

Examining the Impact of the Solo-Yogyakarta Toll Road Construction on Farmers' Assets and Psychological Well-being

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Abstract

This study investigates the psychological impact of farmers' sentiments on land conversion associated with the national strategic project for constructing the Solo-Yogyakarta toll road, focusing on the asset aspects of farmers' families. Employing descriptive and survey approaches, supplemented by in-depth interviews to enhance the research design, the study utilized a random sampling method with a proportional cluster, encompassing a sample size of 258 participants. Data collection was conducted through questionnaires, and analysis involved cross-tabulation and chi-square descriptive analysis to examine relationships between factors. The findings reveal that farmers experience psychological distress, particularly sadness, due to the change in land use and the option to sell their land. Farmers' attitudes toward compensation procedures were generally neutral. Overall, the study highlights the significant psychological impact of land conversion, predominantly manifesting as sadness among farmers. The research underscores the need for policy development to establish support programs by relevant entities, ensuring that compensation funds are effectively utilized to generate new income sources for the affected farmers.

Keywords: farmer's asset; feeling; land use; strategic national project

INTRODUCTION

Development is an ongoing process that unfolds over time, involving continuous growth, learning, and adaptation. It is not a one-time event but a journey that requires consistent effort and dedication to achieve progress and improvement. This process encompasses various stages, each building upon the previous one, advancing skills, knowledge, and overall potential. Equitable development aims to meet fundamental requirements and improve community welfare and regional growth. Farmers, as the subject of action (Nabavi-Pelesaraei et al., 2017), become agents of change for their environment, have the right to make decisions and play a role in development because the goal of farmer development is the subject of government development plans (Makbul et al., 2019; Kuang et al., 2020). Infrastructure development is required to help the country's economy. For example, constructing toll roads will improve the community's quality of life

and the nation's economic prosperity (Susanto, 2019). The construction of toll roads benefits the community by increasing traffic movement between areas (Berawi et al., 2018). The construction of toll roads will facilitate and speed up the movement of goods and services between regions to encourage economic activity (Parker et al., 2018).

National Strategic Initiative Development of President Joko Widodo (in the future, shortened as PSN) is an Indonesian infrastructure project. Presidential Regulation No. 58 of 2017, No. 56 of 2018, and No. 109 of 2020 are the legal basis for PSN. These strategic initiatives spanned Indonesia, including Central Java. The PSN Solo-Yogyakarta toll road is one of the government's top priorities (Ramadani, 2019; Yu et al., 2022).

Toll road construction is a type of infrastructure development that necessitates much land. Toll road construction has significantly converted agricultural land into non-agricultural

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property (Acikgoz, 2011). Conversion of land for toll road development often sacrifices valuable agricultural land (Wulfram and Ervianto, 2017). Toll road construction undoubtedly influences Indonesia's dwindling agricultural land (Widodo and Winarti, 2021). According to the Central Statistics Agency (BPS), the agriculture sector's Gross Domestic Product (GDP) was second only to the industrial sector in 2019, with a 13.45% contribution (BPS, 2019). Conversion of agricultural land for infrastructure development projects is an issue that has so far run afoul of Indonesian legislative provisions (Naufal and Husodo, 2022). Many community objections show that infrastructure development takes away homeowners' land property rights (Ayu Andani et al., 2019).

The psychological impact of hidden behaviors, such as emotions, on farmers affected by development has been explored by few studies. The majority of them concentrate on economic, legal, or managerial issues (Ayu Andani et al., 2019; Makbul et al., 2019; Teo et al., 2019; Widodo and Winarti, 2021). Assessing the assets of farmer families is essential to understanding the characteristics of farmers in food supply areas affected by toll road development. Analyze the psychological elements of farmers affected by toll road development projects, even if farmers continued to sell their property because they had no other choices (Berawi et al., 2018).

As a result, it is critical to investigate the psychological effects that farmers experience as the foundation for the following policy that key stakeholders might implement when their farmers lose their land (Lansing et al., 2001). This study aims to expose farmers' psychological effects (feelings) due to land conversion caused by national strategic programs. Furthermore, to ascertain the features of farmers' family assets and their relationship with farmers' psychological aspects (feelings) concerning toll road building projects.

METHODS

The research location was chosen to cover the impacted areas of toll road building projects in Central Java, using quantitative descriptive and survey methodologies. Toll road development affects 3 Central Java regions: Karanganyar, Boyolali, and Klaten Regencies. Because Klaten is the most affected by toll road building, the research site is in Klaten. According to

statistics from the Department of Agriculture, Food Security, and Fisheries (DPKPP) in Klaten Regency, the building of the Solo-Yogyakarta toll road has impacted at least 375 ha of rice fields. Furthermore, the Solo-Yogyakarta Location Deposition Toll Road Decree number 59/48 of 2020, according to reports, the Solo-Yogyakarta toll road would pass through 11 sub-districts and 50 villages in Klaten Regency.

The population of farmers displaced by the national strategic project of the Solo-Yogyakarta toll road building is determined. Five of the 11 afflicted sub-districts were abandoned, with the most rice fields spanning the east, west, center, north, and south sides. Researchers randomly chose 2 villages from each demographic unit to create a proportionate sample of 258 persons. Random sampling is conducted using Excel software, and the number of responses for each designated area is presented in the table.

The research implemented a Likert-scale instrument with many points of statements and answer options for each statement item. The answer choice consists of 5 options ranging from unfavorable to favorable. The weight or answer score produced by the value of its scale is corrected with a standard deviation. View a farmer's asset factors such as (1) land acreage, (2) farmland ownership status, (3) employment status as a farmer, (4) farm income, (5) the farmer's age, and (6) the number of family dependents. It utilized indicators (1) farmers' sentiments about land use change, (2) farmers' feelings about the evaluation process for land acquisition compensation, and (3) farmers' feelings about the choice to sell land for the variable of farmers' attitudes regarding toll development policies.

Extensively utilizing questionnaires and supplementing them with in-depth interviews allows for standardizing field data using the Likert scale. Questionnaires or lists of statements or questions prepared before the field study are used as data-gathering instruments. After the questionnaire's compilation, field trials are done to generate the Likert score, which is then evaluated using validity and reliability tests. During the primary investigation, we employed a set of statements/questions that were assessed for validity and reliability. In addition, we used SPSS 26 cross-tabulation descriptive statistical analysis.

RESULT AND DISCUSSION

Farmers’ psychological impact (feelings) on the national strategic project to build the Solo-Yogyakarta toll road

The views of farmers concerning government policies surrounding toll road building, as well as feelings of loss of land as a source of family income, are investigated in this aspect, as shown in Figure 1a. Farmers tend to accept the government’s judgment since filing a protest will be time-consuming and will only bring them difficulties. Although paddy fields do not generate much money, they help grow rice.

Respondents’ emotions often range from happy to sad. They felt good since the toll road was created to boost public transit and the economy in the local area. According to Figure 1b, many respondents stated that they would be delighted to get compensation money from land possessed with a high value that could be utilized to satisfy various requirements such as renovating houses, purchasing automobiles, as company capital, and so on (Song et al., 2018). Respondents, however, are sad because they no longer have rice fields inherited from their parents. It will be difficult to buy replacement rice fields near where they live because the price of land around a toll road has increased, the village has been divided into several parts, and access to irrigation is not yet clear.

Respondents’ views on the element of the choice to sell the land revealed feelings of grief. *“Unfortunately, I no longer have rice fields as my income source. It won’t be easy to purchase new rice fields in the region near where I live since there are fewer and fewer.”* As seen in Figure 1c, Respondents who relied on their lives as farmers, working their land and making it their family’s primary source of income, no longer had rice fields. Agriculture, which had been their specialty, has abruptly lost the source of income they had relied on for decades.

Farmer family asset characteristics and psychological feelings regarding the Solo-Yogyakarta toll road development policy

Farmers’ sentiments over planting land and the installation of toll roads elicited a variety of answers. In this research, various graphics explain that the farmer’s chances of being productive and developing are pretty slim. For the national development of toll roads, land owned for an extended period must be given up.

Land transfer status issues

According to Figure 2a, 32.5% of sharecropper farmers with narrow land or less than 0.5 ha have a neutral attitude toward the land conversion strategy. Respondents’ emotions often range from happy to sad. Farmers are glad since they receive compensation from tiny land at a high price relative to the market price, resulting in profit.

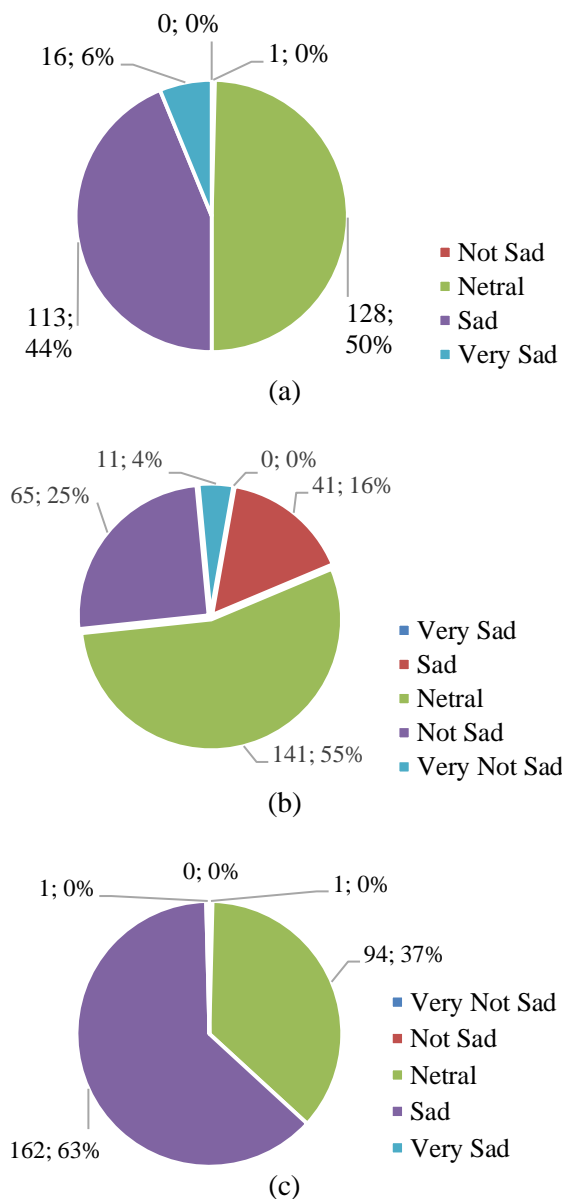


Figure 1. Psychological overview psychology of farmers when it comes to planting land in response to the consequences of toll road development; a) Feelings on land conversion, b) Feelings on the appraisal process, and c) Feelings on the decision to sell land

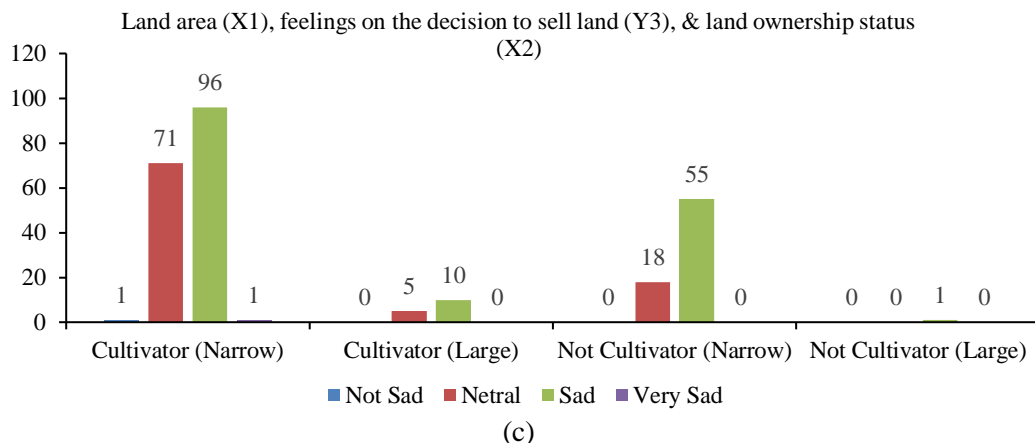
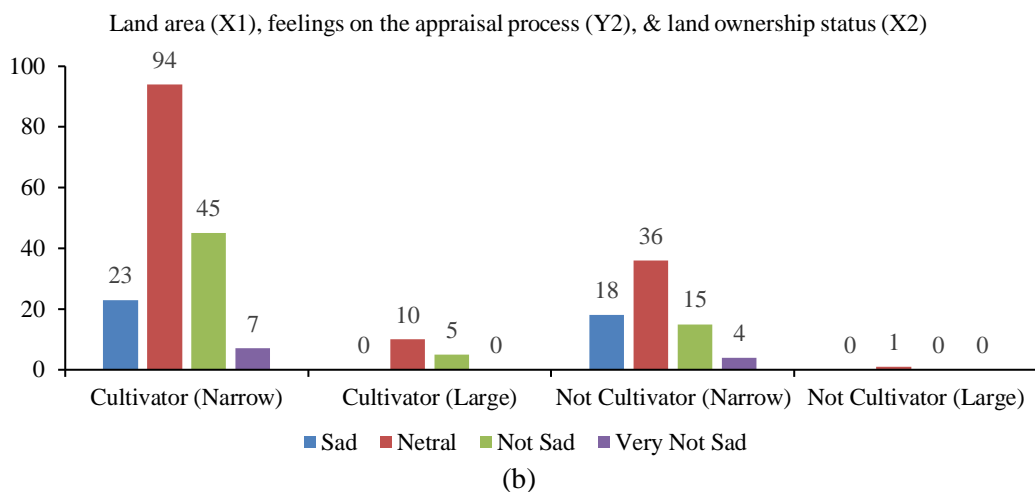
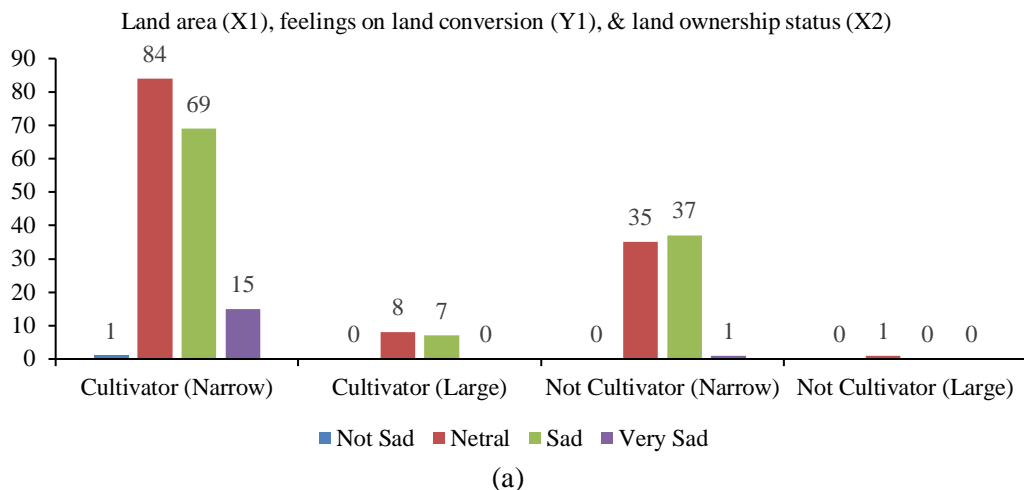


Figure 2. Farmers’ attitudes on land conversion status, including (a) the land conversion aspect, (b) the appraisal process aspect, and (c) the land sale side

It is also disheartening to see that the rice fields owned and farmed thus far have become more tiny, with no rice fields remaining for the development of toll roads. Agricultural land has drastically shrunk because of the spread of built-up regions to periurban agricultural areas. Conversion of farmland has resulted in a decrease

in farming and livestock output as well as a reduction in grazing land (Tufa and Megento, 2022).

According to Figure 2b, 36.4% of sharecropper farmers with narrow land or less than 0.5 ha had an indifferent attitude regarding the evaluation procedure. Respondents thought

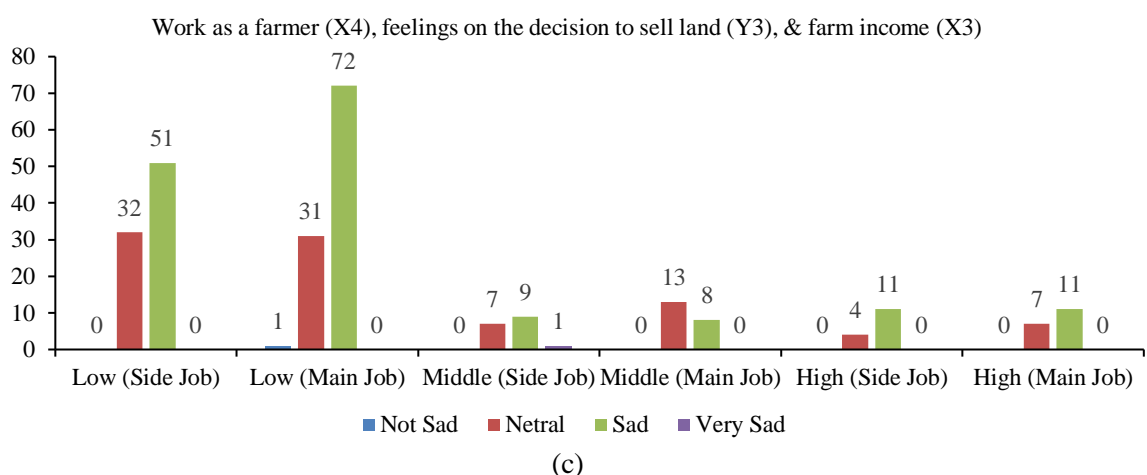
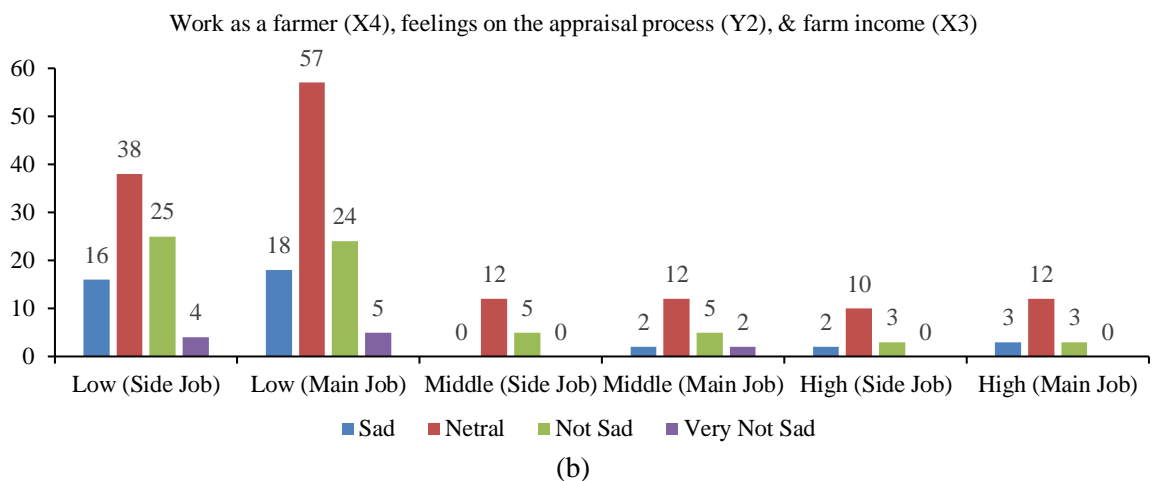
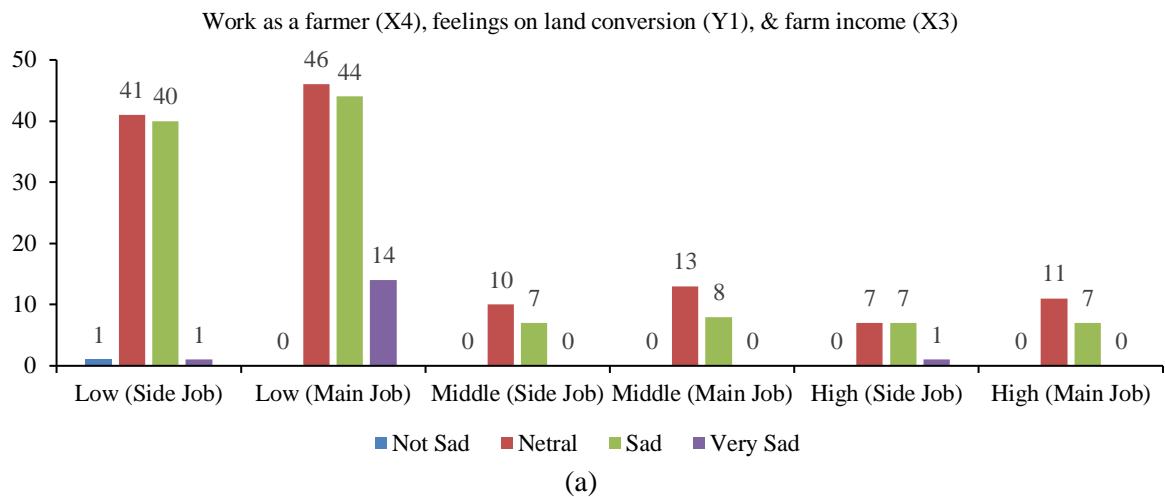
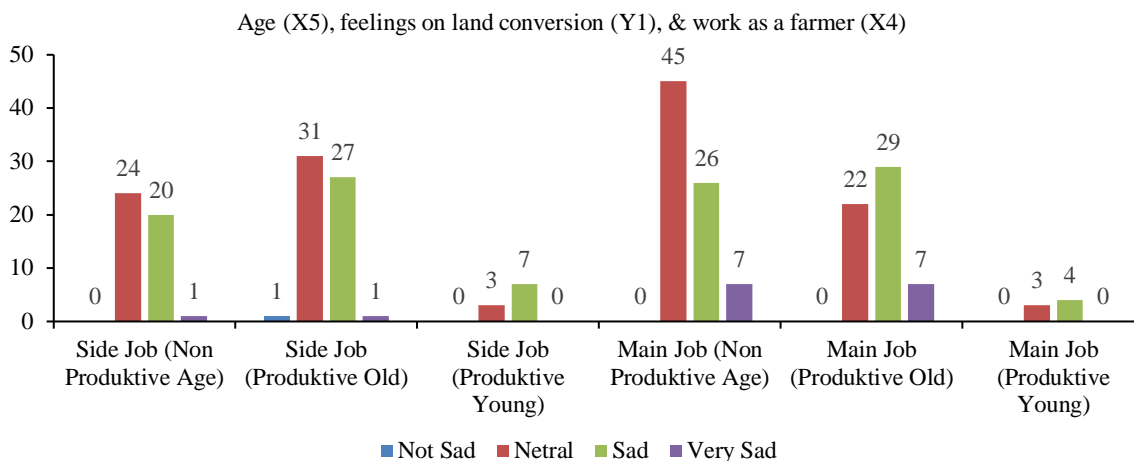


Figure 3. Farmers' attitudes regarding revenue from many perspectives, including (a) land conversion, (b) the assessment process, and (c) land sales

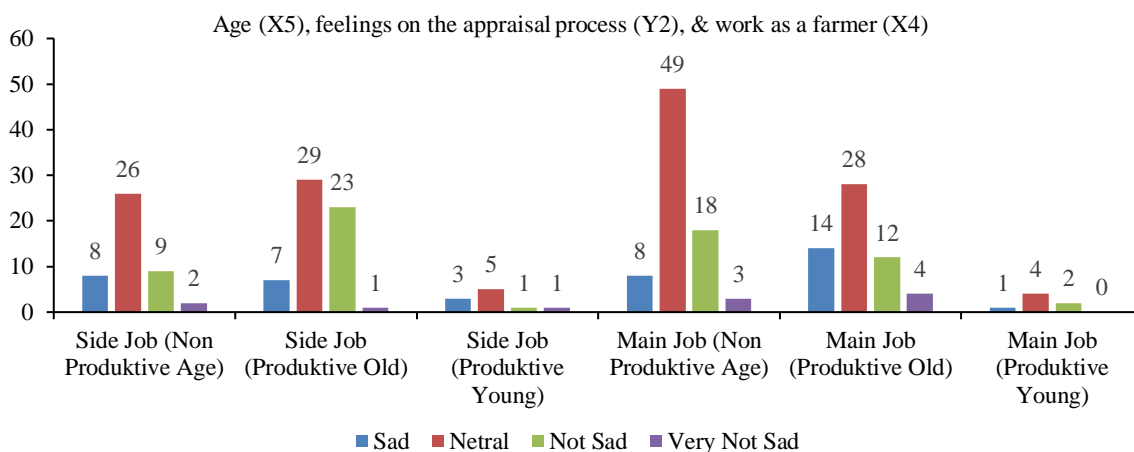
that the evaluation procedure satisfied the farmers' expectations, both in terms of appraisal value and timeliness of land compensation, even if they had to accept that they no longer held paddy fields.

According to Figure 2c, 37.2% of sharecropper farmers with narrow fields are saddened by their

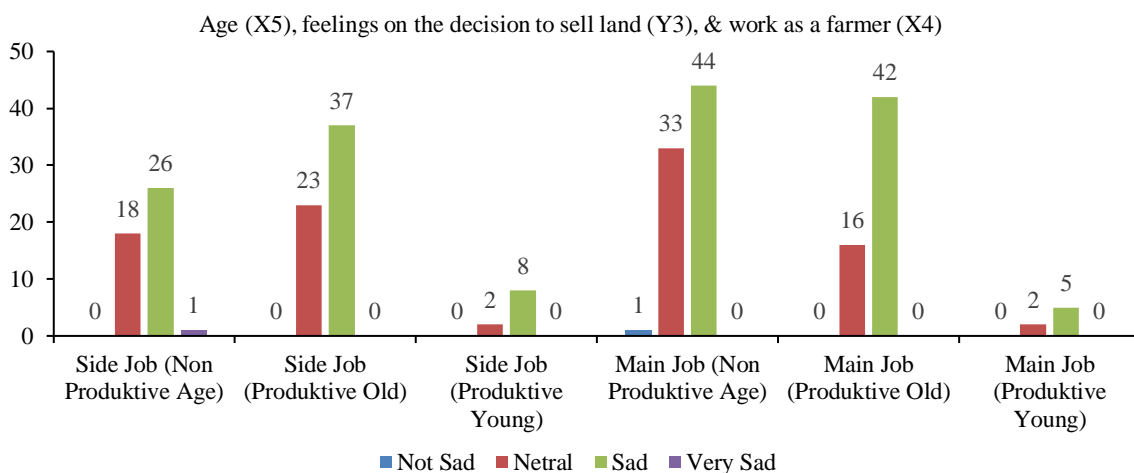
decision to sell their land. Respondents emphasizing cultivating this land no longer own rice fields, which were their primary source of income. Respondents also believed that purchasing replacement paddy fields in the region surrounding their residences would be complex since land values were declining.



(a)



(b)



(c)

Figure 4. Farmers’ attitudes toward productivity. Age is visible in numerous ways, including (a) land conversion, (b) assessment procedure, and (c) land sales

Farmer’s work aspects

According to Figure 3a, 17.8% of low-income farmers who work as ‘farmers’ have a neutral attitude regarding the land conversion strategy. The implementation of this program

is projected to enhance economic circumstances in the impacted communities. Meanwhile, even if they do not make much money from farming, the adjacent rice fields are fruitful, especially for rice farming, which is terrible

for farmers if the functions are switched to toll roads.

According to Figure 3b, as many as 22.1% of farmers with low earnings who work as 'farmers' have a neutral attitude regarding the evaluation procedure. Respondents thought that the evaluation procedure went as planned and that the government carefully reviewed the appraisal that should have been obtained. Respondents generally agree with the assessment value, albeit some believe it is already higher than the market price. In contrast, others think it should be higher because prices in less strategic regions are more outstanding. Furthermore, they accept the offered price because filing a protest or appeal might complicate and hurt them.

According to Figure 3c, 28.0% of farmers with low earnings who make 'farmers' their primary employment are saddened by their decision to sell their land. Because most respondents had no experience working in other areas except agriculture, they relied only on money from rice fields in their everyday lives. Farmers must conduct effective financial management after no longer having paddy fields to become capital and long-term investments.

Productivity age factor

According to Figure 4a, 17.4% of farmers of unproductive age who make 'farmers' their primary employment have an indifferent attitude regarding the land conversion strategy. Respondents prefer to accept government decisions in toll road development regulations because they believe they cannot object or resist when they are no longer productive.

However, according to Figure 4b, as many as 19.0% of farmers are of unproductive age and work as 'farmers' to maintain a neutral attitude toward the evaluation process. These responders are also likely to accept only evaluation process results because protesting might make things challenging for them.

According to Figure 4c, 17.0% of farmers of unproductive age who make 'farmers' their primary employment are saddened by their decision to sell their land. If they do not have paddy fields, these no longer productive responders are incapable and have no experience working in sectors other than agriculture.

CONCLUSION

In conclusion, the study highlights the challenges farmers face, including restricted land tenure, low agricultural income, and the

predominance of farming as a primary occupation, even in later years. The psychological impact of land conversion due to the Solo-Yogyakarta toll road project has led to significant sadness among farmers, with many disheartened by the loss of their land and indifferent towards the indemnity evaluation. Policymakers must address these issues by supporting farmers who lose their land. This support should include motivation and guidance from the Department of Agriculture, encouragement to reinvest in agricultural land with compensation funds, and capital compensation from social institutions to support business ventures.

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