

ANALYSIS OF PARTICIPATION AND WILLINGNESS TO PAY COMMUNITY IN RURAL INFRASTRUCTURE DEVELOPMENT (Case Study in Pidodo Wetan Village, Kendal)

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Abstract

This study aims to analyze the level of participation and willingness to pay the community in rural infrastructure development. This study uses descriptive quantitative analysis in analyzing the participation rate and the Contingent Valuation Method in analyzing the willingness to pay the community. The Data used are primary and secondary data. Primary Data sourced from questionnaire result 92 respondents. Secondary Data is sourced from Pidodo Wetan Village Office. The results Showed that the level of community participation in the construction of infrastructure Pidodo Wetan village is in the high category. Form of participation is most Widely given the power and material / food. Furthermore, the average value of willingness to pay the community of Rp.10,500 with the total value of willingness to pay of Rp.13,728,000. Family income affects the value of the willingness to pay of the community, whereas gender, age, and education have no effect on the bid willingness to pay of the community.

Keywords: community participation, willingness to pay, contingent valuation method, Pidodo Wetan Village.

Abstrak

Penelitian ini bertujuan untuk menganalisis tingkat partisipasi dan willingness to pay masyarakat dalam pembangunan infrastuktur desa. Penelitian ini menggunakan analisis deskriptif kuantitatif dalam menganalisis tingkat partisipasi dan Contingent Valuation Method dalam menganalisis willingness to pay masyarakat. Data yang digunakan adalah data primer dan sekunder. Data primer bersumber dari hasil kuesioner sebanyak 92 responden. Data sekunder bersumber dari Kantor Desa Pidodo Wetan. Hasil penelitian menunjukkan bahwa tingkat partisipasi masyarakat dalam pembangunan infrastruktur desa Pidodo Wetan berada pada kategori tinggi. Bentuk partisipasi yang paling banyak diberikan yaitu tenaga dan material/makanan. Selanjutnya, rata-rata nilai willingness to pay masyarakat sebesar Rp.10.500 dengan nilai total willingness to pay sebesar Rp.13.728.000. Penghasilan keluarga mempengaruhi nilai bid willingness to pay masyarakat, sedangkan jenis kelamin, umur, dan pendidikan tidak berpengaruh pada nilai bid willingness to pay masyarakat.

Kata Kunci: partisipasi masyarakat, willingness to pay, contingent valuation method, Desa Pidodo Wetan

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INTRODUCTION

The village as the center of the smallest local governments, considered to have a significant role in national development. This is because the majority of the Indonesian population residing in the village, with the improvement of social welfare in the village will accelerate national development. According to Law No. 6 of 2014, rural development efforts to improve the quality of life and life and poverty alleviation through the fulfillment of basic needs, the development of rural infrastructure, build local economic potential, as well as the utilization of natural resources and the environment in a sustainable manner for the welfare of the villagers.

Bratakusumah (in Melis 2016) said that the development paradigm that has been developed is the paradigm of empowerment that core public participation. In other words, community involvement is key to success in a development. The government only acted as intermediation and catalyst of all development planning, while the public should have a hand in the planning to the implementation of existing development (Melis et al., 2016). Infrastructure is an important dimension that supports the success of rural development. Rural infrastructure leads to the expansion of agriculture by improving crop yields, farmers' access to markets and availability of institutional finance (Satish, 2007). Most of the poor live in rural areas, and the growth of agricultural productivity and rural non-farm employment is closely linked to the provision of infrastructure (Pinstrop *et al.*, 2006). Thus, infrastructure development is one of the priorities that need to be considered in realizing the government's rural welfare.

Pidodo Wetan village is a village on Kecamatan Patebon, Kendal. The village has roads and irrigation canals are still inadequate. Pidodo Wetan Village Government states there measuring 2,310 m² rural roads are still not on the asphalt and

irrigation embankments along the 2,000 m is still unbuilt. This is due to the lack of willingness of the government-owned funds to meet all the needs of infrastructure development in conjunction with other government financing. In other words, the construction of roads and irrigation embankments at Pidodo Wetan village is still hindered by the fund.

In Law No. 6 of 2014 on village, the government acts to help finance development by allocating the Village Fund. Village funds prioritized for the implementation of development and community empowerment, but in Pidodo Wetan, the village fund administration it is still not enough to meet the needs of rural development, especially infrastructure construction. This is because the priority programs of rural development Pidodo Wetan require large funds such as rural road infrastructure development, construction of multipurpose building and building IT planning early childhood, social facilities development and construction of production facilities.

Based on this situation, public participation was an important element that is needed in rural development. Community participation can be realized in various forms such as ideas, energy, materials / food and money donations. In relation to the participation of the village community as one factor supporting the success of rural development programs, it is certain that public participation would be obtained if the programs in development really fit the needs of the community. Furthermore, it is certain also that development goals will be achieved anyway (Hardianti et al., 2017).

With the description of the background, the authors wanted to examine the level of participation and willingness beruur rural community in helping the development of infrastructure that is evenly distributed in the Pidodo Wetan village.

LITERATURE REVIEW

The Concept of Rural Development and Infrastructure

Definition of rural development based on statements Adisasmita (2006) is the entire village development activities that involve all aspects of village life, and implemented in an integrated manner to develop self-help mutual aid society. Rural development into a media utilize and maximize the potential of existing natural resources, and improving the quality of life of human resources, with guidance and assistance from government officials, in accordance with their respective duties. Rural development effort in accelerating rural development through the provision of facilities and infrastructure to empower the community, and also accelerate the economic development of the effective area and sturdiness. rural development objectives in the long term is the improvement of rural welfare directly through increased employment, business opportunities and revenue based approach to community development, business coaching, and building human. According to Law Decree No. 6 of the Rural Development Village aims to improve the welfare of the villagers and the quality of human life and reduce poverty through the provision of basic needs fulfillment, infrastructure development, local economic development potential, as well as the use of natural resources and environmentally sustainable manner. The targets of rural development itself is the creation of : Increased production and productivity, accelerated growth of the village, improved skills in the production and development of employment and productive business field, improvement initiatives and public participation, strengthening institutional.

Rural development has a fairly broad scope and elastic depending on the interaction of many strengths such as program objectives, the availability of resources for planning and implementation, and others (Oni, 2015). Furthermore, in

Adisasmita (2006) rural development has a scope that includes several parts: (1) development of rural infrastructure (including irrigation, roads, residential neighborhoods, etc.); (2) community empowerment; (3) management of natural resources (SDA) and human resources (HR); (4) job creation, business opportunities, increase revenues (particularly to the areas poor areas); and (5) structuring linkages between rural district with pekotaan region (inter-urban rural relationship).

Infrastructure is a form of public capital (public capital), which was formed from the investment made by the government. According to Grigg (1998) infrastructure is a physical system that provides transportation, irrigation, drainage, buildings, and other public facilities, which are required to meet basic human needs both social needs and economic needs. In this case, matters related to infrastructure can not be separated from each other. The system can be connected environment for their infrastructure that sustains the social system and the economic system. The availability of infrastructure has an impact on the social system and the economic system in the community. Then the infrastructure needs to be understood as the fundamentals in making policy (Kodoatie, 2005).

Facility infrastructure is a basic element in the package needs to be obtained society with a better life. Infrastructure is more directed to the nature of public goods. The type of goods needed by the people, but no one was willing to produce it or may be generated by the private sector but in limited quantities, types of goods are called public goods (Mangkoesoebroto, 1993). Public goods have two main characteristics in terms of use, ie non-rivalry and non-excludable. Non-rivalry refers to the idea that there are some goods whose benefits can be enjoyed by more than one person at the same time. Rivalry in consumption of goods meaning

is that if an item is used by a person, the item can not be used by others. Non-excludable means that when someone enjoys the benefits of an item when the person pays or not. When the goods are used by others and jointly use these goods, the goods can be regarded as a public good. Use of the infrastructure for the users are not charged directly for their use, due to the infrastructure provided by the government sebgain support socio-economic activities (Stiglitz, 2000).

The concept of Community Participation

According Adisasmita (2006), participation is community involvement in the planning and implementation of development programs is being done on a particular local scope. Participation is a public real action in the availability or willingness to make sacrifices and contribute to the development programs implemented. Oni (2015) states that the concept of community participation can be referred to as the active involvement of rural communities in decisions and matters concerning the welfare of the community itself. Active participation in society can be seen through the identification of their needs, planning and implementation of the solution. Type of community involvement includes participation in the concept of involvement in the thought, plan, decide, act and perform an evaluation which focuses on socio-economic development. Keith Davis in Sastropetro (1988), adding some of the forms of participation are as follows: mind (psychological participation), power (physical participation), thought and effort (psychological and physical participation), expertise (participation with skills), goods (material participation), goney (money participation). Tjokroamidjojo (1995) found in the participation of one important party for development, and even became one of the goals of development itself. Namely the involvement movement and the entire community in the planned development

process in accordance with the directives and strategies that have been established through a form of participation in the political system. On the other hand, the development process itself is expected to lead to expansion of participation.

Concept of Willingness to Pay

Willingness to pay is a concept that can be used to see how much people want to support rural development. Willingness to pay is available to get the goods or services they need. In the context of development, willingness to pay is expressed as a form of government organization in supporting rural development programs to meet common interests. Fauzi (2004) states that willingness to pay is referred to as a willingness to pay for goods and services produced by natural and environmental resources. Contingent Valuation Method approach is used to measure the value of a passive (non-use value) of natural resources or often also known as existence value. Wills and Garrod (1990) says that the technique CVM is based on the fundamental assumption regarding ownership rights, which means that if the individual who asked not own the rights to the goods and services produced from natural resources, the relevant measurement is the desire to pay the maximum (maximum willingness to pay) to get the goods. Willingness to pay can be measured in terms of revenue growth that causes a person to be in a position indifferent to exogenous changes. These exogenous changes can occur due to changes in prices (eg due to increasingly scarce resources) or because of changes in the quality of the resource. Thus, WTP can be defined as the maximum amount someone is willing to pay to avoid further losses against something.

According Tietenberg (2016) total willingness to pay is a combination of three types of values: use value, optional value, and nonuse value. Formulation is expressed as follows:

$$TWP = \text{optional use value} + \text{value} + \text{nonuse value} \dots \dots \dots (1)$$

Use value reflecting the direct use of environmental resources. In other words, this value is the value resulting from the activities of direct use of environmental resources and then a negative impact on the community and environment, such as pollution, depletion of land and others.

Option value the future value owned by the insider using the environment. This value reflects the WTP (willingness to pay) for the option to preserve the environment that will be used in the future. Use value reflects the value derived from the use of this time, while the desire to preserve the option value reflect potential future possible use.

Passive-use or nonconsumptive use value the economic value of a given society although its use is not felt directly. This value appears because of public awareness that the environment is a legacy that must be maintained for the survival of future generations.

RESEARCH METHODS

The data used in this study are primary and secondary data. The primary data comes from interviews and questionnaires. Primary data is collected that is the identity of respondents, public perception, public participation and willingness to pay people in rural development. Secondary data were obtained from literature on library materials and data obtained from books, journals, theses and internet. In addition, secondary data is also sourced from the Central Statistics Agency and the Department Kendal Pidodo Wetan Village Government. Data collection is done through questionnaires, interviews and documentation.

Sampling method used in this research is probability sampling method, where all elements in a population have an equal chance to be selected in the sample. In this method, how the sample selection

should be done randomly (simple random sampling). The number of samples in the study were determined by using a technique / formula Slovin. Thus, the obtained sample as many as 93 families.

In this study, the descriptive statistical analysis was used to analyze community participation in the development of rural infrastructure. Descriptive statistical analysis carried out with the help of the Likert method. Likert scale is a positive statement that consists of very not agree, strongly agree, agree, disagree, and strongly disagree. The statement was given a score of 1 for strongly disagree statement, a score of 2 for statements do not agree, a score of 3 to a statement agreed, a score of 4 to a statement strongly agree, and a score of 5 for strongly agree a statement. Berir willingness of society is measured by using the method of Contingent Valuation Method (CVM).

Furthermore, untuk analyze the factors that affect the magnitude of the value of willingness to pay people to do using Tobit analysis. The data is processed by the application program EVIEWS 9. According Gujarati (2009) tobit method assumes that the independent variables are not limited in value (noncensored); only variables are not independent, censored; all variables (both smoking and non-smoking) is measured correctly; no autocorrelation; no heteroscedascity; there is no perfect multicollinearity; mathematical models used in research is right. The second model used Tobit model for scale dependent variables are quantitative, and to analyze the influence of independent variables on the dependent variable. The second mathematical model in this study as follows:

$$WTP \text{ value} = \alpha + \beta_1 \text{ Gender} + \beta_2 \text{ Age} + \beta_3 \text{ Education} + \beta_4 \text{ Families Income} \dots (2)$$

RESULT AND DISCUSSION

Community Participation in Rural Development

In the context of rural development, community participation categorized into some form of contribution, both physical and non-physical. This study analyzes the participation of society into four (4) sections, namely public participation in the form of the idea of participation, energy, materials / food and money donations.

Overall, community participation in rural development can be said to be in the high category. Where the average of respondents who agree to participate is greater than the other ratings. There are as many as 39 percent of average respondents who had agreed to participate as a whole in development. Furthermore, if calculated on the basis of Likert scale, the obtained total community participation overall score that is 40 percent or in the range of category 40% - 59.99%, which means that participation society as a whole are at "high".

The form of participation of the most awarded public in the development is in the form of donated labor and material donations / food. A total of 93.5 percent of respondents have a very high level of participation in the form of energy and as much as 90.3 percent of respondents have a very high level of participation in the form of donations of material / food. This is caused by the characteristics of respondents where most respondents had incomes are still relatively small due to old age and educational background are still low. Thus, people tend to not understand the importance of the idea of participation in rural development concept and feel unable to provide for participation in the form of a financial contribution.

Results of cross tabulation of respondents stated that men predominate in participating in infrastructure development compared to female respondents. The number of respondents who participate most are in the age range 36 to 45 years with the last educational background are

located mainly at the elementary school level. Furthermore, based on the level of personal income, most respondents amounting to 45.2 percent of respondents have a personal income below Rp.1,000,000, of which 23.7 percent of respondents agreed to participate in the form of ideas, as much as 43 percent of respondents agreed and strongly agreed to participate in contributing personnel, 42 percent of respondents agreed and strongly agreed to participate in contributing material, and as much as 8.6 percent of respondents who had agreed to participate in the form of a financial contribution. Then, based on the characteristics of the additional income, there are as many as 46.2 percent of respondents did have extra income, which shall amount to 24.7 percent of respondents have a high level of participation in the form of ideas, amounting to 43.0 percent of respondents had a very high participation rate in the form of personnel, as many as 45.2 percent of respondents had a very high participation rate form of material / food and as much as 5.4 percent of respondents had a very high level of participation in the form of a financial contribution.

Community Participation in the Form Idea

Public participation in contributing ideas or suggestions in the village can be categorized Pidodo Wetan high. This was stated by most respondents where as many as 55 percent of respondents agreed and strongly agreed willing to participate in the form of ideas. Willingness to participate is further realized by as much as 51 percent of respondents who agree and strongly agree always give ideas or suggestions on any village meeting. As a whole, in Table 1 it can be seen that there are as many as 58.1 percent of respondents who have a high level of participation in giving an idea or suggestion on rural development while the remaining 40.9 percent of respondents had a low participation rate and only 1.1 percent of respondents have a very high

participation rate. Based on the results obtained in total of public participation in the form of an idea that is the overall community participation index is 40 percent or in the range of 40% - 59.99%, which means that overall community participation is in the "high" category.

But even so, community participation in providing ideas often do not get a positive response from the community or the government. There are as many as 86 percent of respondents feel that ideas or suggestions they not received a positive response from the community or in a meeting, while they assume that development funds sufficient to meet their ideas or suggestions. Only 19 percent people who found their ideas or suggestions can always be implemented in the next year or even more than a year. This happens due to the lack of transparency by the government village development funds and the educational background of respondents are still low so do not understand the flow of financing in rural development. In Table 1 it can be seen that most respondents (as much as 48.4 per cent) last educated elementary school where as many as 30.1 percent of respondents had a high level of participation idea and the remaining 18.3 percent of respondents had a low participation rate idea.

Community participation in the form of Energy

Community participation in providing energy aid in Pidodo Wetan village can be said is very high. Overall there are as many as 93.5 percent of respondents who have a very high level of participation in contributing force in rural development. This was stated by the majority of people (as many as 95 percent of respondents) chose agree and strongly agree always participate by providing labor. As for the remaining 5 percent of respondents strongly disagree and disagree always participate in a form of energy. If calculated using a Likert scale calculations

of the obtained indices of public participation in the form of labor is 60 percent or in the range category 60% - 79%. It can be concluded that the level of public participation in the form of energy that are in very high category.

The level of public participation in contributing to the development effort is realized in a unit time. The results showed that 52 percent of respondents stated already participated by providing energy assistance twice, followed by 20 percent of respondents to participate as much as once, by 13 percent of respondents participated three times, as much as 11 percent of respondents to participate as much as four times more, and the rest A 4 percent of respondents have never participated in providing energy assistance.

Furthermore, the number of days it takes the community to participate in the form of power whenever development activities are quite varied. Where 70 percent of the public believes takes a day in each development activities, amounting to 13 percent of people taking two days, as much as 11 percent of the people may take as much as four days, and as many as 2 percent of the people may take as much as three days. While the rest only 4 percent of people who did not participate in the form of energy.

Then based on the frequency of the time required each time development activities, as much as 43 percent of respondents said take as much as five hours per day, followed by 40 percent of respondents take as much as four hours per day, as many as 12 respondents take as much as three hours per day, and as many as 1 percent of respondents take as much as two days. The remaining 4 percent of respondents has advised not to participate in providing energy assistance.

In the last two years the average frequency of respondents in providing the contribution of labor participation of as many as two times. The average number of days given that as many as 1 day and the average time given is as much as 3-4 hours

per day. If converted in the form of wages, the amount of rupiah given community in the contribution of labor participation is Rp.75,000 – Rp.100,000 (assuming a wage of Rp.12,500 / working hours).

In addition, the reason people participate in providing energy assistance as requested by the majority of public / local governments is stated by as many as 83 percent of respondents. Another reason is because it is clearly in power. Table 1 has a personal income of less than Rp.1,000,000. Thus people choose to contribute in energy, that 41.9 percent of respondents have very high participation in the form of power.

Community Participation in the Form of Material Contribution

Community participation in the form of donations of material / food are at very high category. This was stated by as much as 90.3 percent of respondents who have a very high level of participation in contributing material / food in rural development. Where there are a number of 84 people (90 percent) of respondents who agree and as many as 2 people (2 percent) of respondents stated strongly agree always participate by donating materials and or food. Based of that result obtained likert scale index to the level of public participation in the form of donations of material / food obtained by 60 percent, Thus, the degree of public participation in the form of donations of material / food is in the range category 60% - 79%, which is at a very high category.

The types of donations that are mostly delivered in the community development activities is the food. Almost all respondents, or 99 percent of respondents said always give food consumption at each development activity. Food was provided in the form of small meals, snacks, drinks and cigarettes. In addition, as many as 46 people or 49 percent of the respondents chose to participate by donating materials such as cement, sand, gravel and carpentry tools

such as hoes, sickles and hammers. Then there are as many as 46 people or 49 percent of respondents stated participate by donating materials and food. Meanwhile, just as much as 1 respondents who declare not provide for participation in the form of energy.

The intensity of the participating communities contributing material / food within a period of two year the average is counted twice. The amount of the costs incurred once the community in activities ranging from Rp.10.000,00 – Rp.200,000.00 with the average cost incurred is Rp.40.000,00. Thus, it can be seen that the average amount of rupiah given society participation in the material / food is Rp.80,000.

The community chooses to participate by contributing material / food, mostly because people ask questions expressed by as many as 75 people (81 percent) respondents. Another reason is due to the fairly low income conditions in which Table 1 records that most have personal income of less than Rp.1,000,000. Thus, people feel able to contribute material / food rather than in the form of money. This is stated by as many as 40.9 percent of respondents who have a very high level of participation in donating materials / food to rural development.

Community Participation in the Form of Donation Money

Community participation in the form of a financial contribution can be categorized as low. The results showed that only about 18 people, or 19 per cent of respondents agreed to participate in the form of donations of money, while the remaining 75 or 81 percent of respondents who stated strongly disagree and disagree always participate in the form of a financial contribution. Overall there are as many as 67.7 percent of respondents who had a low level of participation in contributing money to the development of the village.

Low willingness of society to participate in the form of donations of money evidenced byberiuur society's willingness during the period of last two years. There are as many as 82 percent of respondents stated strongly disagree and disagree give dues per month within two years. While the rest just as many as 17 people or 18 percent of respondents who agree give dues per month within two years. Furthermore, known total score of public participation in the form of a financial contribution obtained by 31 percent or in the range category 20% - 39% or are in the low category.

The intensity of the participating communities contributing money within a period of two yearsis still very low. The results showed that as many as 81.7 percent of respondents said never participated in the form of financial contributions. The remaining 8.6 percent of respondents participated twice, by 8.6 percent of respondents participated as much as one, as many as 3.2 percent of respondents participated four times, and as much as 1.1 percent of the respondents who participated three times. Thethe amounts of fees issued by the public ranged from Rp.10.000,00 – Rp.50.000 per month. The total contribution of a given society ranging from Rp.20.000,00 - Rp600.000,00.

The reason people participate in the form of donations of money largely because people asked expressed by as many as 14 people or 15 percent of respondents. As for the other reasons due to the lack of transparency of funds by local governments, the public perception of the existence of insufficient funds the village, and background of people's income is still low. Table 1 shows that most people have an income below Rp 1,000,000, of which there are as many as 28.0 percent of respondents had a low level of participation in contributing money to the development of the village.

Analysis Wiliingness to Pay Method Contingent Valuation Method

Contingent Valuation Method approach is used to analyze the value of a given society who are willing (willingness to pay) in the construction of rural infrastructure. In this study, the suggested infrastructure is the construction of roads, embankments and two. The value of the bid offered on respondents to the construction of irrigation embankments and roads are as follows:

$$\begin{aligned} \text{Bid} &= (\text{Cost of gabion wall} + \text{Cost Way}): \\ &\text{Population: 12 months} \\ &= (\text{Rp } 50,899,932 + \text{US } \$ 120.347 \\ &\text{million): 1144: 12 months} \\ &= \text{USD } 171\,247\,932: 1,144: 12 \text{ months} \\ &= \text{Rp.12,500 / month} \dots\dots\dots (3) \end{aligned}$$

Furthermore, the number of respondents who are willing to give a contribution just as many as 42 people or 45 percent of respondents, while the remaining 51 people or 55 respondents said not willing to give dues. Based on the number of respondents who are willing to provide contributions, the majority of respondents (as much as 66.6 per cent) states are willing to give the contribution of Rp.12,500 per month in a year, while the remaining 16.7 percent of respondents are willing to give a contribution of Rp.9,000 and as much as 16.7 percent respondents are willing to give a contribution of Rp.4,000. Thus the total value obtained is willing given respondent in the construction of roads and irrigation embankments amounting to Rp.441,000. The value of the average willingness to pay the respondent can be calculated with the following formula:

$$\begin{aligned} \text{EWTP} &= \frac{\sum w_i}{N} \\ \text{EWTP} &= \frac{\text{Rp}441.000}{42} \\ \text{EWTP} &= \text{Rp}10,500 \dots\dots\dots (4) \end{aligned}$$

From the above calculation, the obtained results of the average value of the respondents WTP is Rp 10,500. Thus, the average value of WTP 10,500 can be used as a reference in determining the amount of community contributions.

Furthermore, the data agregating conducted to determine the total value Willingness to Pay through the multiplication of the average value of WTP of respondents with the total population. In this study, total household population there are as many as 1144 households.

Based on the above calculation, the result value of total WTP society (if the entire population is willing to pay) in the construction of road infrastructure and irrigation embankments in Pidodo Wetan village which was Rp 12.012 million per month. However, based on the number of respondents who are willing to pay, the total value of WTP in infrastructure development in rural Pidodo Wetan only Rp 5.405 million.

Based on Table 2 it can be seen that as many as 66.7 percent of respondents expressed willing to provide US \$ 12,500 contribution to rural infrastructure development Pidodo Wetan. Of the total respondents, the number of respondents who are willing to give dues largely male sex. The age range most are at the age above 55 years, namely, consisting of as many as 23.8 percent of respondents make your choice the bid value of Rp 12,500, 2.4 percent of respondents chose the bid value of Rp 9,000 and as much as 7.1 per cent of respondents chose the bid value Rp 4,000.

Furthermore, most of the respondents are willing to give dues have primary school education last. Among them there are as many as 35.7 percent of respondents who chose the bid value of Rp 12,500, as much as 11.9 percent of respondents chose the bid value of Rp 4,000 and the remaining 7.1 per cent of respondents chose the bid value of Rp 9,000.

Based economy characteristic, respondent's most personal income of Rp 1,000,000, of which as much as 38.1

percent of the number of 42 respondents tend to choose bids amounting to Rp 12,500. While respondents with personal income ranged between Rp 3.000.00 - Rp 4,000,000 tend to choose bids amounting to Rp 9,000. This is because respondents with low incomes average work in the field of pertanian thus requires more irrigation than road embankments while income respondents usually work as traders or civil servants so feel no need of irrigation embankments.

Approximately 31 percent of respondents who have additional income of less than Rp 1 million value of the bid of Rp 12,500. Furthermore, respondents who chose the bid value of Rp 12,500 at most have additional income of Rp.1,000,000 - 2,000,000 USD, whereas at the level of additional income of Rp2,000,001 - Rp3,000,000 respondents who chose the bid value of Rp 12,500 at 7.1 percent. Thus, the greater the personal income and additional income which is owned can be factors that determine the amount of contribution of a given society in rural infrastructure development Pidodo Wetan.

Factor Analysis of Factors Affecting Willingness to Pay

Based on estimates shown in the Table 3 can be determined equation factors that affect the willingness to pay is as follows:

$$PAP = -3.204 - 0,506G + 0,040A + 0,26LA + 0,584IGF \dots\dots\dots (5)$$

The regression equation explains that the constant coefficient has a value of (-3.204). This means that if all diangggap independent variables constant, the great value of willingness to pay would be reduced to Rp.3,204.

Variable income families have a probability equal to 0.035. This means that the variable family income has a significant effect on the magnitude of the value of positive willingness to pay communities. The results of this study are supported by the results of research

Saptutyingsih (2007) and Rodríguez et al. (2017) which states that income has a positive influence on the magnitude of the value of WTP. Respondents would be willing to give a higher fee at a high level of income as well. This is because the value of willingness to pay big, the community will benefit greatly sacrificed also appropriate value.

The variables sex, age, and education of the public latter has no effect on the amount of the value of willingness to pay. This is supported by the research results Dhungana (2016) which says that the variable gender and age did not significantly affect the value of willingness to pay. Furthermore Rezhen Harun (2015) states that the age and education no significant effect on the magnitude of the value of willingness to pay. This is due to the homogeneity between gender, age and education of respondents were taken so as not to affect the decision of the people in determining the value of willingness to pay communities in the development of rural infrastructure. In addition, respondents on average still less educated, so that they do not understand the concept of the value of willingness to pay. In this case, the respondents tend to choose a bid based on any personal needs and less attention to social benefits required by the other respondents.

CONCLUSION

Based on research that has been done in the analysis of the level of participation, and willingness to pay people in the village Pidodo Wetan, it can be concluded that: (1) the public perception will be the development of infrastructure in rural Wetan Pidodo can be quite good. This means that the public understand the importance of rural infrastructure development as an element in society still do not understand fully the responsibilities and the importance of community participation in the development of rural infrastructure; (2) community participation in infrastructure development in rural

Wetan Pidodo can be said to be at a high category. The form of participation of the most widely given rural community is the participation of ideas, energy, materials / food, while participation in the form of financial donations are still very rare in the village Pidodo Wetan; (3) Willingness berbur (willingness to pay) community in rural infrastructure development can be said is still low. It can be seen from the number of people who are not willing to provide the infrastructure construction fee more than the number of people who are willing to give dues village infrastructure. The value of the bid is the most preferred development of rural communities is Rp 12500.00 categories of road infrastructure and irrigation embankments; and (4) the variable characteristics of the respondents that affect the value of the bid in a public willingness to pay is variable family income, while the variables of sex, age, and education of the public has no effect on the final value of the bid in the willingness to pay communities.

Suggestion

Based on research that has been done in the analysis of the level of participation, and willingness to pay people in the village Pidodo Wetan, then there are some things that need to be considered include: (1) the central government should pay more attention to the needs of rural communities through the village fund program disbursed for rural development; (2) the village government needs to socialize the importance of encouraging community participation in rural development; (3) financial transparency village clearly needs to be published to the public to avoid prejudice corruption in society; and (4) the community should be more concerned with rural development programs and does not depend on funding from any government.

REFERENCES

- Adisasmita, R. (2006). *Membangun Desa Partisipatif*. Yogyakarta: Graha Ilmu.
- Adisasmita, R. (2006). *Pembangunan Pedesaan dan Perkotaan*. Yogyakarta: Graha Ilmu.
- Dhungana, A. R. (2016). Factors Affecting Willingness to Pay for Improved Water Supply System in Rural Tanah. *Janapriya Journal of Interdisciplinary Studies*.
- Fauzi, A. (2004). *Ekonomi Sumber Daya Alam dan Lingkungan*. Jakarta: PT Gramedia Pustaka Utama.
- Grigg, N. (1988). *Infrastructure Engineering and Managemen*. John Wiley & Sons.
- Gujarati, D., & Porter, D. (2009). *Basic Econometrics*. McGraw-Hill International Edition. 2009 5th edition.
- Hardianti, S., Muhammad, H., & Lutfi, M. (2017). Partisipasi Masyarakat dalam Pembangunan Infrastruktur Desa. *Katalogis*, 120-126.
- Harun, R., C. Muresan, I., H. Arion, F., E. Dumitras, D., & Lile, R. (2015). Analysis of Factors that Influence the Willingness to Pay for Irrigation Water in the Kurdistan Regional Government. *sustainability*, 9574-9586.
- Kodoatie, R. J. (2005). *Pengantar Manajemen Infrastruktur*. Yogyakarta: Pustaka Pelajar.
- Mangkoesebroto, G. (1993). *Ekonomi Publik*. Yogyakarta: BPFE.
- Melis, Muthalib, A. A., & Apoda. (2016). Analisis Partisipasi Masyarakat dalam Pembangunan Desa. *Ekonomi*, 99-105.
- Oni, S. S. (2015). Community Participation in Rural Development : Catalyst For Sustainable Development Efforts. *2nd International Conference on Education and Social Sciences* (hal. 1078 - 1086). Turkey: INTCESS15.
- Pinstrup, P., Andersen, & Shimokawa, S. (2006). Rural Infrastructure and Agricultural Development. *Annual Bank Conference*. Japan: Development Economics.
- Rodriguez, L., A. Revollo, D., & Novel, J. (2017). Household's Perception of Water Quality and Willingness to Pay for Clean Water in Mexico City. *economies*.
- Saptutyningsih, E. (2007). Faktor-Faktor yang Berpengaruh Terhadap Willingness to Pay untuk Perbaikan Kualitas Air Sungai Code di Kota Yogyakarta. *Ekonomi dan Studi Pembangunan*, 171-182.
- Sastropoetro, S. (1986). *Partisipasi, Komunikasi, Persuasi, dan Disiplin dalam Pembangunan Nasional*. Bandung: Alumni.
- Satish, P. (2007). Rural Infrastructure and Growth: An Overview. *Agricultural Economic*.
- Stiglitz, J. (2000). *Globalization and its Discontent*. London: Penguin Books.
- Tietenberg, T. H., & Lewis, L. (2016). *Environmental and Natural Resource Economics (10th Global Edition)*. United States: Pearson Global Edition.
- Tjokroamidjojo, B. (1995). *Pengantar Administrasi Pembangunan*. Jakarta: LP3S.
- Willis, K. G., & Garrod, G. (1990). *Economic Valuation of The Environment : Methods and Case Studies*. United Kingdom: Edward Elgar Publishing Limited.

Table 1. Cross Tabulation Characteristics of Respondents with Community Participation Rate

Characteristics	Type of Participation											Participat
	Idea					Total	Power					
	VL	L	H	VH	HM		VL	L	H	VH	HM	
Gender												
Female	0,0	12,9	19,4	0,0	0,0	32,3	0,0	2,2	0,0	30,1	0,0	32,3
Male	0,0	28,0	38,7	1,1	0,0	67,73	0,0	1,1	2,2	63,4	1,1	67,73
Total	0,0	40,9	58,1	1,1	0,0	100	0,0	3,2	2,2	93,5	1,1	100
Age												
15-25	0,0	2,2	1,1	0,0	0,0	3,2	0,0	0,0	0,0	3,2	0,0	3,2
26-35	0,0	5,4	6,5	0,0	0,0	11,8	0,0	0,0	0,0	11,8	0,0	11,8
36-45	0,0	15,1	18,3	1,1	0,0	34,4	0,0	0,0	0,0	34,4	0,0	34,4
46-55	0,0	7,5	17,2	0,0	0,0	24,7	0,0	0,0	1,1	22,6	1,1	24,7
>55	0,0	10,8	15,1	0,0	0,0	25,8	0,0	3,2	1,1	21,5	0,0	25,8
Total	0,0	40,9	58,1	1,1	0,0	100	0,0	3,2	2,2	93,5	1,1	100
Last Education												
Primary School (SD)	0,0	18,3	30,1	0,0	0,0	48,4	0,0	3,2	1,1	44,1	0,0	48,4
Junior High School (SMP)	0,0	12,9	10,8	0,0	0,0	23,7	0,0	0,0	0,0	23,7	0,0	23,7
Senior High School (SMA)	0,0	9,7	12,9	1,1	0,0	23,7	0,0	0,0	0,0	22,6	1,1	23,7
Bachelor (S1/Diploma)	0,0	0,0	4,3	0,0	0,0	4,3	0,0	0,0	1,1	3,2	0,0	4,3
Total	0,0	40,9	58,1	1,1	0,0	100	0,0	3,2	2,2	93,5	1,1	100
Personal Income												
No income	0,0	10,8	16,1	0,0	0,0	26,9	0,0	1,1	0,0	25,8	0,0	26,9
< Rp 1.000.000	0,0	16,1	29,0	0,0	0,0	45,2	0,0	2,2	0,0	41,9	1,1	45,2
Rp 1.000.001 - Rp 2.000.000	0,0	14,0	9,7	1,1	0,0	24,7	0,0	0,0	1,1	23,7	0,0	24,7
Rp2.000.001-Rp3.000.000	0,0	0,0	2,2	0,0	0,0	2,2	0,0	0,0	0,0	2,2	0,0	2,2
Rp3.000.001-Rp4.000.000	0,0	0,0	1,1	0,0	0,0	1,1	0,0	0,0	1,1	0,0	0,0	1,1
> Rp4.000.000	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total	0,0	40,9	58,1	1,1	0,0	100	0,0	3,2	2,2	93,5	1,1	100
Additional Income												
No income	0,0	20,4	24,7	1,1	0,0	46,2	0,0	2,2	1,1	43,0	0,0	46,2
< Rp 1.000.000	0,0	9,7	17,2	0,0	0,0	26,9	0,0	1,1	0,0	24,7	1,1	26,9
Rp 1.000.001 - Rp 2.000.000	0,0	9,7	10,8	0,0	0,0	20,4	0,0	0,0	0,0	20,4	0,0	20,4
Rp2.000.001-Rp3.000.000	0,0	1,1	3,2	0,0	0,0	4,3	0,0	0,0	0,0	4,3	0,0	4,3
Rp3.000.001-Rp4.000.000	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
>Rp4.000.000	0,0	0,0	2,2	0,0	0,0	2,2	0,0	0,0	1,1	1,1	0,0	2,2
Total	0,0	40,9	58,1	1,1	0,0	100	0,0	3,2	2,2	93,5	1,1	100

Table 1. Continuance ...

Characteristics	Type of Participation											
	Material					Total	Money					Total
	VL	L	H	VH	HM		VL	L	H	VH	HM	
Gender												
Female	0,0	0,0	2,2	29,0	1,1	32,3	0,0	20,4	4,3	7,5	0,0	32,3
Male	0,0	3,2	2,2	61,3	1,1	67,73	0,0	47,3	10,8	9,7	0,0	67,73
Total	0,0	3,2	4,3	90,3	2,2	100	0,0	67,7	15,1	17,2	0,0	100
Age												
15-25	0,0	0,0	0,0	3,2	0,0	3,2	0,0	1,1	2,2	0,0	0,0	3,2
26-35	0,0	0,0	0,0	11,8	0,0	11,8	0,0	8,6	0,0	3,2	0,0	11,8
36-45	0,0	0,0	1,1	32,3	1,1	34,4	0,0	22,6	6,5	5,4	0,0	34,4
46-55	0,0	2,2	2,2	20,4	0,0	24,7	0,0	17,2	3,2	4,3	0,0	24,7
>55	0,0	1,1	1,1	22,6	1,1	25,8	0,0	18,3	3,2	4,3	0,0	25,8
Total	0,0	3,2	4,3	90,3	2,2	100	0,0	67,7	15,1	17,2	0,0	100
Last Education												
Primary School (SD)	0,0	3,2	2,2	40,9	2,2	48,4	0,0	32,3	8,6	7,5	0,0	48,4
Junior High School (SMP)	0,0	0,0	1,1	22,6	0,0	23,7	0,0	20,4	1,1	2,2	0,0	23,7
Senior High School (SMA)	0,0	0,0	0,0	23,7	0,0	23,7	0,0	15,1	4,3	4,3	0,0	23,7
Bachelor (S1/Diploma)	0,0	0,0	1,1	3,2	0,0	4,3	0,0	0,0	1,1	3,2	0,0	4,3
Total	0,0	3,2	4,3	90,3	2,2	100	0,0	67,7	15,1	17,2	0,0	100
Personal Income												
No income	0,0	1,1	1,1	23,7	1,1	26,9	0,0	20,4	4,3	2,2	0,0	26,9
< Rp 1.000.000	0,0	2,2	1,1	40,9	1,1	45,2	0,0	28,0	8,6	8,6	0,0	45,2
Rp 1.000.001 - Rp 2.000.000	0,0	0,0	1,1	23,7	0,0	24,7	0,0	18,3	1,1	5,4	0,0	24,7
Rp2.000.001-Rp3.000.000	0,0	0,0	0,0	2,2	0,0	2,2	0,0	1,1	1,1	0,0	0,0	2,2
Rp3.000.001-Rp4.000.000	0,0	0,0	1,1	0,0	0,0	1,1	0,0	0,0	0,0	1,1	0,0	1,1
> Rp4.000.000	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total	0,0	3,2	4,3	90,3	2,2	100	0,0	67,7	15,1	17,2	0,0	100
Additional Income												
No income	0,0	1,1	0,0	45,2	0,0	46,2	0,0	35,5	5,4	5,4	0,0	46,2
< Rp 1.000.000	0,0	1,1	2,2	22,6	1,1	26,9	0,0	17,2	5,4	4,3	0,0	26,9
Rp 1.000.001 - Rp 2.000.000	0,0	0,0	1,1	18,3	1,1	20,4	0,0	14,0	1,1	5,4	0,0	20,4
Rp2.000.001-Rp3.000.000	0,0	0,0	0,0	4,3	0,0	4,3	0,0	0,0	3,2	1,1	0,0	4,3
Rp3.000.001-Rp4.000.000	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
>Rp4.000.000	0,0	1,1	1,1	0,0	1,1	2,2	0,0	1,1	0,0	1,1	0,0	2,2
Total	0,0	3,2	4,3	90,3	2,2	100	0,0	67,7	15,1	17,2	0,0	100

(Note : VL = Very Low, L=Low, H=High, VH=Very High, HM=High Maximal)

Table 2. Cross Tabulation Characteristics of Respondents with a Willingness to Pay

Characteristics	WTP value offered			Total
	Rp4.000	9,000	Rp12.500	
Gender				
Woman	4.8	4.8	23.8	33.3
Man	11.9	11.9	42.9	66.7
Total	16.7	16.7	66.7	100.0
Age				
15-25	0.0	0.0	7.1	7.1
26-35	0.0	0.0	7.1	7.1
36-45	4.8	4.8	19.0	28.6
46-55	4.8	9.5	9.5	23.8
> 55	7.1	2.4	23.8	33.3
Total	16.7	16.7	66.7	100.0
last education				
SD	11.9	7.1	35.7	54.8
SMP	0.0	4.8	4.8	9.5
High School	4.8	2.4	21.4	28.6
S1 / Diploma	0.0	2.4	4.8	7.1
Total	16.7	16.7	66.7	100.0
personal income				
no income	7.1	4.8	11.9	23.8
<Rp 1,000,000	7.1	7.1	38.1	52.4
Rp 1,000,001 - Rp 2,000,000	2.4	2.4	16.7	21.4
Rp2.000.001-3,000,000	0.0	0.0	0.0	0.0
Rp3.000.001-Rp4,000,000	0.0	2.4	0.0	2.4
> Rp4,000,000	0.0	0.0	0.0	0.0
Total	16.7	16.7	66.7	100.0
Perquisite				
no income	2.4	7.1	23.8	33.3
<Rp 1,000,000	9.5	7.1	14.3	31.0
Rp 1,000,001 - Rp 2,000,000	0.0	0.0	21.4	21.4
Rp2.000.001-3,000,000	2.4	0.0	7.1	9.5
Rp3.000.001-Rp4,000,000	0.0	0.0	0.0	0.0
> Rp4,000,000	2.4	2.4	0.0	4.8
Total	16.7	16.7	66.7	100.0

Table 3. Tobit Regression Results

variables	Coefficient	Probability
Gender	-0506	0428
Age	0:04	0109
last education	0265	0474
income Families	0584	0035
C	-3204	0063

Source: Research Findings