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Accelerating Financial Inclusion through Non-cash Assistance: Exploring Factor Affecting Beneficiaries Perception

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Accelerating Financial Inclusion through Non-cash Assistance: Exploring Factor Affecting Beneficiaries Perception

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Abstract

Distribution of social assistance through a non-cash system is a new government breakthrough to increase transfer effectiveness and promote financial inclusion. After the pilot project in 2014, the recent study found that there is a number of beneficiaries who feel the non-cash system is difficult. Therefore they use non-cash facilities to get the transfer only and do not want to use for other financial services. This fact could become an obstacle to financial inclusion. This study aims to investigate what factors influence beneficiaries perception to use non-cash system. We conducted a survey of 139 non-cash beneficiaries in Kabupaten Cirebon, West Java and Kabupaten Pasuruan, East Java. The results showed that accessibility such as queue time, travel time and transportation cost had a significant effect on perception of non-cash system. Perceptions also vary according to beneficiary characteristics.

Keywords: Non-Cash Assistance; Transfer; Financial Inclusion; Perception; Beneficiaries

Abstrak

Distribusi bantuan sosial melalui sistem non-tunai merupakan terobosan baru yang dilakukan pemerintah untuk meningkatkan efektivitas bantuan dan mempromosikan inklusi keuangan. Penelitian terbaru menyatakan bahwa, pada uji coba sistem non-tunai di tahun 2014, sejumlah penerima bantuan merasa kesulitan mencairkan bantuan dengan sistem tersebut. Mereka hanya menggunakan fasilitas non-tunai untuk mencairkan bantuan saja dan tidak ingin menggunakan sistem tersebut untuk layanan keuangan lainnya. Fakta tersebut dapat menjadi hambatan tercapainya inklusif keuangan. Studi ini bertujuan menyelidiki faktor-faktor apa saja yang memengaruhi persepsi penerima bantuan untuk menggunakan sistem non-tunai. Kami melakukan survei pada 139 penerima bantuan non-tunai di Kabupaten Cirebon, Jawa Barat dan Kabupaten Pasuruan, Jawa Timur. Hasil penelitian menunjukkan bahwa aksesibilitas seperti waktu antrian, waktu perjalanan dan biaya transportasi berpengaruh signifikan terhadap persepsi sistem non-tunai. Persepsi juga bervariasi menurut karakteristik penerima bantuan.

Kata kunci: *Bantuan Non-tunai; Transfer; Inklusi Keuangan; Persepsi; Penerima Bantuan*

JEL classifications: H31; H55

1. Introduction

The last few years electronic money or non-cash money is widely used as a means of financial transactions. In addition to the private sector, the government has also used non-cash systems in various services. One of the government's new breakthroughs is to distribute transfer to poverty reduction programs. Through Presidential Regulation (Perpres) No. 63 of 2017 dated July 12, 2017, the government formally approved the distribution of non-cash social assistance. The regulation applied non-cash social assistance to poverty reduction programs that include social protection, social security, social empowerment, social rehabilitation, and basic services. Compared to other countries such as India, Bangladesh, Haiti, and the Philippines, Indonesia is quite late in adopting this system.

The distribution of non-cash assistance is believed to improve the effectiveness and efficiency of aid.

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Social assistance is expected to be received by the appropriate people with exact amount of quantity, on time and good quality. Through this system social assistance is sent directly to the recipient's account through the channeling bank. Through a digital finance agency (LKD), the beneficiaries can disburse or save some of their assistance. Accounts can be accessed via a combo card which is a payment instrument that features electronic money and savings that can be used as a medium of distribution of various social assistance. This card can record the recipient's data and serve as an electronic saving or wallet (e-wallet). LKD is expected to encourage public interest to save. Non-cash assistance with LKD has opened the access of the poor to banking.

The distribution of social assistance is conducted by state banks, namely Bank Mandiri and Bank BRI. Bank Mandiri disbursed Rp108.4 billion social assistance to 240,000 families through the Family Hope Program (PKH) scheme and the Non-Cash Food Assistance program (BPNT). Of these, as many as 199,320 families received social assistance with PKK scheme, while 40,065 families received with BPNT sceme. The disbursement of aid was done to the financial agents of Bank Mandiri (LKD). Currently Bank Mandiri has more than 42,000 financial agents consisting of 22 thousand individual agents and 20 thousand counters of legal entities spread all over Indonesia. Meanwhile Bank Rakyat Indonesia until mid-August 2017, Bank BRI has distributed PKH in 2 phases, Phase I 2017 BRI successfully distributed aid to more than 2 million beneficiaries with nominal amount of Rp1 trillion. Phase II 2017, BRI distributed aid to approximately 1.6 million benefeciaries with nominal amount of Rp839 billion.

In addition to improving effectiveness, non-cash assistance also encourages the financial inclusion agenda. Through the system all beneficiaries can automatically access and use banking services. They can withdraw and save the money they received. However, the government suggested that social assistance should not be taken all. They are expected to save some money in their accounts. Through savings, the money from social assistance will grow and beneficiaries will get more benefit in the future.

However, in a pilot program of non-cash social assistance distribution in 2014 some empirical findings indicate that many social assistance beneficiaries use non-cash facilities only to disburse their money. Only few of them left their money for savings. In the early stages there were 542 poor households in Jakarta who received social assistance, but only 25% of the people set aside funds from the aid. This fact can be developed into access to productive credit. They are leaving about Rp200,000 or Rp100,000 of their money for savings.

1.1. Research Question

In addition to the limited amount of money received, the beneficiary's negative perception may affect the intention of benefiaries to use non-cash systems. Djamaluddin, Hidayanto, & Wardhani (2016) suggests that beneficiaries think that non-cash system difficult and tend not to use the financial services provided. If the condition continues, the program succeeds in increasing its effectiveness but fails to encourage financial inclusion. This study aims to investigate what factors influence the intention of beneficiaries to use or not to use non-cash systems. Whether demographic characteristics, access or government socialization are significant factor that influenced beneficiaries perception.

Specifically this research will answer the following questions: (a) How is the perception of beneficiaries regarding the adoption od non-cash social assistance?; and (b) What factors influence the beneficiary's perception regarding adoption of non-cash system?

1.2. Social Assistance and Consumer Perception

In addition to taxes, the government affects the distribution of income through expenditure policies. One considerable expenditure is social assistance for the poor. The government redistributes income through expenditure policy. The government increases the consumption of the poor by providing assistance in the form of cash and or goods. Social assistance is useful for improving the utility of poor households and minimizing the consumption gap between rich and poor as seen in Figure 1.

It shows that initially the poor household budget line is AB with consumption X and Y at point Eo. If

the government give provides cash transfer to the household then the budget line increases to KD. On a higher budget households can consume along the KD budget curve. Suppose the consumption lies at the point E2. The graph shows that after cash transfer household utility will increased (IC2>ICo). If the government provides in kind transfer by giving the goods x for free as much as AC then the budget line becomes ACD. On the ACD budget curve, if households consume at point E1 then household utility increases (IC1>ICo). Both types of government assistance increase household utilities. Household utilities at point E2 and point E1 are the same.

Effective transfer will increase beneficiary utility from point Eo to either E2 or E1. The distribution of social assistance through the non-cash system is a good way to improve transfer effectiveness. The non-cash system allows beneficiaries to receive funds faster with more flexible time and minimal leakage because they are transferred directly to their account. Thus beneficiaries can get benefit from transfer and increase their consumption. In addition to improving the effectiveness of transfer, furthermore, non-cash systems are expected to promote financial inclusion. Poor people that were not previously connected with banking are now possible to enjoy banking services such as savings. In the long run they are expected to get credit or insurance. Thats why government expect the beneficiaries to put some of the money as savings in LKD. In this way the beneficiaries will get benefit from the savings. In the long term saving will grow and will become one the source of household income. In Figure 1, saving will allow the budget line KD shifting to MN. With a higher budget line household will consume more and then get higher utility.

The intention of beneficiaries to use financial services is influenced by their perceptions of technology and its usefulness (Singh 1999). The better of beneficiaries perception, the higher their participation rate to use of non-cash systems. Many factors can affect people perception about the adoption of new technologies such as accessibility, cost, benefit, demographic characteristics and socialization. Miliani, Purwanegara, & Indriani (2013) found that benefit is a factor affecting a person's desire to use non cash technology (e-money).

Cost and accessibility affect the intention of people to use e-money. The more expensive the costs and the more difficult to access the system the smaller

people intention to use the non-cash system. The results of Fonchamnyo (2012) based on regression analysis indicate that security, trust, cost, benefit and access have significant influence to consumer decision to use e-banking. In addition, characteristic factors such as age, education level, marital status have a significant influence on the decision. The younger and the more educated person the easier for him to use the non-cash system.

Ariguzo and White's (2013) study found that there are significant differences characteristics between people who use and who do not use mobile money based on gender, age, income, education level and residence (city/village). The study was conducted in 8 provinces in Kenya on the M-Pesa program by taking 1975 respondents. Lee & Lee's (2000) by using consumer financial data in 1995 found that in general, the more educated, the more prosperous and the younger consumers who often communicate with private information providers then the higher intention to adopt banking technology than any other group. However, these characteristics vary depending on the different banking technologies used.

Government socialization also considered as a factor that affect the effectiveness of non-cash system. The research conducted by of Jonathan, Erlanda, & Hidayat (2015) showed that the socialization of Bank Indonesia with quality improved of payment system increased the intensity of non-cash system usage. Socialization of the non-cash system (e-money) is needed regarding the benefits and ways of using non-cash (e-money). People who usually use mobile phones usually do not automatically use mobile banking or mobile money (Etim 2014).

Beneficiaries who have used banking services are considered to be more receptive to non-cash systems than those who are not connected to the banking system. Those who have savings often go to the bank/LKD and have positive trust and perceptions about banking. Therefore non-cash system innovation through banking should not be difficult to be accepted.

Communication technology is another factor that supports the use of non-cash systems. It facilitates the flow of information between beneficiaries and banks as channel of transfers. Auta (2010) in Nigeria shows that the use of e banking is widespread because it provides great benefits such as easy transfer, transaction speed, low cost and time saving. The study also shows that strong telecommu-
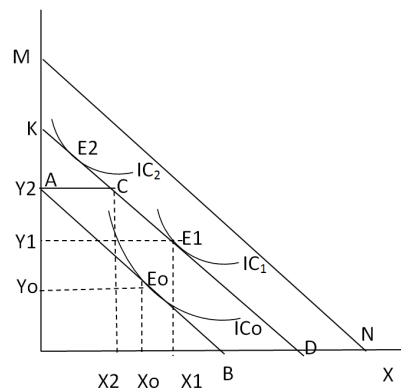
Figure 1: Cash Transfer and In Kind Transfer Will Increase Utility

nication support is needed to ensure stability of e banking applications and the necessary expansion of banking into rural areas.

2. Method

This study interviewed randomly 139 respondents who received PKH with e-money program at the end of 2014. In this program Beneficiaries are given simcard cards that must be installed on their mobile phones. Thus it is assumed that each rspondent has handphone and they can use it. Respondents were spread in two areas, 60 people in Desa Beji, Kabupaten Pasuruan, East Java and 79 people in Kecamatan Dukuh Puntang, Kabupaten Cirebon Regency, West Java. To analyze the respondent's perception toward easiness of non-cash system regarding 3 aspects namely access, characteristics and socialization, our study presents descriptive analysis shown in cross tabulation and histogram graph. We will comparing the conditions in both the 2 survey regions, Cirebon and Pasuruan.

To investigate the effect of access, characteristics and socialization toward the intention of beneficiaries in using a non-cash system, we use probit regression model. Beneficiaries tend to use non-cash systems if they felt the system is easy to access. Conversely, if they felt difficult to access then they are reluctant to adopt the system. The system is easy to access if the distance to LKD close, travel time to LKD short, low transportation costs and short queue time.

We use probit regression model to estimate the

effect of access, characteristic and socialization to perception of using non cash system :

$$D = \beta_1 + \beta_2 * \text{Access} + \beta_3 * \text{characteristic} \quad (1)$$
$$+ \beta_4 * \text{socialization} + e$$

Dependent variable, D is cathegorical variables where 1 is respondent feel that non cash system is easy, 0 others. The dependent variable D is the categorical variable where the value 1 means the respondent feel that the disbursement of transfer is easy, 0 others. In the probit model p is the probability of respondents feel that disbursement of transfer is easy. The greater the value of p, the greater the probability of the respondents feel that disbursement of transfer is easy and the greater probability of using the non cash system for financial transactions (saving) , instead of simply take all the transfer for consuming. Independent variables consist of access variables, respondent characteristics, and socialization.

Access is estimated by the following variables:

- Distance to LKD
  Ho: The distance to LKD is significantly affect the probability of respondent to use non-cash system. The closer the distance the easier the recipient to disburse the transfer and the greater probability of respondent to use non-cash system.
- Travel time to LKD
  Ho: Travel time to LKD is significantly affect the probability of respondent to use non-cash system. The longer the time to LKD the more difficult access to non-cash system so that it is
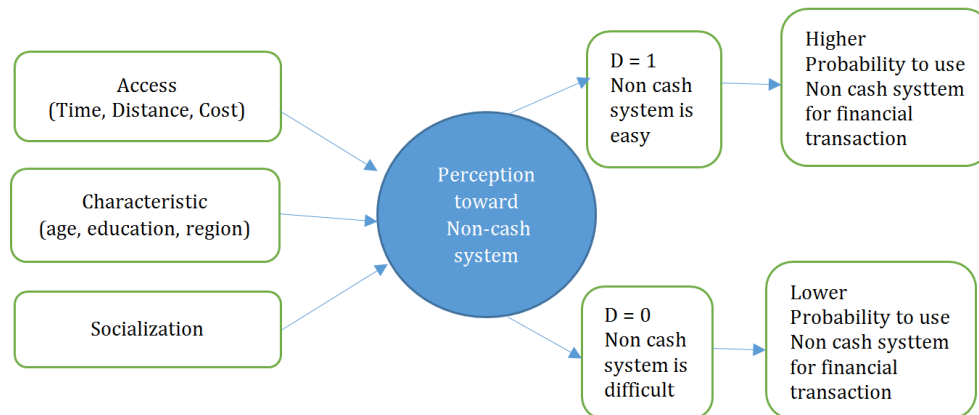
Figure 2: Framework of Regression Analysis

expected that the lower probability of respondent to use non-cash system.

- Waiting time at LKD counter
  Ho: Waiting time to LKD is significantly affect the probability of respondent to use non-cash system. The longer the queue time in LKD counter the more difficult to access non-cash system so that it is expected that the lower probability of respondent to use non-cash system

- Transportation costs to LKD
  Ho: Transportation costs is significantly affect the probability of respondent to use non-cash system. The more expensive the transportation cost, LKD the more difficult to access non-cash system so that it is expected that the lower probability of respondent to use non-cash system.

Characteristics of respondents are estimated by the following variables:

- Age
  Ho: The respondent age is significantly affect the probability of respondent to use non-cash system. The younger the respondents the higher the intention to use the non-cash system and the higher probability of respondent to use non-cash system. Young people are considered easier to adopt technology.

- Last education
  Ho: education is significantly affects the probability of respondent to use non-cash system. The more educated the more likely the respondent to use the non-cash system.

- Region

Ho: region has significantly affects the probability of respondent to use non-cash system. There is a difference of between region regarding the probability of respondent to use non-cash system.

Socialization is estimated by variable:

- Number of socialization
  Ho: Number of socialization is significantly affects the probability of respondent to use non-cash system. The more socialization given to the respondents the better respondent knowledge regarding the non-cash system and the greater the probability of using non-cash system.

3. Results and Analysis

3.1. Respondent's Perceptions of Non-cash System

Non cash is easy and varies between regions

Graph 3 shows that majority of respondents in both regions (56.83%) stated that the non-cash system is easy to use. As much as 61 respondents in Cirebon and 18 respondents in Pasuruan stated that the non-cash system is easy to use. Another empirical finding indicates that perception between the two regions tend to be different. Majority respondents in Cirebon (77.22%) said the system was easy while in Pasuruan (70%) mostly thought the system was

difficult. However, there are still many respondents stated that the non-cash system is difficult. It is more than 40%.
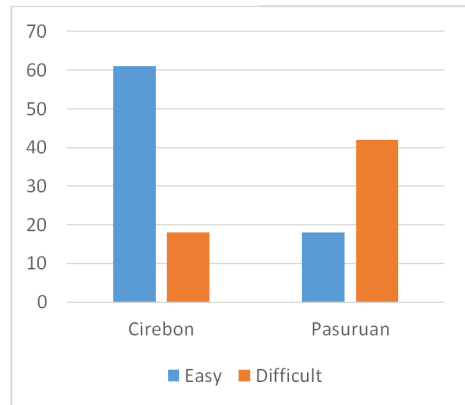

Figure 3: Perception of Non Cash System by Region

Education tends not to correlate with the perception of non cash system

Based on the last level of education that was completed, the data shows that most of the recipients are low educated. There are more than 70% of respondents in Pasuruan district have completed elementary school and it is about 16.67% of respondents graduated from junior high school and only 6% of respondents graduated from high school. In Kabupaten Cirebon the respondent who has completed primary school-education is more than 80%, junior and senior high school is 2.5% of each and respondent who has no school is 5%. Graph 4 also shows that more than 80 percent of beneficiaries who feel that the non-cash system are easy has completerd primary school. Meanwhile, those who feel that the non-cash system difficult (78%) has completed primary school. This indicates that the level of education tends not to correlate with beneficiary perceptions of non-cash system.

Respondents age who feel that the non-cash system easy is more than 40 years old on average

At Kabupaten Cirebon, 40-year-old respondents tend to assume that non-cash system easier than those 39 years old, as shown in Figure 5. However
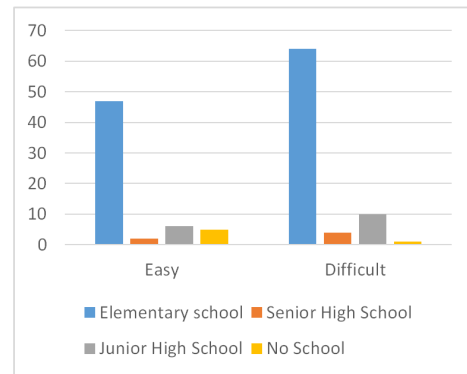

Figure 4: Perception of Non Cash System by Education

in Kabupaten Pasuruan, age did not differ significantly between respondents who feel the non-cash system easy and difficult. Those who feel the non-cash system easy is 43 years old while those who find it's difficult is 45 years old.
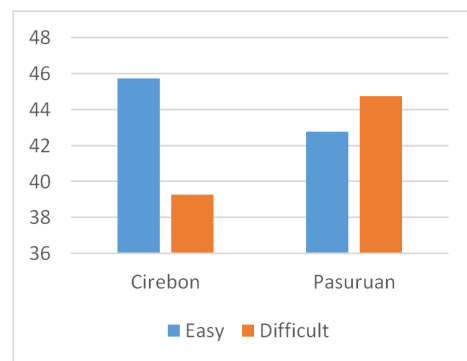

Figure 5: Perception of Non-cash System by Age

Table 1 shows that in Kabupaten Pasuruan the distance to LKD is far enough that is about average of 8.9 Km. However the travel time is quite short that is only 13.95 minutes. The transportation costs is quite low that is about Rp2.379. queue time in LKD counter is relatively longer, its about 95 minutes. In Kabupaten Cirebon district, the distance to LKD is relatively closer but travel time much longer than Pasuruan, it is about 15, 62 minutes. Transportation costs relatively higher, its about Rp 8.129. However queue time in LKD is shorter than Pasuruan.

Table 1: Distance, Cost, and Time to LKD by Region (on Average)

	Distance to LKD (Km)	Transportation cost to LKD (Rp)	Travel time to LKD (minute)	Queue time at LKD (minute)
Pasuruan	8,9	2.379	13,95	95
Cirebon	2,5	8.129	15,62	53

Distance to LKD tends to affect the perception of non-cash in both region

Graph 6 shows there is a pattern between perception of non-cash system and distance to LKD in Pasuruan Regency. Respondents who had to travel with longer distances to LKD felt that the non-cash system was more difficult. Their average mileage is about 10 Km. On the other side the distance to LKD for respondents who feel that non-cash system easy onlyis only about 6 Km. However in Kabupaten Cirebon respondent who stated that it is difficult and easy non cash had to travel with almost the same distance (more than 2 Km). It indicates that in Kabupten Cirebon there is no significant different regarding distance to LKD for those who feel non-cash system easy and difficult.
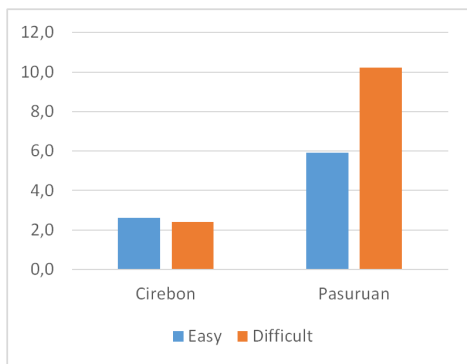

Figure 6: Perception of Non Cash System Regarding Distance to LKD

Travel time tends to influence non-cash perception in both regions.

Graph 7 shows that beneficiaries who have to go to LKD with longer travel time tend to find that it is difficult to use non-cash systems. In cirebon those who find it's difficult to use the average non-stick

system spend more than 20 minutes to LKD. While those who feel that it is easy only spend 13 minutes on average. In Kabupaten Pasuruan those who consider the non cash system difficult have to spend longer (14.6 minutes) than those who consider it easy (12.3 minutes).
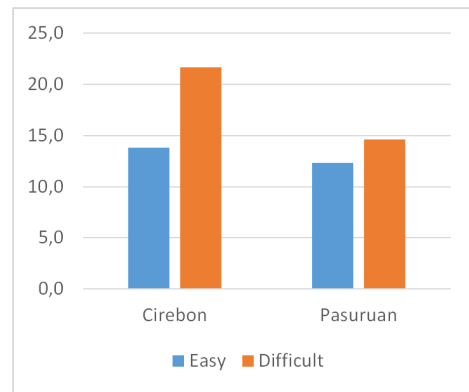

Figure 7: Perception of Non Cash System Regarding Travel Time to LKD

Transportation costs tend to correlate to respondent perception of non-cash system in Kabupaten Cirebon

Graph 8 shows that in Cirebon, those who spend more expensive transportation costs to LKD feel that it is difficult to use of non-cash systems. They have to spend about Rp13,056 for transportation. On the other side those who consider that non cash system easy only spend Rp 6,675 on average. In Pasuruan, transportation cost is relatively small, it is about Rp2,000. Base on cross tabulation data we expected that there is significant differences in perception related to transportation cost.

Queue time tends to affect perception of non-cash system in Kabupten Pasuruan

Graph 9 shows that in Kabupaten Pasuruan the benficiaries who spend longer time to queue in LKD tend to feel that non-cash system is diffcult. There is an interesting finding in Kabupten Cirebon. Those who spend more time to queue fell that non cash system is easy. Similarly those served more quickly consider the non-tone system difficult.
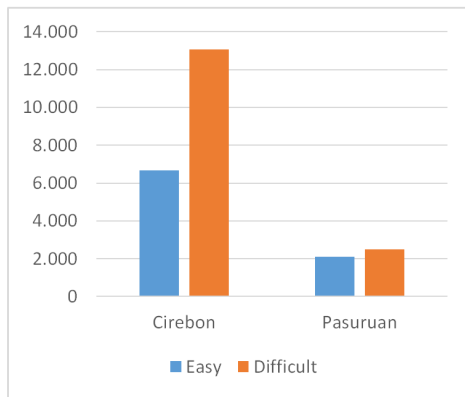
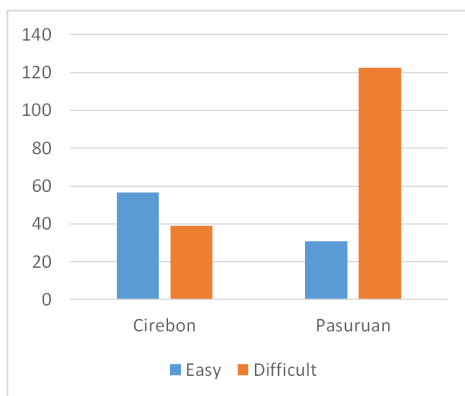**Figure 8: Perception of Non Cash System Regarding Transportation Cost to LKD**

Figure 9: Perception of Non Cash System Regarding Queue Time At LKD

The amount of socialization tends not to affect non-cash perceptions

Graph 10 shows that average respondents in Cirebon get more than 1 time socialization. However as much as 50% of respondents consider that non cash system is easy and another 50% feel that it's difficult. These findings indicate that in Cirebon the amount of socialization provided by the government has not proven to reduce the respondent perception that non-cash systems is difficult. Another interesting finding in Pasuruan where the more socialization was being given the more respondents who considered the non-tariff system difficult. The empirical findings may be due to the lack of socialization and inappropriate socialization methods or materials.
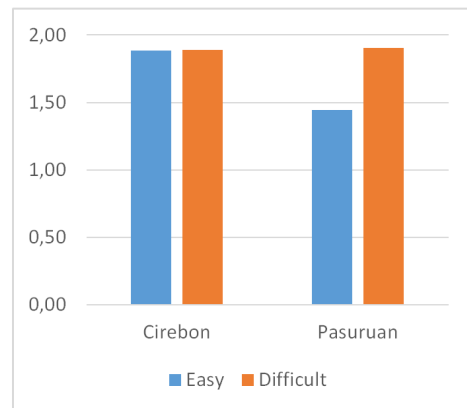

Figure 10: Perception of Non Cash System Regarding Number of Socialization

3.2. Factors affecting respondent perception of non cash system

The following is the result of probit regression analysis which analyzes respondent behavior as a whole. In general, the affect of access, characteristics, and socialization on perception of non-cash consistent to the null hypothesis. Nevertheless some of the effects of independent variables are not statistically significant. The distance, cost and time of the queue significantly influence the perception of non-cash system.

Table 2 shows that older respondents tend to believed that non-cash system easier. if the age of

Table 2: Probit Regression Output

Independent Variables	Coefficient	Dy/dx
Characteristics		
Age	0,0166	0,004112
Basic school, 1=SD/SMP; 0=others	-0,3928	-0,097405
No school, 1=no education; 0=others	-2,0425*	-0,506489
Urban, 1=Cirebon ; 0=Pasuruan	1,7823***	0,441974
Access to LKD		
Distance	-0,000014	-0,000003
Time to go	-0,0390*	-0,009659
Traveling Cost	-0,0001**	-0,000018
Queue time	-0,0064*	-0,001584
Number of socialization	0,1078	0,02672
Constant	0,2394	

Significant level : * 0,1;**0,05; ***0,001; Prob > chi2 = 0.0000; Pseudo R2=0.3487; Number obs = 139

respondent increase 1 year then perception will increase 0.004. However, the data do not sufficiently support the significance of these variables. It is probably because of almost all beneficiaries are more than 40 years old.

Perceptions of non-cash systems differ significantly between school and non-school. Non-school respondents feel that non-cash system difficult. If the respondent is not school then perception will decrease 0,5. If the respondents have completed elementary school then then probability of non cash system easy will decrease 0.097. However, there is no significant difference of perception between respondents who have completed basic and intermediate education. Some of respondent with basic education feel that non cash system easy and the other fell its difficult.

The perception of non cash system also difference significantly between Cirebon and Pasuruan. Respondents in Cirebon feel that the non-cash system easier rather than Pasuruan. The perception of Cirebon respondents who consider that non cash transfer easier is 0.44 higher than respondents in Pasuruan.

Table 2 shows that access to LKD affects respondents' perceptions of non-cash systems. The more difficult to access LKD the lower respondents' perceptions of non-cash system. Of the 4 access variables only 3 significant, namely travel time variables, transportation costs to LKD and queue time in LKD. The distance to LKD is negatively related to respondent perception. If distance to school is far enough

than respondent perception tend to lower. If the distance to LKD increase 1 km then perception will decrease by 0,0000030. Nevertheless the data are not sufficient to prove that variables are statistically significant.

Transportation costs Significantly affect the perception of non-cash system. The greater the cost to LKD the lower the beneficiary's perception. An increase Rp1 travel costs to LKD will decrease the beneficiaries perception 0.000018.

Time significantly affects beneficiary perceptions. The longer the time to disburse the transfer the lower the beneficiary's perception. If travel time to LKD increase then perception will decreases 0.0096. Queue time also significantly affects the perception of non-cash system. Respondents who had to spent more time to queue tend to feel that non-cash system difficult. An increase of 1 minute queue time will decrease perception of beneficiaries as much as 0.0015.

The relationship between the number of socializations and perception is positive. If number of socialization increases then beneficiaries perception will increase 0.026. However, the data is not sufficiently support that variable are statistically significant. It is probably because beneficiaries need more socialization appropriate method to have better perception of non cash system.

4. Conclusion

The beneficiaries should have positive perception regarding non cash system. If they feel easier than they will tend to use non cash system for financial transaction. To encourage beneficiary to use non-cash systems in the long term, the government need to improve access to disburse transfer. The government needs to make shorter travel times, lower transportation costs and shorter queue time. Education is needed to improve financial literacy especially for respondents who have never attended school. Socialization regarding to the benefits and the financial facilities attached to non-cash system should be provided intensively in a way that is easily understood by the respondents who have low education. Intensive education should be undertaken in areas where majority beneficiaries feel that non-cash systems difficult.

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