

Piloting Collection Model of Health Insurance Contributions for Informal Sector Members

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Abstract: Studies conducted by BPJS and CHEPS, 2015 showed that an active collection model through a third party (a promoter agent) can improve the collectability status of informal sector members. This study aimed to do a piloting collection model by a promoter agent (individuals, primary care facilities (PCF), and local leaders) as well as informed about the ideal criteria of being agents with its challenges. Methods: A quasi experimental design with non-equivalent group design (NEGD) was implemented on two provinces with 1,509 households' participants in Semarang and 1,193 households in Balikpapan. Results: an individual promoter agent had 37.5% lowest proportion of being delinquent. Multivariate regression analysis revealed that participants fostered by PCF and local leader as their promoter agents had higher risk for being delinquent than those facilitated by individual promoter agents. The effectiveness of the model differs between Semarang and Balikpapan with Individual Agent Model showed a significant effect in Semarang. While in Balikpapan, there were no meaningful models to improve the collectability. At last, the ideal individual agents have to hold: an experience working in the community, have highly social skills as well as highly understanding of their intervention regions.

1 INTRODUCTION

The number of participants BPJS Health up to December 2016 has reached 171,048,734 participants equal BPJS Health achieves 68.5% of the target of UHC and BPJS Health should be able to cover about 75 millions of residents in the remaining 2 years to 2019. From the contribution aspect, the growth of informal sector members who exceed this target ideally can support revenue contribution of JKN, but in fact the realization of contributions of informal sector members until the end of 2015 and then reached 2.8 trillion rupias. This amount is far above the initial target of the determination of the receivables of informal sector members estimated by BPJS Health at 1.8 trillion rupias. The high receivables are contributed by the low collectability of informal sector contributions that only reached 60%. This will certainly affect the national health financing cash flow, especially for BPJS Health which can ultimately have implications

for financial management and services in health care providers.

In the context of informal sector members, there were four main reasons impact delinquency rate: erratic income (23.6%), reluctant to queue (15.8%), others reasoning (16.8%) such as (ATM Offline, took a long time to pay at bank, forgot to pay (12.8%), disappointed with provider or BPJS Health (6,8%) (Ruby, 2016).

In Kusumasari & Widiastuti (2013), there are four element can influence person's behaviour to pay health insurance contributions. *Action* is built on the condition that a person wants or feels the need for a health service guarantee, especially when they sick (*desired*). However, when people health, it is necessary to build an interest in informal sector worker that make them interested in joining JKN program, which in their perception can be a protector of their risk from illness or risk of financial burden due to illness (*interest*). To achieve these perceptions, it is necessary to build awareness of in informal sector members in the existence of JKN in protecting themselves and their health (*awareness*).

If the AIDA link to informal sector members has been established it is not impossible that the level of collectability of health insurance contributions in this type of participants may increase. It takes a method or model of collection contributions that more than just provision of payment channels that tend to be passive. It takes an officer or individual who actively and directly interacts with the participants to guide, educate and build awareness of participants' behaviour in paying health insurance contributions, which will be known as BPJS Health Promoter Agent.

The general objective of this activity is the implementation of the Piloting Collection Model of Health Insurance Contributions for Informal Sector Members to enhance the collectiveness and sustainability of group contributions of informal workers in the achievement of the National Health Insurance (JKN) program.

2 METHODS

The design of this study used quasi-experimental method. Quasi experiments are experiments that have treatments, outcome measures, and experimental units but do not use random placements.

The quasi experimental design used in this study is Non-Equivalent Group Design (NEGD). This is because in the assessment to be done on the level of collectability status that will be compared not only between groups of intervention with the control group alone, but also among fellow intervention groups with different promoter model models. Baseline collectability level compared to the end line collectability level on each model as an intervention agency and the intervention by the control.

The selection of both groups was done purposively. A total of 300 informal worker households were designated as intervention targets, but due to field dynamics faced by agents, the number of households reached for each agency was at least 150 households. The number of households that can be visited is 6 - 8 households per day per promoter agent, so that within 1 month (25 working days) will be achieved the visit of 150 households of informal workers per month. While the control areas were not intervened, 150 informal workers' households in the control areas were adjusted to the number of participants for each intervention and observed their initial contribution rate (as baseline data) and at the end of the program (end line).

The unit of analysis in this study was the household of informal worker participants who participated in the BPJS Health in one cluster (1

cluster, consisting of 150 households). Interventions conducted at Central Java Province, Semarang City and East Kalimantan Province, Balikpapan City

The population in this study was all households of informal workers in the experimental model of active dues collection model, namely Central Java and East Kalimantan provinces. While the sample in this study is the head of the family who became the respondent survey of the collection model of contribution stage 2 in 6 cluster points per province (1 point cluster contains 150 households).

This trial was conducted 2 (two) stages. Phase 1 is held on October 20, 2015 until December 23, 2015. Stage 2 is held from April 2016 to 31 October 2016.

3 RESULTS

Data was analysed by univariate, bivariate, and multivariate analysis. Variables were used consist of number of family members, children under 5 years old and oldest of family members, services class, worker number of family members, sex, age, education background, married status, smoking behaviour, sector of work, head of household income, health status at first registration, economic status, catastrophic status, and respondents' delinquency status in the baseline and end-line of the research. Data was category and used SPSS software to analyse.

The data was analysed by univariate to show the frequency of all variables. Bivariate analysis was done to show the relationship between collectability status baseline and end-line and others variables which had represented social economic, and demography aspect. Bivariate analysis used *chi square* test by city, rural urban cluster, and village sample.

Besides, chi square was used to show the differences increase of delinquency rate between intervention and control members. So, it could show the effectivity of intervention. Effectivity analysis also described based on promoter agent model in this intervention which shown the lowest proportion of delinquency rate by the promoter agent model.

After found the affecting factor of collectability rate, the data was analysed multivariate to show the most affecting factor of collectability rate. Multivariate analysed used logistic regression test by looking the highest Odds Ratio (OR) value of independent variables. Multivariate analysed was done on city area sample level (Semarang and Balikpapan)

In this study there are a total of 2702 household heads of informal sector members who responded to the trial of applying an active JKN dues collection model through a promoter agent. This number consisted of 1509 household heads in Semarang city (55.8%) and 1193 household heads in Balikpapan (44.2%).

1. Demography profile

Table 1: Demography Profile of Respondents in Semarang and Balikpapan 2016

| Variables | Semarang | Balikpapan |
|-----------------|----------|------------|
| Sex | | |
| Male | 75.2% | 80.9% |
| Female | 24.6% | 19.1% |
| Age | | |
| <26 years old | 2.8% | 3.5% |
| 26-40 years old | 28.9% | 27.4% |
| 41-58 years old | 46% | 47.3% |
| > 58 years old | 22.4% | 21.8% |

Majority of the respondents are male which were 75.2% in Semarang and 80.9% in Balikpapan. But there are around twenty percent respondents are female who act as head of household for informal workers who become their household members. This data show that the role family health insurance payer majority are heads of families, fathers or sons who are in the household. However, the table above showed women role as family health insurance payer is rising.

Most (3 of 4) payer contributions in the households of informal workers in Semarang are at working age (26 - 58 years). However, not a few workers in informal workers' salaries are more than 58 years old (retirement age), 22%. This trend occurs in all villages sample. Not much different from the characteristics of the age of underwriters in the city of Semarang, 3 of 4 underwriters in the city of Balikpapan are also at the age of work and the rest are at retirement age.

2. Social and Economic Profile

Table 2: Social Economic Profile of Respondents in Semarang and Balikpapan 2016

| Variables | Semarang | Balikpapan |
|----------------------|----------|------------|
| Married status | | |
| Single | 5.5% | 4.3% |
| Married | 82.5% | 79% |
| Divorce | 11.5% | 16.5% |
| Education background | | |

| | | |
|--------------------------|-------|-------|
| < SHS | 23.1% | 48.4% |
| SHS – Vocation/ Bachelor | 49.4% | 48.9% |
| > Vocation- Doctoral | 27.3% | 2.7% |

Most of the respondents are married 83% in the city of Semarang and 79% of Balikpapan. Both in Kota Semarang and Balikpapan, underwriters in households of informal sector member are dominated by heads of households with high school education – Diploma (48%). This indicates that most of the contributors in informal sector member households are educated, although there are still 29% of respondents who have junior high school education. In this group, potential contribution arrears most occur.

From Semarang data in Figures and Balikpapan in Figures 2015 indicates that 60% of the workforce population in Semarang and 27% of the workforce population in Balikpapan work in the informal sector (PBPU). In workforce aspect, most of them work in employment in services (71%) and 15% in trading. Only 3% of them work in agricultural. Of those who work, 58% work more than 40 hours a week. Nevertheless, there are still 5% health insurance payers are unemployed and 37% work less than 40 hours a week. In this group of households also the potential contributions of arrears most occur.

Table 3: Income Profile of Respondents in Semarang and Balikpapan 2016

| Area sample | Income Profile Category | Percentage |
|-------------|---------------------------|------------|
| Semarang | < Rp 1,900,000 | 27.6% |
| | Rp 1,900,000-Rp 4,500,000 | 52.4% |
| | > Rp 4,500,000 | 6.4% |
| Balikpapan | < Rp 2,200,000 | 53.2% |
| | Rp 2,200,000-Rp 4,500,000 | 36.5% |
| | > Rp 4,500,000 | 10.2% |

84% of the participants of the informal sector who responded to the pilot project in Semarang are worked. Of those who worked, more than half of the respondents earned between Rp 1,900,000 to Rp 4,500,000, only 6.4% of respondents earned more than Rp 4,500,000 while 4 out of 10 respondents were still earning less than the minimum regional wage (UMR) of Semarang, Rp 1.900.000 (27.6%).

Meanwhile, in Balikpapan city, 86% of family members of informal sector who participated in the pilot project in this city are worked. Of those who worked, 36.5% of the respondents earned between Rp 2,200,000 to Rp 4,500,000, only 10.2% of respondents earned more than Rp 4,500,000 while almost 5 out of 10 respondents still earned less than UMR in Balikpapan at Rp 2,200,000 (53.2%).

3. Other Social Economics Variables

Table 4: Economic Status and Catastrophic Rate in Semarang and Balikpapan 2016

| Variables | Semarang | Balikpapan |
|-------------------|----------|------------|
| Catastrophic rate | | |
| Yes | 10.6% | 22.1% |
| No | 89.4% | 77.9% |
| Economic status | | |
| Poor | 12.7% | 35.4% |
| No Poor | 87.3% | 64.6% |

In this study also identified poverty status of underwriters in informal sector members. Poverty criterions were based on Social Ministry Policy No.46 of 2013 about *Fakir dan Orang Tidak Mampu*. The data showed that 12.7% of informal sector member in the pilot project model of health insurance contributions collection in Semarang categorized as poor household in Semarang. In addition, there are 10.6% of informal sector household falls into the category of catastrophic conditional, which is a household financial condition where 30% of the income is charged to pay dues.

In Balikpapan city 35.4% of respondents in this city are identified as having poor status based on Social Ministry Policy No.46 of 2013 about *Fakir dan Orang Tidak Mampu*. In addition, 22.1% of informal sector member fall into the category of catastrophic conditional, which was, the financial condition of informal sector members with a proportion of 30% contribution to income. Percentage of participants in the informal workers who fall into the poor category and experience greater condensed catastrophic conditions in Balikpapan than the percentage in Semarang. This is allegedly because of the cost of living (living cost) in the city of Balikpapan. Balikpapan is currently a costly living city according to various references.

4. Healthy profile

Table 5: Healthy profile of Respondents in Semarang and Balikpapan 2016

| Variables | Semarang | Balikpapan |
|-------------------------------|----------|------------|
| Health status at registration | | |
| Health | 89.8% | 96.6% |
| Sick | 10.2% | 3.4% |
| Services class | | |
| 1 st class | 20.2% | 16.8% |
| 2 nd class | 36% | 25.4% |
| 3 rd class | 43.8% | 57.8% |

Most of the respondents in Semarang who registered as member of BPJS Health were good health (8.89%). This means, 1 out of 10 respondents registered as BPJS health's members were taken sick. Based on the class of care taken, 43.8% informal sector members who as respondents in Semarang used 3rd class of services. In Balikpapan, 96.6% of informal sector members who participated in the pilot project admitted being in good health at the first registration as a participant and 57.8% respondents chosen 3rd class of services.

5. Level of Contribution Collectability

In this pilot study conducted collection of dues through the placement of promoter agencies BPJS Health in some sub-districts which has been established into the intervention area of study. In each city, six sub-districts have participating households in the largest informal worker group. In the sub-district, each village was selected to intervene. In each village a promoter agent is placed, with one type between individual promotional agents, promoter agencies working with FKTP and promoter agencies in collaboration with village officials.

To see the level of contribution collectability, the researcher uses the respondent analysis unit is the individual with a total of 7856 individuals participating in the informal sector members who participated as the respondents of this pilot project actively through the promoter agent. This number consisted of 4,282 individuals participating in informal sector members in Semarang, Central Java (54.5%) and 3574 members in Balikpapan, East Kalimantan (45.5%).

In Semarang, respondents with informal sector members who chosen third class of services were the most participants (44%) except in Tlogosari Kulon (30%) and the lowest participants chose first class (19%). The amount of delinquency against total participants at the baseline was 31% and increased by 17% to 48% on the end-line. Participants who chose first class of services became the highest arrears followed by 2nd and 3rd class. In the baseline data, villages with the highest total arrears were Puduk Payung (38%) and lowest Krobokan (22%). Then when viewed on the end-line data, the highest arrears remain in Puduk Payung (54%) and lowest Tlogosari (39%) and Krobokan (40%).

The rate of contribution collectability in the Balikpapan city intervention area showed that respondents in the informal sector members with the third class of services were the largest participants (61%) and the same for all villages, while the lowest

participants were in 1st class (16%) except in Batu Ampar village by 23 %. Total Arrears to total participants at the 24% baseline increased 22% to 45% on the end-line. Participants with 3rd class (23.54%) became the highest arrears and followed by 2nd class and 3rd class of services. The highest arrears on baseline were Batu Ampar village (36%) and lowest Karang Rejo (19%) became the lowest percentage of influence was Karang Joang (18%).

4 DISCUSSION

Based on the result of *chi square test* with 95% confidence level, it is found that the condition of the respondent when registering as a participant of BPJS Health in Semarang has an effect on the incidence of arrears (P value = 0,002) with the highest proportion 57,9% respondents in this city registered in sick condition. Respondents in sick conditions tended to have dues delinquency, they do not continue to pay dues when they have received services and returned to health. This is allegedly because participants who enrolled in good health tended to have sufficient knowledge of the concept and philosophy of health insurance for their lives, while those in sickness tended to register due to their current needs. This variable does not provide a meaningful relationship to contribution in Balikpapan, however there is an odds ratio value that can illustrate the role of this variable against the risk of contributions arrears. From the results of the odd ratios, the households of informal workers in Semarang who are underwriters are enrolled and / or their members are sickly, 2.1 times are at higher risk of delinquent JKN contributions compared to those enrolled when they are healthy. While in Balikpapan, informal sector household whose underwriters are enrolled and/ or their family members are sick, 1.4 times higher risk of arrears JKN contributions compared to those enrolled when healthy.

The contribution delinquency in Balikpapan also was affected by number of family member (p values 0.000) and the highest proportion is households with more than three persons in one family. So, households with more than three persons in family 2.8 times higher risk of arrears JKN contributions.

Besides that, in Semarang the presence of elderly has a significant relationship with the incidence of arrears (P value = 0.0001), as well as in the city of Balikpapan (P value = 0.0001). Therefore, the informal sector households with elderly household members or underwriters are heads of families over the age of 58 should receive

government assistance. Not only about the ownership of the elderly in the household, the arrears of contribution in the informal sector members in Balikpapan is also affected by the ownership of children under five (P value = 0.006). Toddlers are also a group of people who are vulnerable to health problems from outside so that the risk of exposure by disease agents to be high.

From the socioeconomic point of view, the informal employment households in Semarang who have catastrophic rates have a significant relationship with incidents of arrears (P value = 0.034), as well as respondents in Balikpapan (P value = 0.008).

Based on the intervention of the promoter agent, it can be seen that the type of promoter agent has a significant effect on delinquency status of informal sector members in Semarang City with p values 0.000 and the proportion of participants in the lowest arrears is the individual promoter agent of 37.5%. Based on the analysis of multivariate regression, participants of informal workers are supervised by agents promoters working with primary health care is 1.4 times more at risk for delinquent dues than agents promoter individually while participants of the informal workers who scouted agent promoter who worked with village officers at risk 1.7 times greater for delinquent JKN contributions compared to individual promoter agencies.

Meanwhile, in Balikpapan the lowest proportion of participants in arrears exists in individual promoter agent by 44.4%. Based on a regression analysis, informal sector members who had supervised by promoter agent working with health facilities and village officials 1 times greater risk of delinquency than individual promoter agent.

One of the achievements of the promoter agency's performance is the role of the agent in maintaining the level of college participants' collective contribution, both routine and routine (not in arrears). Below shows the result that the presence of a promoter agency in the middle of the informal worker of BPJS Health in Semarang made almost 61% of the informal workers' households of the pilot project participants still pay regularly. While in the control area, where the fee payment model is passively conditioned on the basis of the existing payment channel, there are 30.77% of the informal worker's households who remain delinquent in payment of their health insurance contributions.

While in Balikpapan, the presence of promoter agency in the middle of informal sector members of BPJS Health keeps more than 50% of informal sector households routinely pay from informal

workers. Whereas in the control area, where the fee payment model is passively conditioned on the basis of the existing channelling payment channel (existing channel), there are 22.54% of the informal worker's households who remain delinquent payment of their health insurance contributions.

In terms of cost ratio in the implementation of contribution collection by promoter agent, it can be seen that the model of individual promoter agent in Semarang City has the lowest cost ratio that is 1.57 whereas the biggest cost ratio in Semarang City is promoter agent in cooperation with village officer with the amount of 2.44. In the city of Balikpapan, lowest expense ratio is the promoter agent who cooperated with village officials with a ratio of 3.51 while the ratio of the largest costs in Balikpapan is the agents who cooperate with healthcare facilities with the amount of 3.98.

5 CONCLUSION

1. In general, all areas of both intervention and control occur to increase arrears;
2. The effectiveness of models differs between two areas: Individual Agent Model is more meaningful in Semarang. While Balikpapan does not have a meaningful model in the increase of collectability;
3. Costs ratio is greater than the benefits so that the cost of benefits is not efficient;
4. There is no general profile of agents that can indicate performance fee collection: Semarang: women and agents as main income, while in Balikpapan: Male, age above 30 years, married, has experience and this job as the main income.
5. Profile agent required to perform their functions are have active experience in social activities so that they can formulate strategies in the field; having a high social spirit and good communication skill; know the area very well, so it can map the participants quickly and can be accepted by the local community well.
6. The main obstacle is the presence of household heads who are hard to find because of work and are not willing to meet, the difficulties of the agents coming to the night especially for the female agent, for the housing area are not given access to meet the families of informal worker participants, resident participants, and in rural areas difficult geographically reachable.

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