportunity costs.

**Transaction cost analysis: individual scheme and group lending scheme**

Table 3 shows that transaction costs on both schemes is dominated by the cost of laon disbursement. In the individual credit schemes, who using the land certificate as collateral, the cost for loan disbursement to dominate at 95.5% of the total cost of the transaction, while if they (clients) used a BPKB as a collateral, then it dominate at 82% of the total transaction costs. In the group scheme, in group A, the cost for loan disbursement to dominate at 95.4% of the total of transaction costs. In group B, the cost for the loan disbursement to dominate at 84% percent of the total of transaction costs.

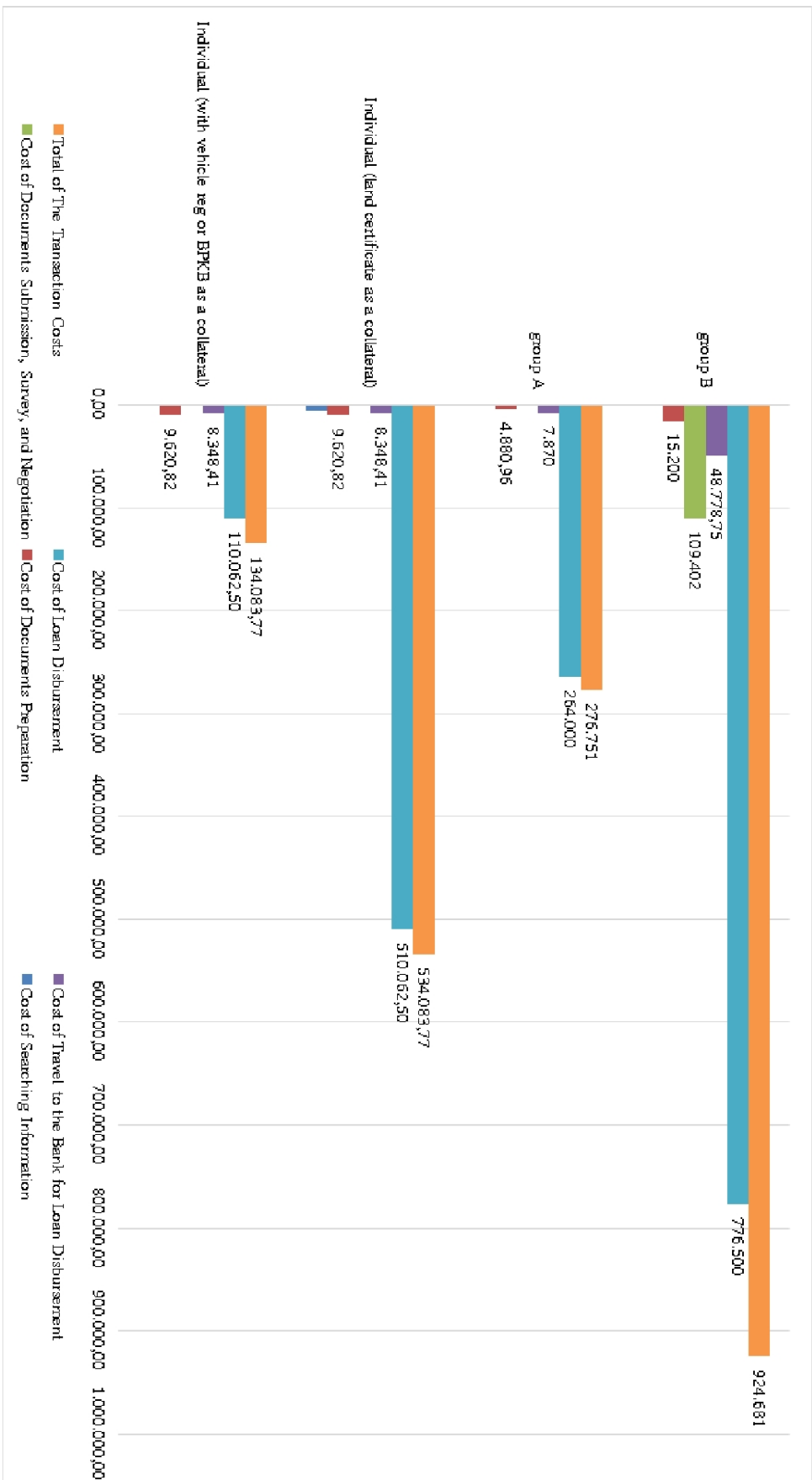


Figure 16. Comparison Chart Transaction Costs On Individual and Group Schemes (in rupiah)

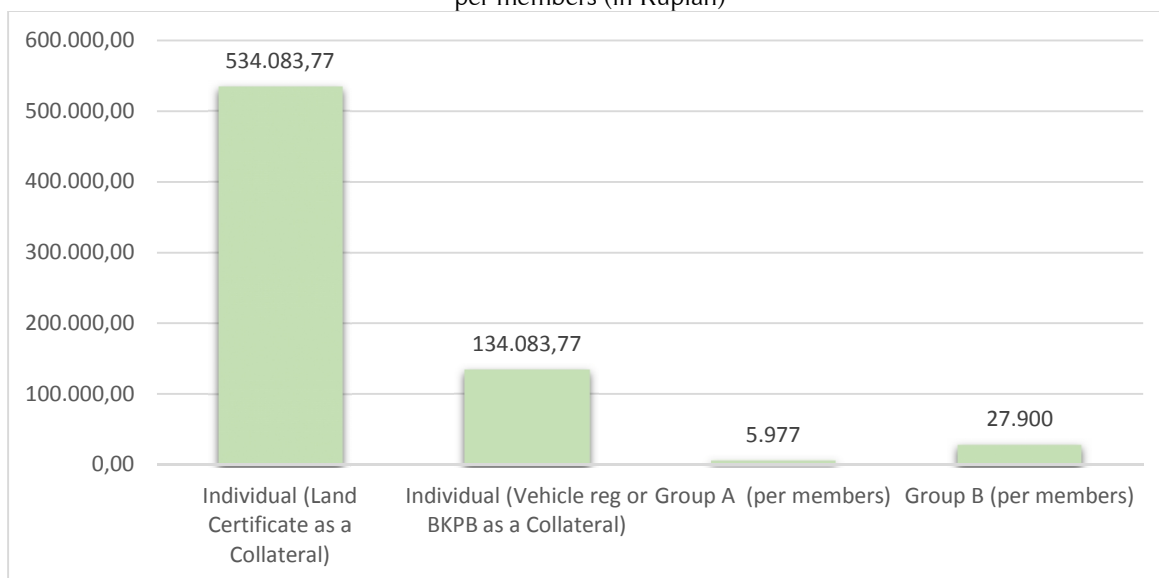
**Table 3:** Comparison of transaction costs in individuals loans and groups loan schemes

No	Transaction costs component	Transaction Cost (in Rp)			
		Individual (with land certificate as collateral)	Individual (with Vehicle reg as collateral)	Group A	Group B
1.	Cost of searching information	6,052.04	6,052.04	0	0
2.	Cost of document preparation	9,620.82	9,620.82	4,880.956 (members)	15,200 (members)
3.	Cost of document submission, surveys, and negotiations	0	0	0	109,402
4.	Cost of travel to the bank for disbursement	8,348.41	8,348.41	7,870	38,778.75
5.	Cost of loan disbursement	510,062,5	110,062.5	264,000	776,500
Total of Transaction Costs		534,083.77	134,083.77	276,751	924,681

Source: Processed data, 2016

Interestingly, in the group scheme, when viewed as a whole of the total of transaction costs, it's still possible to have larger transaction costs compared to individual schemes. Result showed that in group A, although still have lower transaction costs -when it compared to individual schemes which use the land certificate as collateral- but the total of the transaction costs in group A is higher than the total of the transaction costs on individual schemes which apply a vehicle reg (BPKB) as collateral. Surprisingly, with the larger members as many as 25 members, and the opportunity costs incurred by the group B, the total of the transaction costs from the group B is the highest among the all schemes. Higher transaction costs in the group scheme due to the imposition of administrative costs and the cost of provision as well as the opportunity cost.

**Figure 17:** Comparison chart transaction costs between individual scheme with group scheme per members (in Rupiah)



If we conduct the analysis in a per-members perspective, the transaction costs incurred by the group members are the smallest among the all schemes. Figure 17 shows that there are significant differences when compared to the transaction costs per members of the group with the individual scheme. The transaction costs per member in the group A is Rp 5.977, while per member in the group B is Rp 27,900. The low transaction costs is caused by each members only need a photocopies of KK and ID cards (KTP) for the loan documents, and shared costs from administrative costs and provisions costs. This finding is consistent with the research from Swamy and Tulasimala (2011) which states that, as a whole, then the transaction costs on group loan scheme even greater than individual schemes, but if viewed as a member, the transaction costs in the group will be lower and more efficient than the individual schemes.

## Discussion

The role of MCA and LPPM on both models determines the amount of transaction costs incurred. On the individual schemes, MCA who are always mobile and amicably approach raises trust between MCA with prospective customers. MCA serves both formally and informally, especially for information retrieval and submitting the documents. In group lending schemes, the LPPM greatly assist in the collection of documents, so that the Posdaya groups do not need to spend more expenditure for the maintenance of the loan documents collection and submission. Even so, there is a groups that spend more to submitting the documents to the Bank, in this case is Group B. LPPM need to increase the assistance for the group or Posdaya to obtain a MSEs financing from the Bank, especially in terms of minimizing the transaction costs on the loan application process.

In terms of funds, individual schemes have more funds to be acquired than the group lending scheme. In the group scheme, each member only received Rp 2.000.000. This finding is consistent with research from Madajewicz (2004) which states that despite lower transaction costs and the funds obtained through group lending schemes fewer than the individual loans. On the individual schemes, they will gets a bigger funds between Rp 5.000.000 to Rp 50.000.000. For example, customers with individual schemes apply for a loan amounting to Rp 5000.000 and using the vehicle reg (BPKB) as collateral. Assume the transaction costs that will borne by the individual clients are equal to the total of transaction cost with vehicle reg (BPKB) as collateral, which amounted to Rp 134.083. So, the client of the individual scheme will receive a credit fund about Rp 4.865.917 net. So that, the transaction costs borne by the clients with the individual loan scheme is 2.86% of the total of the credit funds.

Specifically, the loans from the group scheme obtained by group B are smaller than the group A. Each member in the group B will obtain the loan fund is about Rp 1.972.100, while each member in the group A will obtain the loan fund is about Rp 1.994.023. Interestingly, the greater the funds raised, the discount will be greater, and spend more transaction costs. In this case, the 1 percent of the provision cost is became a cause. The 1 percent of the provision cost resulted when more members of groups interested in borrowing and participating this group scheme, it will be enlarged the transaction costs. That is, each added a one member to parcitipate in borrowing a group lending scheme, the transaction costs from the share of the provision costs would increase by Rp 20.000. To simplify, the discount of the fund will be greater, if there is one member added to parcitipate this group lending scheme.

Even so, the group lending scheme is more suitable for the micro and small entrepreneurs, especially for micro-entrepreneurs. Based on interviews, the entire group was greatly assisted by the funds of this group lending scheme. Most of the members use these funds to purchase additional raw materials. The leader of the group admits that this loan scheme contributes to improve the member's welfares, especially members who have micro and small businesses. Group scheme with funds amounting to Rp 2,000,000, is more suitable when used for those who have micro business with a turnover of less than Rp 100 million per year, and they are pioneering new micro-enterprises. In general, those who have very micro business or family business scale and pioneering new efforts would be more suitable if joined in groups and advancing the status of pre-prosperous families heading to a prosperous family. This finding is consistent with Attanasio et al. (2011) which states that a credit scheme through a linkage system between the groups with the bank to improve the welfare of micro and small entrepreneurs, and entrepreneurship skills.

The Bank itself is still low in channeling funds for this group lending schemes. The bank still considers that this group lending scheme is high risk. Based on the interviews, its's because this scheme does not use any collateral or guarantee. So that becomes possible reasons why the Bank charge a provision cost and administrative costs, at the same time, it is quite substantial when compare it with the individual scheme.

The Bank needs to improve in marketing or promotion of the group lending scheme in Semarang City. One of the ways that can be taken is cooperating with universities in Semarang to establish Posdaya or business groups that will be supported by the Bank loan funds using group lending scheme. Optionally, will perform advertisements on electronic media or online media to promote this group lending schemes.

## Conclusion

Based on the above, it can be concluded that there is a difference between the cost of transactions in group schemes and individual schemes, both groups overall or per member. On the individual schemes, transaction costs generally incurred at the time of the submission process until the disbursement of credit is 1) the cost of transportation; 2) the cost of photocopying documents; 3) cost of photos and photo print-

ing; 4) the cost of stamp duty; 5) the cost of taking care of the business certificate; 6) administrative costs; 7) the cost of binding of collateral; 8) other costs. In group lending schemes, Group A, the transaction costs incurred during the search for information by the credit disbursement is 1) the cost of transportation; 2) administrative costs; 3) the cost of provision; and 4) the cost of stamp duty; 5) other costs. In group B, the transaction costs incurred are 1) the cost of transportation; 2) the opportunity cost; 3) the cost of provision; 4) administrative costs; 5) the cost of stamp duty; 6) other costs. While a member of the group, the transaction costs incurred are 1) the cost of photocopying; 2) the cost of transportation; 3) load sharing administrative costs; 4) the burden of cost-sharing provisions.

The stage of loan disbursement dominates the high transaction costs incurred by each loan scheme. In the individual scheme, the type of collateral will greatly affect the amount of the transaction costs in the loan disbursement process. While in group lending, the cost of provision greatly affect the size of the transaction costs in the loan disbursement process and transaction costs that will be borne by each member.

The total of the transaction costs on individual schemes is much higher than the transaction costs incurred by a group member in each group. However, the total of the transaction costs in the overall group scheme is still possible larger than the transaction costs of the individual lending scheme. Although the cost of transactions per member lower than the transaction costs on an individual lending scheme, but the fund earned each member smaller than the fund for individual loans.

The Bank needs to reducing or eliminating the provision cost for the group lending. By charging 1% of provision cost, the greater the funds raised by clients of the group scheme, the discount will be greater. Improve services by providing service photocopies of documents such as ID cards, KK, and the marriage license for free at the Bank, and provide the stamp for free, so this will reduce transaction costs in photocopies of documents and stamp duty. In addition, banks need to increase the add more micro credit analyst (MCA) for individual lending scheme and implement a similar system on the loan group scheme.

The increase in disbursement of credit funds through group lending needs to be done, especially in the city of Semarang. The bank needs to cooperate with LPPM of The Universities to provide guidance and formation of micro and small business groups in the city of Semarang. Thus, disbursement of credit in group lending schemes in Semarang could be increasing and is expected to reduce the number of underprivileged families by providing credit-business loans in micro and small business groups.

For micro-entrepreneurs, who just start their business, it is better to use group lending schemes. Through the group lending schemes, transaction costs incurred are low, applying a collective responsibility system, and able to obtain loan even without a collateral. For small and micro entrepreneurs who have started to grow and want to large enough capital for additional assets, investments, and improving their business, it is better to use individual lending scheme.

This study only compared the transaction costs incurred on the customer without comparing the lender transaction costs or the bank. Moreover, this study does not provide any level of statistical significance of the effect of each of the stages in affecting the amount of the transaction costs.

## References

- Adams, D. W., & Ladman, J. R. (1979). Lending to rural poor through informal groups: A promising financial market innovations? *Savings and Development*, 3(2), 85-94.
- Armendariz, B., & Morduch, J. (2010). *The economic of microfinance*. Second Edition. London: The MIT Press.
- Attanasio, O., Augsburg, B., De Haas, R., Fitzsimons, E., & Harmgart, H. (2011). Group lending or individual lending? Evidence from randomise field experiment in Mongolia. *IFS Working Paper W11/20*, 1-47.
- Benham, A., & Benham, L. (2001). The cost of exchange. *Ronald Coase Institute Working Paper Series Number 1*, 1-15.
- Besley, T., & Coate, S. (1995). Group lending, repayment incentives and social collateral. *Journal of Development Economics*, 46(1), 1-18.
- Coase, R. H. (1960). The problem of social cost. *The Journal of Law and Economics*, 3(1), 1-44.
- Counts, A. (2008). *Small loans, big dreams: How Nobel Prize winner Muhammad Yunus and microfinance are changing the world*. New Jersey: John Wiley & Sons, Inc.

- Creswell, J. W. (2003). *Research design: qualitative, quantitative, and mixed methods approaches*. Second Edition. London: SAGE Publication.
- Creswell, J. W. (2011). *Designing and conducting mixed methods research*. London: SAGE Publications.
- Fachini, C., Ramirez, D. B., & De Souza Lima, R. A. (2008). The transaction cost of lenders and borrowers in a Brazilian microcredit organization. *Journal of Saving and Development*, 32(4), 381-407.
- Furubotn, E. G., & Richter, R. (2005). *Institutions and economic theory: The contribution of the new institutional economics (Second Edition)*. Ann Arbor: The University Of Michigan Press.
- Ghatak, M. (1999). Group Lending, Local Information And Peer Selection. *Journal of Development Economics*, 60(1), 27-50.
- Hosseini, S. S., Khaledi, M., Ghorbani, M., & Brewin, D. K. (2012). An analysis of transaction cost of obtaining credits in rural Iran. *Journal of Agricultural Science and Technology*, 14(2), 243-256.
- Irjayanti, M., & Azis, A. M. (2012). Barrier factors and potential solutions for Indonesian SMEs. *Procedia Economics and Finance* 4, 3-12.
- Kar, J. (2010). Institutional credit, transaction cost and informal sector: A case study of Indian villages. *The Indian Journal of Labour Economics*, 53(2), 397-408.
- Kiragu, E.M., Sakwa, M. (2013). Effect of group lending mechanism on enterprises development of rural women in Kenya: A survey of Kenyena District, Kisii County-Kenya. *Interdisciplinary Journal of Contemporary Research Business*, 4(12), 556-584.
- Kongolo, M. (2010). Job creating versus job shedding and the role of SMEs in economic development. *African Journal of Business Management*, 4(11), 2288-2295.
- Llanto, G. M., & Chua, R. T. (1996). *Transaction cost of lending to the poor: A case of two Phillipine non-governmental organisations*. Brisbane: The Foundation for Development Cooperation.
- Madajewicz, M. (2004). Joint liability versus individual liability in credit contracts. *Journal Economic Behaviour and Organization*, 77(2), 107-123.
- Masuko, L., & Marufu, D. (2003). The determinant of transaction cost and access to credit by SMEs and the poor in Zimbabwe. *IFLIP Research Paper 03-9*.
- Menard, C., & Shirley, M. M. (2005). *Handbook of new institutional economics*. Dordrecht: Springer.
- Miles, M. B., & Huberman, A. M. (Ed.) (1994). *Qualitative data analysis: An expanded source*. Thousand Oaks: SAGE Publication.
- Neuman, W. L. (Ed.) (2007). *Basics of social research: Qualitative and quantitative approach*. New York: Pearson Education Inc.
- North, D. C. (1992). Transaction cost, institutions, and economic performance. *Occasional Paper*, 30, 1-35.
- OECD. (2004). Promoting entrepreneurship and innovative SMEs in a global economy: Towards a more responsible and inclusive globalisation. *2nd OECD Conference of Ministers Responsible for Small and Medium-Sized Enterprises (SMEs)*. Istanbul: OECD.
- Shatragom, S., Bayer, R.C. (2013). Cost efficient joint liability lending. *The University of Adelaide School of Economics Research Paper, 2013-23*, 1-23.
- Swamy, V., & Tulasimala, B. K. (2011). Financial intermediaries and economic development: Evidence on transaction cost of borrowing by the poor. *International Journal of Banking and Finance*, 8(3), 54-72.
- Wang, N. (2003). Measuring transaction cost: An incomplete survey. *Ronald Coase Institute Working Paper Series Number 2*, 1-13.
- Williamson, O. E. (1985). *The economic institutions of capitalism: firms, markets, relations, contracting*. New York: The Free Press A Division of Macmillan, Inc.