A study of ability to pay and willingness to pay of national health insurance voluntary participant in rural area

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A STUDY OF ABILITY TO PAY AND WILLINGNESS TO PAY OF NATIONAL HEALTH INSURANCE VOLUNTARYPARTICIPANT IN RURAL AREA

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Abstract

Background: Expansion of coverage for informal workers is still one problem in achieving universal health coverage. Independent participants non-PBI scheme is intended for people in the informal sector in National Health Insurance (JKN) era. The existence of adverse selection and delay in contributions payment by Independent participants non-PBI need to be solve in order to find the most appropriate model of contribution collection in informal sector.
Objective: To analyze policies in prevention of adverse selection in JKN and identify potential health funding by informal sector in rural and urban communitiesin Banyumas.
Method: Cross sectional design with structured qualitative approach conducted in populationof Independent participants non PBIwho delay in contribution payment at least 6 months, with a sample of 197 respondents.
Results: There was potential health funding in informal workers in Banyumas. Ability to Pay (ATP) was greater than the amount of the contribution Class III (3,49 USD-7,35 USD). Willingness ToPay (WTP) was greater than the amount of the contribution Class III (2.00 USD- USD $ 2,57). ATP was greater than the WTP.
Conclusions: It is necessary to create a policy to provide incentives to informal sector who able and willing to pay the JKN contributions regularly.

Keywords: Ability to Pay, Willingness to Pay, National Health Insurance

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INTRODUCTION

Various issues related to implementation of National Health Insurance (JKN) have become emerging issues, such as the expansion agenda and the level of protectionthat must be accompanied by an adequate contribution. One of the obstacles to the participation is the large numbers of not-salaried employees or commonly referred to as informal sector workers. Most of the informal sector workers do not occupy business location permanently. Central Bureau of Statistics (BPS) stated in 2009, there were 37.9% of salaried workers and 62.1% of not-salaried workers, even 28.8% of the number of salaried workers is actually workers who do not receive salary.Central Bureau of Statistics (BPS) stated in 2013 that the number of informal sector workers was 60.5%. The conditions is worsen with the fact that most of them have not realized yet the need for contributions for health insurance and do not even understand what health insurance it is. Low salary contributes to limited access to education, nutritious food, adequate housing and quality health services [1]. The absence of coercive regulations forinformal sector workersto participateJKN by register as a participant non PBI lead to adverse selection in the BPJS risk pooling. Only those who feel the need of health serviceswho wants to register as a participant. The absence of waiting time period also promoteunfavorable risks pooling occur. If it happened for a long time, it is feared JKN scheme could not run because the heavy burden of health costs to be spent.Previous

research found the presence of moral hazard patterns and adverse selection in the informal community of health insurance participants in the JKN era [2]

Universal health coverage in JKN could be achieved with application of the principles of health insurance, including the application of the law of large numbers. Large number of participants will allow risk pooling impartial and running properly to occur. The mechanism of subsidy from the healthy for the sick and from the rich for the poor could be run in accordance with the JKN policy objectives. Adverse selection is shown by stacking participants who only register when they need health services and delay in contribution payment as long as they feel no need health services.

METHODS

This study used a descriptive observational study with case study design. A qualitative approach with indepth interview and quantitative approach with open questionare was conducted to obtain policy analysis data and explore the potential and models of contribution collection in informal sector workers. The study conducted in Banyumas regency and used 197respondents as a studysample from a population registered independent participants non PBI who delay in contribution payment for at least 6 months as of July, 2016. Univariate analysis used to make tabulation of monetary unit at ability and wilingness study.

RESULTS

One of the benefits from joint universities research isthe real effort to packagesthe researches into a policy recommendation which is one way to deliver an evidence-based policy to stakeholders. Therefore, the results not only published in scientific manner, but also provide solutions and create better circumstance. The series of studies concerning National Health Insurance system found some issues in JKN implementation. Problems have been tried to solve with various regulatory policies, temporarily or permanently. Attempts to study every detail of implementation should be based on the public needs as a stakeholder's target. Adverse selection is a condition in a health insurance scheme where much of participants collected are participants who are at risk of experiencing chronic diseases or in need of high healthcare cost. Ideally, a health insurance pool has broad range of participants, from low risk to high risk of diseases. If the collected membership close to ideal, then risk pooling will properly distributed. Healthy participants will contribute to funding of ill participants. Health insurance providers who experience adverse selection conditions will be faced with very highcost of ill participants. This catastrophic financing will lead to a high rate of claims for services and the collapse of the health insurance system. Independent participants non PBI schemes of BPJS in JKN era is indeed one of the schemes that addressed for the informal sectors that is not listed in the scheme of PBI. Informal sector workers who identical with the majority of near poor people isthe communities who vulnerable to impoverishment against high cost of healthcare. The circumstance of uncertain income is not reflection that they are incapable to pay and deserving of full government health insurance aid (PBI). Adverse selection is identified occurfrom the high number of drop outof monthly contribution payments by independent participants non PBI. The dropout rates continue to increase in the second year of JKN at 2015.From January to August 2016,it is recorded the addition of drop out contributions as much as 10-50%. The implication of these conditions is that the independentparticipantsnon PBI only registerwhen they need health services for a moment and then when they feel healthy they assumeno need of health insurance`

This is evident from the informant as follows:

> "I do not pay anymore, miss, I've already healthy anyway.. later if I need it ... when I got sick i mean, I definitely will join again" (Informant 122)
> "It was a visit to midwife, she instead told me to join the BPJS Kesehatanjust in case for my wife that labor ahead soon.. So I register, it is not bad, eventually i did not pay anything "(Informant 28)
> "... Yesterday my son was sick anyway ... got typhoid and need hospitalization, so the nurse told me to register ..." (Informant 92)
> "I register for my father, for costs saving cause he must control his disease every month ... now he already healed…and I forgot to pay the contribution ..." (Informant 17)

In early January 2015, BPJS has been experiencing a shortage of budget as much as 5 trillion to cover the cost of overwhelming claims on healthcare for independent participants non PBI. Contributionsthat are expected to be paid on sustainable fashion may not be accomplished at this time. Informal sector workers that is currently in good health, they do not feel the need to have a health insurance. So the principle of the Law of Large Numbers can't be met.

Table 1: Respondents Characteristics Informal Sector in Banyumas

No.	Category	n	(%) N=197
	Age		
1.			
	15-24	14	7,1
	25-34	48	24,4
	35-44	57	28,9
	45-54	37	18,8
	55-60+	28	14,2
	Education		
2.			
	No education	10	5,1
	Primary School	51	25,9
	Junior High School	51	25,9
	Senior High School	71	40
	Academy/University	14	7,1
	Revenue based onUMRBanyumas(2015)		
3.			
	Lower thanUMR(<78,59 USD)	102	51,8
	Upper thanUMR(>78,59 USD)	95	48,2
	Family member registered atBPJS		
4.			
	Less than 4	143	82,6
	4	7	21,8
	More than 4	79	9,7
5.	**Bank account ownership**		
	Yes	154	78,2
	No	43	21,8
6.	**House ownership**		
	Own house	111	56,3
	Rent a House	7	3,6
	Parents/sibling house	79	40,1
7.	**Marital status**		
	Not married	8	4,1
	Married	179	81,8

	Widower/widow	10	5,1
8	**Type of settlement**		
	Rural	70	35,5
	Urban	127	64,5
9	**Ownership Type Class Services JKN**		
	ClassI(Rp59.500)	29	14,7
	ClassII(Rp.45.500)	54	27,4
	ClassIII(Rp.25.500)	114	57,9

The population of this study were participants registered in the membership department BPJS Branch Office Banyumas who do not pay JKN contribution monthly for at least 6 consecutive months. Identificationof therespondent characteristics in this study resulted the following information:

A total of 31.5% or 105 respondents were in informal sector with 25-44 years old (productive age). Forty percents (71 respondents) had senior high school education level, but the majority had income below regional minimum wage of Banyumas regency, as many as 51.8% or 102 respondents. The need for health insurance by BPJS perceived greater in informal community groups who have been married. There was obligation to provide health protection to his family members. The majority of them had a good level of education and enrolled in their productive age. The majority had a bank account number and has had his own home ownership. It's just that the majority of them still had incomes below the minimum wage Banyumasyear 2015.

The majority had 4 family members who are registered as members of BPJS, as many as143 respondents (82.6%). There was a tendency to register one or more family members were deemed in need of health services in the near future. This was one of the characteristics features of the condition of adverse selection. The majority of 154 respondents (78.2%) had a bank account. A total of 111 respondents or 56.3% had anown homes, only 7 respondents who had a residence leased or contract. Ownership of bank account number was no guarantee of its current contribution payments each month regularly. Forgotten and lazy to go to the bank was one of the reasons they were delay in payment of health insurance contribution. A total of 179 respondents or 81.8% were married. Sixty-five percent of respondents lived in urban areas. The majority of respondents had membership status JKN Class III with the lowest premium payments,1,82 USD (57.9%). The need for greater health security felt byinfomal sectors who live in urban areas. Availability of access to information and better access to services were affecting people's desire to participate the National Health Insurance. The need for health insurance by BPJS perceived greater in informal community groups who had been married. The obligation to provide health protection to his family members. The majority of them had a good level of education and enrolled in their productive age. The majority had a bank account number and has had his own home ownership. It's just that the majority of them still had incomes below the minimum wage Banyumas inyear 2015. Economic status was one indicator in providing access to health services in the community. Estimates of household expenditure was considered far more effective to assess the ability of the local economy than by looking at aspects of family income. Total expenditure of household needs in the context of local communities in Indonesia is modified based on the use of the goods or services they buy and spending on goods and services that they receive. Local culture of Indonesian societytend to be more comfortable sharing and mutual cooperation in fulfilling the needs of daily household.

Total expenditure was obtained by calculating the average number of needs of consumption and non-consumption expenditure. Total household expenditure was composed of two major domains, household expenditure on food consumption and expenditure on non-food consumption. Spending on food consumption consist of the basic needs, drinks, snacks, fruit, vegetables and side dishes. Non-food expenditures consist of expenditures for cigarettes and tobacco, consumable expenditure, monthly dues payment needs such as electricity, water and other monthly expenses. Transportation expenses, the need for self-care and salon, purchase insurance needs and purchases of secondary and tertiary needs, spending on school or work, spending on health and other social contributions such as donations lavatory marriage, death or charitable donations etc.

Table 2. Household Expenditure of Informal Sector Family in Banyumas District

No	Household Expenditure (in Month)	Mean(Rp)
I	**Expenditure on food consumption**	
	1. Basic needs (Rice,Cooking Oil,Sugar etc)	10,98
	2. Drinks (Mineral Water,Milk,soft drink)	2,90
	3. Snack (Cake,Bread,Candy, etc)	2,91
	4. Fruits	14,00
	6. Vegetables, side dishes, seasoning	8,72
II	**Expenditure on non-food consumption**	
	1.Cigarette or Tobacco	3,17
	2.Monthly payments (dues rent, electricity, water, insurance and installments vehicle)	27,36
	3.**Domestic Consumables goods** (Soap, Toothpaste, laundry detergent, cosmetic,deodorant, parfumeetc)	9,32
	4.**School /Work needs** (Tuition fee, books,stationary, school tuition etc)	15,54
	5.**Transportation** (Gasoline,school shuttle expenses,taxibike/public transportation expenses)	3,75
	6.**Salon expense** (haircut, facial, spa etc)	0,32
	8. Health expense (Drugs, herb, health supplement, medical cost etc)	3,13
	9. **Socio-spiritual activities** (Donation, donations death, dues RT / RW, Arisan, visit the sick, weddings Donations)	10,34
TotalHouseholds expenditures		100,28

Source: Primary data,2015

Total household expenditure wasthe average of needs spent by households. Extreme values range on the maximum and minimum values in this study resulted in an average value which is relatively lower than the median value. The average amount of total household spending on public informal sector in Banyumas is 100,28 USD

Table 3. Composition of Household Expenditures on public informal sector in Banyumas

	Total food household expenditure in 1 month (in USD)	Total non-food householdexpenditures in 1 month (in USD)	Total Household Expenditures in 1 month (in USD)
Median	**21,08**	**43,66**	**64,73**
Mean	**27,03**	**72,94**	**99,96**
Minimum	2,93	2,5	7,15
Maximum	307,24	621,62	928,85

Table 4. Estimated Ability to Pay (ATP) or Contribution Paying Ability JKN Public Informal Sector

AbilityToPay	Amount(USD)
CriteriaI	
Food	27,30
Not food	69,73
Disposibleincome	69,73
ATP=5%DisposibleIncome	3,49
CriteriaII	
Cigarette	3,17
CigarettedanNot food	72,94
ATP=10%(CigarettedanNot food)	7,29
CriteriaIII	
ATP=4% fromTotalexpenditure	4,00

Ability to pay insurance contributions for informal workers ranges from 3,49 USD - Rp7,29 USD. ATP was higher than the amount of the contribution JKN per month, primarily for the purchase of insurance premium class III.Study of the willingness to pay of informal sector in this study using population-specific from society which had existed as JKN participants who no longer pay regularly for at least 6 months. Delay in payments only 1 month led to loss of the right to health insurance they should receive.

Selection class health care and a monthly contribution to the scheme independent participants non PBI dominated by urban communitiess. People tends to sign up to the scheme for the lowest contribution that is 1,82 USD.

Table 5. Tabulation and Election Type Region Settlement Class and Premium Monthly service JKN

		Class servicesand JKN monthly contribution			Amount
		ClassI (4,25 USD)	ClassII (3,25 USD)	Class III (1,82 USD)	
Residential area	Rural	10	22	38	70
	Urban	19	32	76	127
Total		29	54	114	197

The possibility of contribution rate adjustments in the future is possible to happen. Vulnerability of sustainable of regularly contribution payments towardchange in contribution rate are the root causes of contribution payment arrears. A majority of people in urban areas expect no increase in the amount of premiums JKN.

Table6.Cross TabulationType of residential areas with willingness to pay toward fluctuation of future JKN contribution amount

		willingness to pay toward fluctuation of future JKN contribution amount			Amount
		Yes	No	constant	
Residential areas	Rural	17	19	34	70
	Urban	45	27	55	127
Total		62	46	89	197

Table7.*Wilingness to Pay* (WTP) Informal Sector in Banyumas

	WTP (USD)
Mean	2,57
Median	2,00
Minimum	0,16
Maximum	8,50

Willingness to pay a contribution for informal workers in Banyumas ranged from a minimum of 0,16 USD up to a maximum of Rp. 8,50 USD. The average of willingness to pay contribution was 2,57 with a median 2,00 USD. WTP was greater than the amount of the contribution with the lowest service,class III (1,82 USD)

DISCUSSION

Policies that have been taken to overcome adverse selection is not effective resolving the problemssurfaced today. Restrictions of waiting time on the use of benefits have effect on administrative bureaucracy that inconvenient forenrolled patients, but do not have any leverage to encourage informal sector people at low risk of illnessto register immediately [3] [4]. BPJS Board of Directors Regulation No. 1 Year 2014 on Procedures for Membership Registration that has been updated by the BPJS Board of Directors Regulations No. 2 year 2015 per July 1, 2015, only provide limits of healthcare usage that *moral hazard*by participants. Expansion of the scheme Receiving Aid Health Insurance Fee (PBI) by Government Regulation No. 76 Year 2015 has been announced. This regulation set on the Amendment of Government Regulation No. 1012012 on Recipient of Aid Health Insurance Contribution. But the policy was still not able to touch the existence of the informal sector that actually have the potential health financing. It is required a policy recommendation that has a comprehensive leverage to overcome the problems of adverse selection.Present situation of individual payment in private/government hospital the exclusion of poor is obvious. Only the very sick under acute conditions are paying. Healthy people do not have to incur any expense at all. The price vs. quality of service is also not taken care of, be it government sector or private sector. There was no control of price therefore poor population are major sufferer of disease which directly influences the longevity of people [5]. BPJS experienced unsolved problems relatedto effort to expand the coverage of informal sector workers and their families in the era of

National Health Insurance (JKN). Some of the factors that influence participation in the informal sector workers to joinprivate or commercial health insurance are marital status, the risk of illness in families, marital status and age of participants. (Intiasari, 2014). Previous research in Nigeria found about 82% of the household heads were willing to pay insurance premiums for their households, which came to an average of 513 Naira (1.68 USD) per month per person. The average amount individuals were willing to pay was lower in rural areas (611 Naira) compared to urban areas (463 Naira). These results were influenced by household size, level of education, occupation and household income. In addition, only 65% of the households had the ability to pay the average premium [6]. There should be a policy that encourage the expansion of the coverage of informal sector and not policies that restricting health services. However, adverse selection phenomenon is impact of policieswhich we just can't leave aside. Policy recommendations is needed to identify the characteristics of the informal sector and should still be able to explore the optimum "pockets" funding in public. ATP and WTP greater than the amount of JKN contribution scheme of independent participant non PBI class IIIsuggest the potential for financing from the public. Efforts to find a breakthrough in order to delay payment of the contribution does not happen is very necessary. Policies recomendation should understand all the potential of local wisdom and the needs of public health insurance of informal sector in expanding the coverage and strengthening the system of health financing JKN era.Binam et al (2002) state that household economic conditions have an influence on willingness to pay [3]. Research by Bendig and Arun (2012) and Bonan (2013) found that a large number of stairs with a high number of non-productive ages could influence the willingness to pay premiums.[4] This is because the composition of the age of the respondent family, which consists mostly of the productive age, has a lower risk of illness so that the needs or demands for health service needs are also lower. However, Lofgreen et al (2008) asserted that the variable number of families can influence the perception of the willingness of the community to pay premiums. The amount of family influences perceptions of risks and perceptions of losses. The greater the number of family members, the greater the risk of illness and the greater the financial loss that will be experienced. Family pain experience significantly influences the ability to pay health insurance contributions [7].Paez et al in their research on health insurance literacy asserted that a person's willingness to pay premiums is a decision phase of a series of phases of the decision to purchase a health insurance package. The decision to buy it must also be explored further by analyzing the utilization of health insurance in the future [8]. Policy that can aspire phenomenon of adverse selection and at the same time maintaining sustainability of regular JKN contribution payments each month is not available.Delay in the payment of contributions due to forget and the other household needs that they consider more important. The policymaker might think introducing community based model including public-community partnership model for healthcare financing of informal workers. Decision making regarding the implementation of such schemes should consider worker location and occupation [9].Another study found that just 18.5% are being covered by some form of health insurance and large portion of the population is still financing health care expenditure out of pocket. Various socio-economic variables like marital status, education, income level, occupation etc drives people of Darjeeling to take the decision of taking health insurance [10]. Health insurance has not a primary requirement for all communities in the informal sector in Banyumas. Ability to pay (ATP) public informal sector in rural and urban communities in Banyumas was greater than the amount of the contribution health service class III is 3,49 USD– 7,35 USD.Willingness to pay (WTP) public informal sector in rural and urban communities in Banyumas was greater than the amount of the contribution class III health service that as much as average willingness to pay

contribution 2.57 USD with a median amount of willing to pay contribution is2.00 USD. There is potential health funding from the informal sector in Banyumas.It is necessary to build policy recommendations to provide incentives to the informal sector workers, so theyable and willing to pay the JKN contribution regularly.

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