economies

MDPI

Article

Structural Equation Model (SEM) of Social Capital with Landowner Intention

Achmad T. Nugraha [1,*], Gunawan Prayitno [2], Faizah A. Azizi [2], Nindya Sari [2], Izatul Ihsansi Hidayana [2], Aidha Auliah [2] and Enock Siankwilimba [3,4]

[1] Agribusiness Department, Syarif Hidayatullah State University Jakarta, South Tangerang 15412, Indonesia
[2] Regional and Urban Planning Department, Faculty of Engineering Universitas Brawijaya, Malang 65142, Indonesia; gunawan_p@ub.ac.id (G.P.)
[3] Graduate School of Business, University of Zambia, Lusaka P.O. Box 50516, Zambia; enocksiankwilimba@gmail.com or
[4] Musika Development Initiatives Zambia Limited, 6, Tukuluho Road, Long Acres, Post Net No. 481, Private Bag E891, Lusaka, Zambia
* Correspondence: achmad.tjachja@uinjkt.ac.id

Abstract: The continuous loss of farmland in Indonesia is a major problem in the food production industry. The Gempol-Pandaan road, which is a section of the Trans Java toll road and connects the major cities of Surabaya and Malang, gives the Pandaan District of Indonesia its strategic location. Sustainable Food Agriculture Land (SFAL) in the Pandaan District is one strategy for expanding wetland farming. Therefore, this research aims to analyze the connection between social capital and landowners' intention to alter SFAL in Pandaan District, Pasuruan Regency, hoping to resolve existing land-use conflicts. The purpose of this study was to use partial least square structural equation modeling (PLS-SEM) to the question of how landowners' social capital is related to their intention to change land use. The PLS-SEM analysis shows that there are less opportunities for SFAL landowners to shift land use when social capital is high. Conversely, greater intentions among SFAL landowners to convert agricultural land to nonagricultural uses are associated with weaker or lower relationships among social capital characteristics.

Keywords: social capital; SEM analysis; SFAL; intention; land-use change

Citation: Nugraha, Achmad T., Gunawan Prayitno, Faizah A. Azizi, Nindya Sari, Izatul Ihsansi Hidayana, Aidha Auliah, and Enock Siankwilimba. 2023. Structural Equation Model (SEM) of Social Capital with Landowner Intention. *Economies* 11: 127. https://doi.org/10.3390/economies11040127

Academic Editors: María del Carmen Valls Martínez, José-María Montero and Pedro Antonio Martín Cervantes

Received: 19 December 2022
Revised: 9 March 2023
Accepted: 10 March 2023
Published: 20 April 2023

1. Introduction

Rice is the main staple food for half of the world's population, especially for people in Asia. It is cultivated in 113 countries, with China and India leading in the production of half of the world's rice supply, followed by Indonesia, Bangladesh, Vietnam, Thailand, and Myanmar (FAO 2017). Approximately 80% of rice production involves small-scale farmers, making its social economic discourse very contentious. According to OECD/FAO (2018), Indonesia's annual rice consumption per capita in 2017 reached 135 kg, higher than that of the Philippines (115 kg), Thailand (99 kg), and Malaysia (81 kg). Therefore, rice has always been among the top priorities for Indonesian government policies, especially those on trade and agriculture. The agricultural sector has presented a significant impact on the overall development of Indonesia in terms of increasing people's income, foreign exchange earnings, and controlling inflation. Indonesia is the biggest agricultural country, and biodiversity land in Indonesia is the second largest after Brazil. The agricultural sector is important because most of the poor live in rural areas, with the main income coming from the agricultural sector (Boni 2022). The agricultural sector's GDP has followed an upward trend from 2015 to 2019. Agriculture accounts for 13.5% of the country's GDP. GDP growth is predicted to remain strong in the agricultural sector, even compared with other sectors whose numbers have been substantially reduced. The annual GDP growth rate of the agricultural sector is 1.75 percent (Central Bureau of Statistics 2020). Meanwhile, according

to The Central Statistics Agency (BPS), Indonesia's agricultural land has decreased by 0.019% from the total area of the previous year, so that agricultural land in Indonesia in 2022 was 10.41 million hectares. This is due to population growth, migration, suburban urbanization, and fluctuating land requirements (Surya et al. 2020). As a result, the demand for conversion of agricultural land to other uses will continue to rise, resulting in changes in land use (Prayitno et al. 2020), particularly the conversion of agricultural land to built-up land in Pandaan District (Prayitno et al. 2019b). Land conversion is defined as the conversion of agricultural land to nonagricultural land (Prayitno et al. 2018). The conversion of agricultural land functions can occur due to several factors, such as social, economic, and policy factors (Prayitno et al. 2021a).

Land is important in various sectors; the demand for land will rise, resulting in land conversion (Rondhi et al. 2018). This land-use change occurs for certain reasons, namely the need for development to meet the increasing needs of the population, simultaneously followed by the demands of societal needs, which continue to rise with the passage of time (Prayitno et al. 2021a, 2021b; Wang et al. 2018). If not addressed immediately, the uncontrolled conversion of agricultural land can cause serious problems (Rosyidie 2013) (Hidayat et al. 2021). In addition, the conversion of agricultural land towards economic growth, which is quite intensive, can also cause a decrease in environmental quality. Land-use change raises various economic, social, and environmental problems. Uncontrolled land conversion causes problems such as environmental degradation, traffic congestion, poverty, crime, and other social conflicts (Surya et al. 2020). To address this problem, policies that regulate land conversion are being implemented in response to the problem of converting agricultural land to other uses. One of them is the government regulation (PP) No. 1 of 2011 on the Determination and Transfer of Functions of Sustainable Food Agricultural Land (Lahan Pertanian Pangan Berkelanjutan/LP2B/SFAL), which states that SFAL is protected and cannot be converted. SFAL is irrigated land devoted to rice production that is determined to be protected and developed consistently in order to produce staple food for self-reliance, security, and national food sovereignty. There is also Law No. 41 of 2009 concerning the protection of SFAL, which mandates the government and local governments to carry out control through the provision of incentives, disincentives, mechanisms licensing, protection, and counseling. The protection SFAL is carried out by giving sanctions to perpetrators of violations of Section 44 of Law No. 41 of 2009, which prohibits the conversion of land designated as SFAL.

Regulations must protect food agricultural land to ensure SFAL availability and improve farmer welfare. These regulations thus control the conversion of agricultural land functions, ensuring national food self-sufficiency, resilience, and sovereignty. Controlling SFAL can be accomplished through the use of incentives and disincentives. Incentives are rewards for farmers who maintain and do not convert SFAL, according to the government regulation No. 12 of 2012. Meanwhile, disincentives such as revocation of incentives are imposed on farmers who have received incentives but fail to fulfill their obligations. They are carried out when farmers who have received incentives fail to fulfill their obligations by failing to protect their SFAL by violating norms, standards, procedures, and criteria, or if the land has been converted.

Landowners' intentions to change land use are influenced by social, economic, and land regulations factors (Ilham et al. 2005). In terms of social factors can be seen from psychological attitudes, which are divided into three dimensions (cognitive, affective, and behavioral) (Lenzi et al. 2012). The psychological dimension of affective attitude can be distinguished based on place attachment (Prayitno et al. 2019a), and social factors, namely the sense of community, which is related to social capital.

According to (Putnam 1993b), social capital enables the formulation of new strategies in development. Social capital is generally explained as the characteristics of networks, norms, and beliefs in social relations that facilitate the cooperation and coordination of people to achieve desired and mutually beneficial goals. According to several studies, social capital plays a role in a farmer's decision-making process. However, there is no

clear conception of how the components of social capital interact to determine behavior. Understanding community interaction through social capital can explain the factors of social capital that can drive the decision-making process toward certain behaviors. Research (Hunecke et al. 2017) explains the importance of social capital in farmers' decision processes regarding technology adoption. Likewise, Sobels et al. (2001) argued about the role of social capital in trust, norms, reciprocal expectations, and linkages. In that study, social capital is related to factors that contribute to the network of Landcare groups in rural Australia. Prayitno et al. (2022a) also explains that social capital consists of networks, norms, and trust, and that social capital emphasizes social networks bound by feelings of mutual understanding, cooperation, trust, and shared values that can encourage sustainable agriculture. In addition, according to research conducted by (Castillo et al. 2021), social capital is important in understanding farmer behavior toward pressurized irrigation technology. In this study, social capital and its interactions influenced farmers toward the transition from traditional irrigation to pressure irrigation. Based on several studies, the existence of social capital is able to influence the decisions or desires of farmers for the agricultural land they own. Social capital influences decision-making or collective action in a community. Social capital is a network based on trust, reciprocity, and mutual support with shared access and use of resources. Social capital can increase self-awareness and motivate people to act and sympathize with others (Prayitno et al. 2022a; Auer et al. 2020; Auliah et al. 2022; Hwang and Stewart 2017). Therefore, the relationship between social capital and the intention to change land needs to be identified. The components of social capital, which are trust, norms, and networks (derived from community ties), are examples of social capital that improve society's efficiency by facilitating coordination and cooperation for mutual benefit (Putnam 2001).

Trust is defined as one of the components forming social capital. Trust is a hope that grows in society and is born from an honest nature, regular behavior, and cooperation based on shared norms (Fukuyama 1995). Norms are defined as values, expectations, understandings, and goals that are believed to be carried out jointly by the community (Field 2003), and social networks are collaborative networks between communities that facilitate communication and interaction that enable the growth of trust and strengthen cooperation in society (Putnam 1993b). Social capital will build trusting relationships among people, which can influence positive outcomes (Cheevapattananuwong et al. 2020; Nugraha et al. 2021). When the social capital of a community is high, the relationship between the community and its supporting environment will be tighter and support the protection of land use. This is because farmers or landowners are the key decision makers in choosing land use (Rajpar et al. 2019), so community social capital can affect changes in agricultural land (Kizos et al. 2018; Deng et al. 2020). High social capital is required for the development of a society capable of defending and protecting its interests, particularly in land protection (Nugraha et al. 2021).

Pasuruan Regency is one of the East Java regencies undergoing land-use development, supported by its strategic location, adequate road infrastructure, and its role as the main route for East Java's economic center. Additionally, the Gempol–Pandaan toll road connects two major cities, Surabaya and Malang, and will eventually become part of the Trans Java toll road. This has resulted in the conversion of agricultural land, with 213.69 Ha being converted in Pandaan District, which is 4.9% of total land use (Prayitno et al. 2020). This change will also impact landowners' intention to change land functions. Pandaan District is one of the districts in Pasuruan Regency. According to the RTRW of Pasuruan Regency for the 2009–2019 period, one of the cultivation area development strategies is to develop agricultural areas through the determination of Sustainable Food Agriculture Land (Bappeda Kabupaten Pasuruan 2010). Agricultural land designated SFAL must be protected and not converted into urban or rural areas. Furthermore, a policy of controlling space use in incentives and disincentives for SFAL makes it challenging to change land functions. This contradicts the fact that many agricultural lands have been converted into toll roads, which causes a dilemma for landowners to maintain land or convert their agricultural

land. Therefore, this study aims to determine the relationship between social capital and landowners' intention to change the SFAL in Pandaan District, Pasuruan Regency.

2. Materials and Methods

2.1. Data Collection

This study gathers data through questionnaires and interviews with relevant parties. The population of food agricultural landowners in Pandaan District is 5951 farmers. The sample used for the questionnaire is 400 respondents, who are SFAL owners, based on a sample calculation with the Isaac Michael approach with an error rate of 5%. Social capital has 3 variables: "trust", which is measured by 8 indicators; "norms", which is measured by 4 indicators; and "network", which is measured by 11 indicators. Each indicator (mentioned below) is filled with a score from 1 to 5 (Likert scale from Strongly Disagree to Strongly Agree) by the respondents, and the results are calculated using index analysis (Table 1).

Table 1. The indicators of social capital.

Variable	Indicators	Symbol	Source
Trust (X1)	Over the past 5 years, the level of trust in the village has been getting better	X1.1	(Farisa et al. 2019; Irawati et al. 2021; Nugraha et al. 2022; Prayitno et al. 2022b)
	Many people in my village help each other	X1.2	
	If a community project is not profitable for me but has benefits for many other people in the village, I will donate time or money to the project	X1.3	
	Trust in local community leaders	X1.4	
	Trust in local religious leaders	X1.5	
	Trust in the village apparatus or government	X1.6	
	Trust in fellow villagers	X1.7	
	Trust in the community in lending and borrowing goods (Ex. agricultural equipment)	X1.8	
Social Network (X2)	I like to work individually with fellow villagers	X2.1	(Prayitno et al. 2022b)
	I enjoy working in groups with the village community	X2.2	
	I have many close friends who are comfortable, can talk about personal matters, and ask for help in this village	X2.3	
	If I suddenly had to be out of town for a day or two, I would rely on the neighbors to look after what I had. (Example: house, land, children, etc.)	X2.4	
	If I need some money for capital and farming costs, many people in the village (especially in the farmer group) are willing to help finance me	X2.5	
	If I suddenly face a long-term emergency such as crop failure, many villagers (especially people in farmer groups) are willing to help me	X2.6	
	I am very active in participating in farmer groups	X2.7	
	People in farmer groups help each other in marketing agricultural products	X2.8	
	People in farmer groups help each other in farming tools and agricultural infrastructure	X2.9	
	People in farmer groups help each other in terms of agricultural needs (fertilizers, pesticides, etc.)	X2.10	
	The people in the farmer group and I have a good relationship	X2.11	
Norms (X3)	I obey the written rules in the community	X3.1	(Farisa et al. 2019; Irawati et al. 2021; Nugraha et al. 2022; Prayitno et al. 2022b)
	I get a written sanction if I violate written rules in the community	X3.2	
	I obey the unwritten rules in the community	X3.3	
	I get unwritten sanctions if I violate written rules in the community	X3.4	

A score of 1 is given if the respondent feels they strongly disagree with the statement in the questionnaire. A score of 2 is given if the respondent does not agree with the statement in the questionnaire. A score of 3 is given if the respondent feels they quite agree with the statement in the questionnaire. A score of 4 is given if the respondent agrees with the statement in the questionnaire. A score of 5 is given if the respondent feels they strongly agree with the statement in the questionnaire. Statements for scores 1–5 are contained in each question in the questionnaire. Examples of these statements are mentioned in (Table 2).

Table 2. Example of the statement variable trust in each score in the questionnaire.

Variable	Indicator	(Score) Statement
Trust	Trust in local religious leaders	(1) Strongly disagree, I feel that religious leaders are not nurturing and inconsistent in holding the values of truth and justice and do not have deeper knowledge and experience in religious science
		(2) Disagree, I feel that religious leaders are less nurturing and less consistent in holding the values of truth and justice
		(3) I quite agree, I feel that religious leaders are quite nurturing and quite consistent in holding the values of truth and justice
		(4) Agree, I feel that religious leaders are nurturing and consistent in holding the values of truth and justice
		(5) Strongly agree, I feel that religious leaders are nurturing and consistent in holding the values of truth and justice and have deeper knowledge and experience in religious science

2.2. Structural Equation Modeling Analysis

This study uses structural equation modeling (SEM) analysis to determine the relationship between variables. In this study, the SEM model was applied using the SEM-PLS (Partial Least Square) software to assess the relationship between social capital and the intention to change land use for SFAL landowners. SEM analysis is a multivariate analysis that makes it possible to comprehensively test the relationship between complex research variables in the entire model. The advantage of using SEM analysis over other analyses is that SEM analysis can be used to determine whether a research model is valid or whether the research model is suitable or not. SEM can produce a research model that involves a number of latent variables, the indicators in it, and the relationship between the two (Haryono 2014). However, the weakness in the SEM analysis itself is that the causality relationship in the variables is not determined by the SEM but is built by the theories that support it. Therefore, SEM is used in this study because it can bring up a statistical model for predicting the calculation of the relationship between direct and indirect variables in the theoretical model (Ghozali 2008), namely in the theoretical model of social capital variables (beliefs, norms, and social networks), as well as variable land-use change intentions for SFAL landowners. The theoretical model of social capital in SEM analysis describes trust as being very important for developing relationships, social networks, and norms (Prayitno et al. 2018; Fukuyama 2001). In terms of norms, there are several actions that are acceptable and unacceptable to build trust when socializing in society. The existence of norms cannot be separated from the formation of social networks, because social norms are built with the formation of social networks. Each social capital variable is measured using 23 indicators. Then, based on the relationship between the social capital variables, changes in the land use of SFAL landowners will be affected. The relationship between social capital and changes in land use is quantified in two parts, depending on the response of the landowner to the question of whether they intend to change or sell the land or not.

2.3. Pandaan District Overview

Pandaan District is one of the subdistricts of Pasuruan Regency and is located astronomically at 112°30′–113°30′ east longitude and 7°30′–8°30′ south latitude. Pandaan District

has a total area of 4327 Ha and is divided into 17 villages, which are further divided into 86 hamlets, 151 community units (rukun warga/RW), and 530 neighborhood units (rukun tetangga/RT) (Figure 1). Rice fields are the most common land use in Pandaan District, accounting for 2847 Ha or 65.70 percent of the total land-use area (BPS Pasuruan 2020). The average productivity of rice fields in Pandaan District is 6.3 tons/ha/year and the average price of grain is IDR 4400/kg. This demonstrates that farming is the primary source of income for the Pandaan District community. In 2018, a toll road connecting Malang to Surabaya City was built, located in the middle of Pandaan District and the eastern part of the direction of the national road connecting Malang and Surabaya City. The construction of the toll road will also influence the development of the surrounding land use.

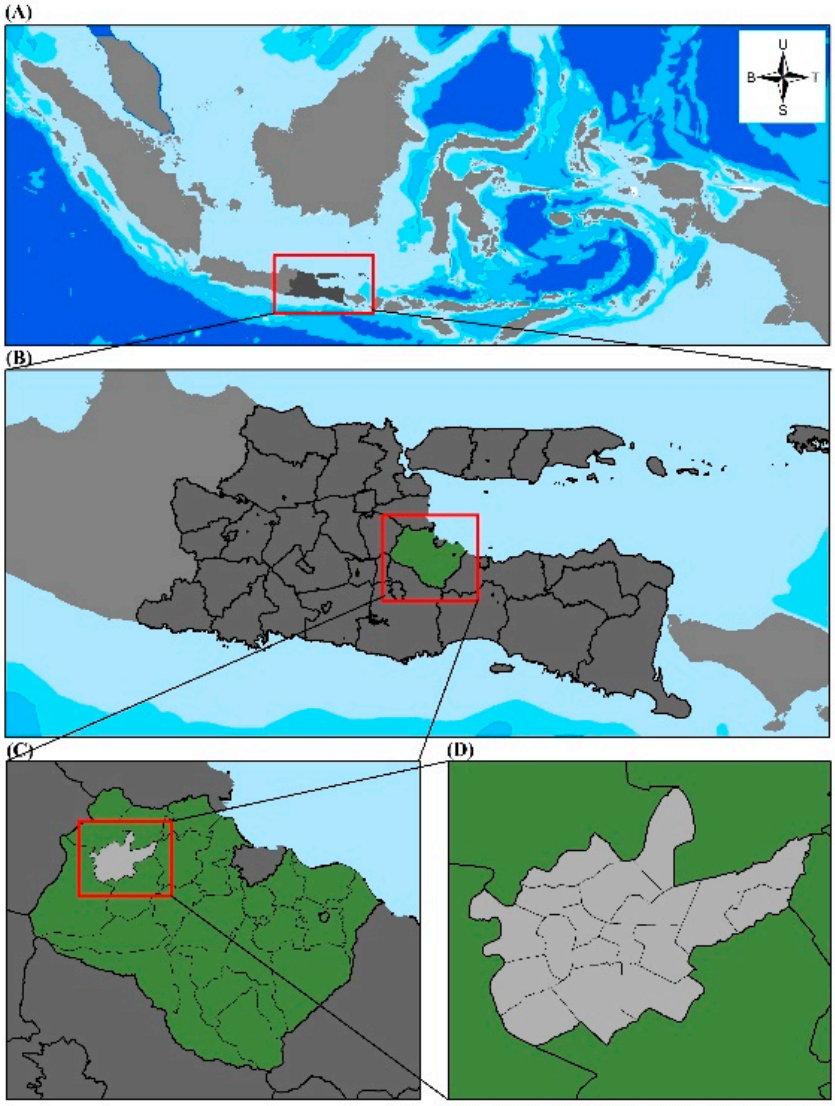


Figure 1. Map of study area: (**A**) East Java in Indonesia. (**B**) Pasuruan Regency to East Java. (**C**) Map of Pasuruan Regency; the highlighted area shows Pandaan District. (**D**) Pandaan District.

The development of uncontrolled land use can lead to converting agricultural land to nonagriculture. In general, the conversion of agricultural land in Indonesia is caused by internal and external factors. Internal factors are caused by poverty, and external factors are caused by land taxation (PBB) or land growth due to economic development and population growth. The conversion of agricultural land in Pandaan District is an issue due to the construction of toll roads, which affects land-use development. This loss of productive land will disrupt food production's sustainability if it is not controlled. In

addition, this agricultural land also has the function of providing and opening employment, environmental functions, and functions of water catchment areas. So, if there is a change in the function of agricultural land, it will cause the loss of these other functions. SFAL is a system and process of planning, determining, developing, utilizing, fostering, controlling, and supervising agricultural food land and its area in a sustainable manner (UU Number 41 of 2009). The designation of SFAL land is carried out as a policy effort to control the rate of conversion of agricultural land so that other functions, such as ecological functions, can be maintained. Pandaan District has 1108.96 Ha of Sustainable Food Agricultural Land (SFAL). Table 3 mentions the area of SFAL in each village in Pandaan District (Table 3).

Table 3. The area of SFAL in each villages.

No	Villages	SFAL Area (Ha)
1	Jogosari	19.95
2	Kutorejo	31.63
3	Petungasri	16.73
4	Banjarkejen	82.45
5	Banjarsari	76.24
6	Durensewu	49.17
7	Karangjati	25.57
8	Kebonwaris	84.39
9	Kemirisewu	117.89
10	Nogosari	37.48
11	Plintahan	59.09
12	Sebani	115.08
13	Sumberejo	88.54
14	Sumbergedang	84.08
15	Tawangrejo	31.14
16	Tunggulwulung	101.96
17	Wedoro	87.57
Total Area		1108.96

Kemirisewu Village has the largest SFAL in Pandaan District, with 117.89 Ha, or 10.63 percent of the total area. Additionally, Sebani Village has a large Sustainable Food Agricultural Land area of 115.08 Ha or 10.38 percent (BPS Pasuruan 2020). Meanwhile, Pandaan Village is the only subdistrict that does not have land designated as SFAL. This is due to its strategic location, as it is traversed by the national road connecting Malang to Surabaya City and has developed quite quickly. Agricultural land designated as SFAL must still be protected and may not be converted (Al Azizi et al. 2022). This also influences the desire of landowners to change their land. In addition, the intention of landowners to change land use is also influenced by social factors, such as social capital (Ilham et al. 2005). So, in this study, we examine the social capital of SFAL landowners and landowners' intentions to change SFAL in Pandaan District.

3. Results and Discussion

3.1. Respondent Characteristics

This study uses respondents who are owners of agricultural land in Pandaan District and still maintain their land. Respondents in this study joined farmer groups in each village in Pandaan District. This study involved 500 respondents with different characteristics. Concerning age, most people are of productive age; there were 81 respondents (16.2%) aged 25–40 years, 126 respondents (25.2%) aged 41–45 years, and 117 respondents (48.6%) aged 46–50 years. Furthermore, concerning the livelihoods of the respondents, 341 respondents (68.2%) indicated their main livelihood as food agriculture land farmers. Another 159 respondents (31.8%) were food agricultural landowners with side jobs such as village officials, factory employees, private employees, civil servants, entrepreneurs, laborers, traders, breeders, and Linmas. As for the landowner respondents, most of them had an

area of 0.5 ha of agricultural land, specifically 182 respondents (36.4%). Next, based on the income of the respondents in this study, most of them had a relatively high income according to the Pasuruan Regency Minimum Wage (UMK) in 2020 of IDR 4,190,133, because, apart from getting a basic salary, the respondents also had additional wages from side jobs. Then, based on education, it can be seen that 289 respondents had their most recent education in high school.

3.2. Intention to Change SFAL Based on Social Capital

The intention to change land is a variable that aims to find out how the landowner wants to maintain or change their land. SFAL land change decisions in Pandaan District will be linked to social capital. The results of the intention to change SFAL of the landowners in Pandaan District can be seen in Figure 2.

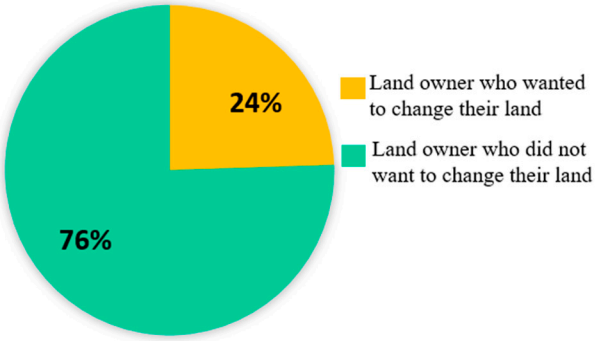


Figure 2. SFAL owners' decisions in Pandaan District to change their land.

Figure 2 illustrates that from the total number of SFAL landowners in Pandaan District, 76% answered that they did not intend to change the land, while 24% said they intended to change the land (Figure 2). These results are linked to social capital in Pandaan District. The distribution of the percentage of respondents in land change decisions in each village in Pandaan District is shown in Figure 3.

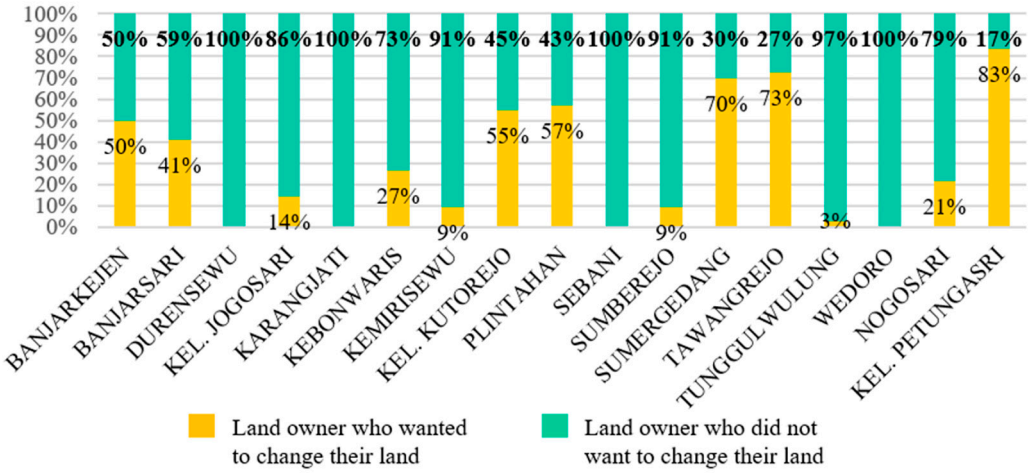


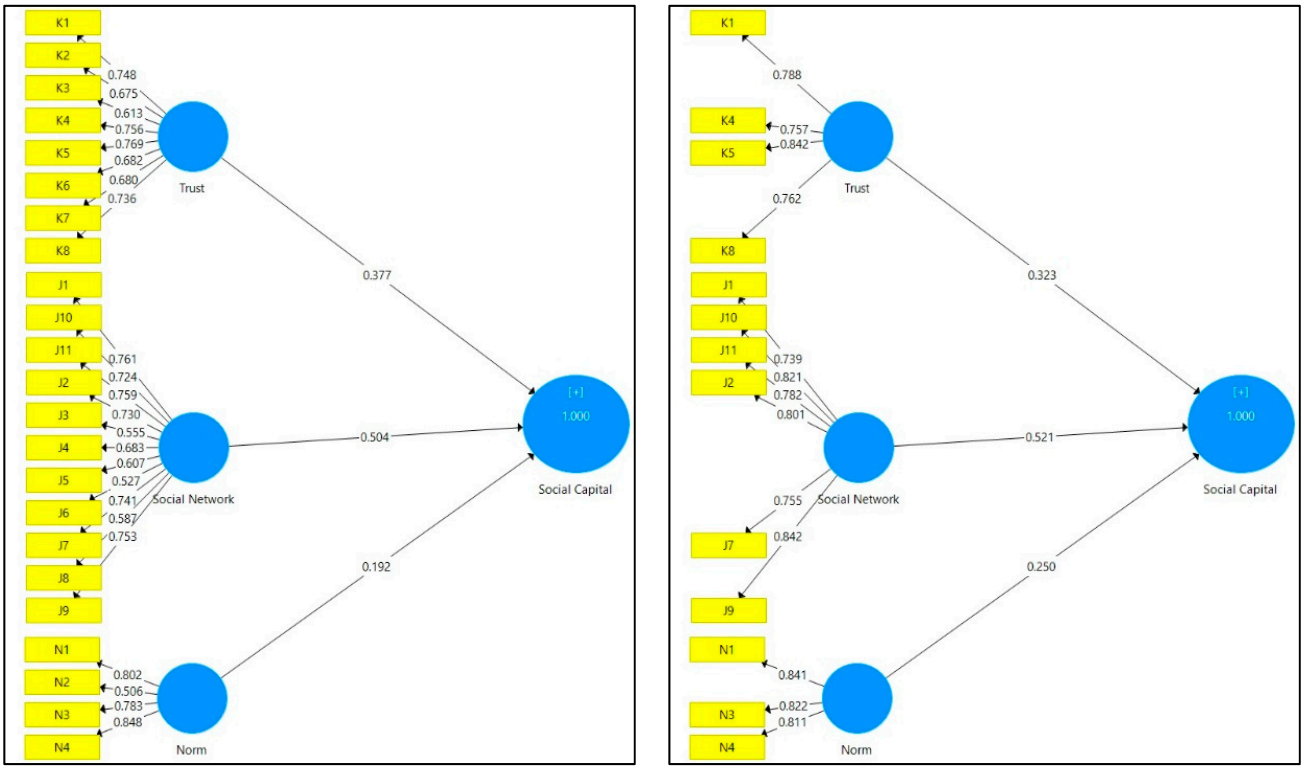
Figure 3. SFAL owners' intention in each village in Pandaan District to change their land.

Figure 3 illustrates that 100% of landowners in Wedoro Village, Sebani Village, Karangjati Village, and Durensewu Village have no intention to change their land, while in Banjarkejen Village, Kutorejo Village, Plintahan Village, Sumbergedang Village, Tawangrejo Village, and Pertungasri Village, more than 50% of respondents answered that they wanted to change their land (Figure 3). After knowing the land change decisions in Pandaan District, the next step was to find their relationship to social capital using structural equation modeling (SEM) analysis applied in PLS-SEM software.

3.3. Social Capital of SFAL Landowners' Intentions

SEM analysis requires several assumptions to be met, including sample size, normality, outliers, and multicollinearity. According to the assessment of the normality output table, most univariate and multivariate normality tests usually are distributed because they fall within the 2.58 range. With the condition that p is less than 0.05, the evaluation of outliers also meets the requirements. Furthermore, the determinant value of the covariance matrix is 0.000 for the value of multicollinearity.

The assumptions of SEM analysis for this study were met based on some of the explanations. Furthermore, the model test and structural model measurements were performed. The measurement of the model test with the resulting model has not yet met the good fit criteria, so changes must be made so that the model produces good fit results (Table 2). The model of SFAL owners who want to change land is presented in Figure 4. There are some indicators that do not meet the requirements or are invalid, so these indicators were discarded. The discarded indicators on the trust variable include K2. Meanwhile, on the social network variable, the discarded indicators include J1, J8, J9, J10, and J11. The discarded indicators for social norms are N3 and N4.



(**a**) (**b**)

Figure 4. The first model of CFA (**a**) and the second-phase CFA model (**b**) of SFAL landowners intentions.

We made modifications in Figure 4, showing that the modification results bring the model to a good fit. Then, regression weights results must be analyzed to examine the influence relationship between variables. Testing the relationship between latent variables is based on the critical ratio (CR) value and the significance probability value. The critical ratio (CR) criteria are 1.96 and a p-value of 0.05. The regression weights produced the following results (Table 4):

- The influence of norms on trust: Testing of the norm variable's relationships to trust showed a critical ratio (CR) of 1.210 ($\geq$1.96), with an estimate value of 0.135 and a probability value of 0.222 ($p < 0.05$). This proves that there is an insignificant positive relationship between norms and trust. Trust is the basis for creating social relationships

and networks. In a society that has a high level of trust, there tends to be positive social rules and interpersonal relationships that support cooperation.

- The influence of norms on the network: The norm variable's relationship with networks showed a critical ratio (CR) value of −0.363 (≥1.96), with an estimate value of −0.25 and a probability value of 0.717 ($p < 0.05$). This proves that there is a negative relationship and an insignificant influence between norms and networks, evidenced by negative values in the critical ratio and probability values that are above the standard criteria.
- The influence of trust on networks: The influence of trust variables on networks was shown to have a CR value of 3.361 with a p-value of 0.000 (very small and below 0.05). This proves that there is a significant positive relationship between trust and networks. With strong community trust, there is the strongest network of SFAL owners in Pandaan Subdistrict.

Table 4. Comparison of cut-off values between first and second CFA model.

The Goodness of Fit Index	Cut-Off Value	First-Stage CFA		Second-Stage CFA	
		Result	Information	Result	Information
SRMR	>0.10	0.135	Good Fit	0.12	Good Fit
d_ULS	>0.05	6.37	Good Fit	1.96	Good Fit
d_G	-	3.17	Good Fit	1.19	Good Fit
Chi-Square	>0.05	5.29	Good Fit	2.11	Good Fit
NFI	<0.9	0.45	Good Fit	0.58	Good Fit

The relationships between latent variables of social capital in the forms of trust, network, and norms have positive and negative effects on each other, and all are not significantly related to each other. From the relationships of the three variables, the significant effect is only between the trust variable and networks. It is therefore interpreted that the trust of SFAL owners who wish to change their land has a strong influence on forming a network, while the prevailing norms have a negative and insignificant influence on the network. So, it is obvious that the relationship between the three social capital variables is not strong, which makes it easy for residents who own SFAL to want to change their land. For this reason, it can be concluded that the weaker/lower the relationship between variables forming social capital, the higher the intention of SFAL landowners to make land-use changes. The standardized regression weights value can see the value of the influence of the relationship between trust and networks of 0.484, while the value of the influence of norms on trust is 0.146.

Social Capital of SFAL Owners Who Are Not Willing to Sell Their Land

As mentioned, according to the assessment of the normality output table, most univariate and multivariate normality tests usually are distributed because they fall within the 2.58 range. With the condition that p is less than 0.05, the evaluation of outliers also meets the requirements. Furthermore, the determinant value of the covariance matrix is 0.000 for the value of multicollinearity. Based on what was explained, the assumptions of the SEM analysis for this study were met (Figure 5).

Furthermore, the model test and structural model measurements were performed. However, the measurement of the model test with the resulting model has not yet met the good fit criteria, so changes must be made so that the model produces good fit results. For example, the population model of SFAL owners who want to change their land is presented in Figure 3. Based on the results of SEM, the discarded indicators on the trust variable include K4, K5, and K8. Meanwhile, the discarded indicators on the social network variable include J1, J4, J6, J7, J8, and J9. The discarded indicators for social norms are N3 and N4. It can be said that five indicators in the "trust" and "social network" variables and two indicators in the "norm" variable are indicators that can measure the social capital variables of SFAL owners who are not willing to sell their land.

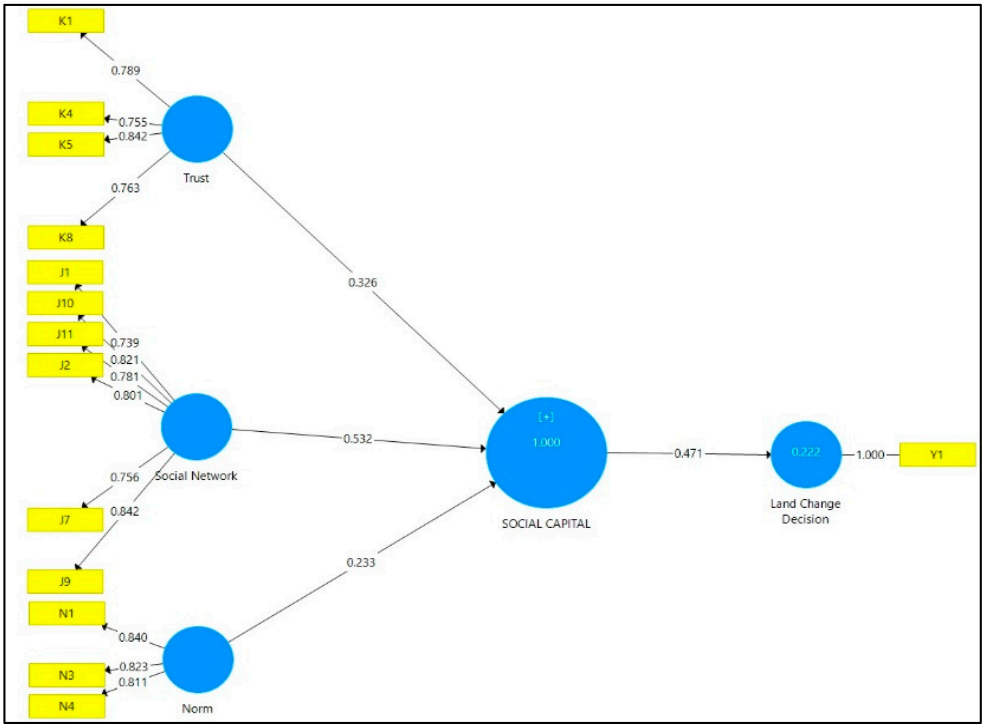


Figure 5. SEM result for social capital of SFAL owners who do not want to change their land use.

The regression weights results must be examined to examine the influence of the relationships between variables. Then, the critical ratio (CR) and significance probability values test the relationship between latent variables (Table 5). Following the modifications in Table 6, it is obvious that the modification results bring the model to a good fit.

Table 5. Value of R square Model.

Variable	R Square	Strength
Social network	0.510	Good Enough
Social capital	0.006	Low
SAFL landowners' intentions	1.000	Very Good

Table 6. Value of Path Coefficients on Relationship Latent Variables.

Variable	Original Sample	Standard Error	T-Statistic	Information
Social Network -> Social Capital	0.442	0.009	48,079	Significant
Trust -> Social Capital	0.432	0.011	38,011	Significant
Social Capital -> SFAL Landowners' Intentions	−0.078	0.047	1649	Significant
Norm -> Social Network	0.714	0.028	25,433	Significant
Norm -> Social Capital	0.236	0.008	29,958	Significant

- The influence of norms on trust: Testing the relationship between norm variables and trust showed a critical ratio (CR) value of 3.625 (≥1.96), with an estimated value of 0.249 and a probability value of 0.000 (very small and below 0.05). This proves that there is a significant positive relationship between norms and trust. This way, the stronger the community norms, the stronger the trust of the community who owns SFAL in Pandaan District will be.
- The influence of norms on the network: The correlation between norms and networks can be seen with a CR value of 2.156 and a *p*-value of 0.000 (very small and below 0.05). This shows that there is a significant positive relationship between norms and networks.

- The influence of trust on networks: The influence of the trust variable on networks can be seen with a CR value of 6.654 with a *p*-value of 0.000 (very small and below 0.05). This proves that there is a significant positive relationship between trust and networks. This way, the stronger the trust, the stronger the community network of SFAL owners in Pandaan District will be.

The relationships between latent social capital variables in the form of trust, network, and norms significantly influence each other. The norm and network variables significantly affect the trust variable (Figure 6) (Table 6).

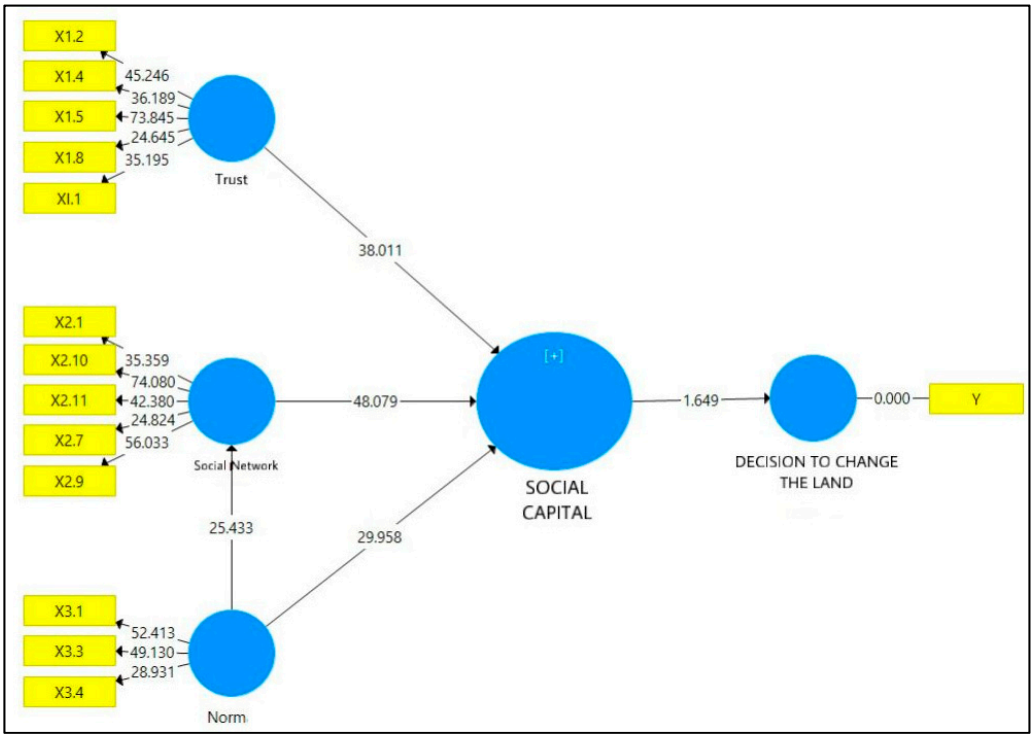


Figure 6. Result of Bootstrapping Social capital of SFAL owners.

3.4. Research Implication

In developing countries such as Indonesia, land conversion, in the sense of changes in land use, is basically unavoidable in the implementation of development. The rapid growth of the population, which is not followed by the demands of the community's need for land, has led to conflicts of interest over land use and discrepancies between land use and its allotment plan. Even though the land itself is limited and cannot be added (Eko and Rahayu 2012), in many cases, land conversion occurs from agricultural to nonagricultural land.

Regarding land-use conversion, suburban areas are areas that have experienced a lot of land conversion from agriculture to non-agriculture. Many of these land functions are caused by the influence of the development of the surrounding cities (Rahayu 2009). It is the same only in Pandaan District, Pasuruan Regency; this region has its main source of income in the agricultural sector. However, in 2018, the construction of a toll road connecting Malang and Surabaya City led to land-use development in Pandaan District.

Changes in land use have resulted in a slew of complex issues involving spatial, economic, social, and environmental dimensions. Changes in land use are marked by the allocation of space for the development of trade and services, large-scale settlements, recreational facilities, shopping centers, educational facilities, and other urban activities (Surya et al. 2020). Changes in land use are a consequence of the need for land and the demands of increasing population growth (Prayitno et al. 2018). Changes that occur from agricultural to nonagricultural land are influenced by various social, economic, and government policies that make development rules (Prayitno et al. 2021a). Social capital is one of the social factors

that influences the intention of SFAL landowners in Pandaan District to transfer land. Social capital is a form of support when obstacles occur. Social capital is able to support the sustainability of community agriculture in the midst of land conversion. Through social capital, landowners can survive with a high sense of trust, strong network ties, and norms that are still well-maintained (Setiawan et al. 2020).

Social capital in this study is divided into three dimensions namely trust, norms, and social networks (Putnam 1993a). Trust is the basis of a relationship; trust is defined as a person's belief in others, demonstrated by taking risks and hoping that other people will act mutually supportively and not harm them. A high level of trust in someone will strengthen cooperation between communities (Putnam 1993c). Based on the results of the analysis, this study showed a significant positive relationship between the norms and beliefs of the community owners of SFAL land in Pandaan District. High trust in society will tend to be followed by positive social norms (Cox 1995). Norms themselves are also interpreted as certain rules that must be followed by society, including religion, moral guidelines, and codes of ethics (Field 2003). Thus, the stronger the community norms, the stronger the trust of the community owners of SFAL in Pandaan District.

Furthermore, through the social network dimension, the research results show a significant positive relationship between norms and social networks, as well as a significant positive relationship between trust and social networks. Social networks are defined as community involvement that causes better relations and creates a sense of togetherness to achieve the desired goals (Sawatsky 2008). The social network is one of the elements of social capital, and it refers to reciprocity and trust (Fathy 2019). Thus, the social network of community owners of SFAL land in Pandaan District is related to norms and beliefs; that is, the stronger the norms and beliefs, the wider the social network of SFAL owners in Pandaan District. The social capital of SFAL owners in Pandaan District is marked by the existing condition of farmers who are willing to lend each other equipment and other agricultural needs, such as fertilizers, pesticides, etc. Community owners of SFAL land in Pandaan District will help each other even when experiencing emergencies such as crop failure. Other communities are willing to help (especially people in farmer groups) with capital, farming costs, and marketing agricultural products.

The conversion of agricultural land in rural areas has a huge impact on the community, especially on farmers as landowners, because agricultural land, apart from being a source of income, also has a social role for the community. Rural communities that have strong social capital tend to choose to maintain their agricultural land (Prayitno et al. 2021a). This is in line with research findings, according to which the community owning SFAL land in Pandaan District chose to retain its agricultural land because it was based on community social capital. The people who own the SFAL in Pandaan Subdistrict say they do not want to change their land: with an average response of 74%, the community wants to keep the SFAL land as a source of income. Thus, the SFAL landowner community's social capital in Pandaan District significantly affects the SFAL landowners' decision to make land changes. Higher or stronger social capital relations will influence SFAL landowners' intention to change their land to make it less expensive. Several actions that the government can take based on the findings of this study include:

- Implement policy changes and innovations to encourage SFAL owners to defend their property. Increase trust and community networks in communities with low social capital, provide a variety of information related to cooperation among community members, exchange information in land management, assist each other in the implementation of plant maintenance, and assist in the provision of seed water, among other on-farm activities.
- Governments could give detailed and realistic directions about the boundaries of SFAL land changes to landowners who have a proclivity to make SFAL land-use changes, as well as contribute to the community's social capital.
- Implement policy changes and innovations to encourage SFAL owners to keep their land property. Increase trust and community networks in communities with low social

capital, provide a variety of information related to cooperation among community members, and exchange information on land.

4. Conclusions

Social capital elements include trust, norms, and networks. The social capital index of Pandaan District is in the moderate category, with the highest index being trust at 73.58. The higher/stronger the social capital relationship, the less SFAL owners will want to change land functions. On the other hand, the weaker/lower the relationship between social capital variables, the greater the intentions of SFAL landowners to make land-use changes.

The relationships between latent variables of social capital in the form of trust, network, and norms have a significant positive influence on each other. The norm and network variables have a significant effect on the trust variable. This means that in Pandaan Subdistrict, the prevailing norms and trust can increase networks among residents and SFAL owners who are not willing to sell their land, even though the selling price is high. The value of greatest influence is the relationship between trust and networks, with a value of standardized regression weights of 0.583, while the lowest value is the relationship between norms and networks, with a standardized regression weights value of 0.145. Indications of the relationship between social capital variables that influence each other illustrate the strength of social capital in Pandaan District, which makes SFAL owners reluctant to change and/or sell their land. For this reason, it can be concluded that the higher/stronger the social capital relationship, the more reluctant SFAL owners are to make land transformations or land-use changes.

Author Contributions: Conceptualization, G.P., A.T.N. and F.A.A.; methodology, A.T.N. and G.P.; software, F.A.A.; validation, G.P., F.A.A., N.S. and A.A.; formal analysis, G.P., I.I.H. and F.A.A.; investigation, A.T.N. and N.S.; resources, G.P.; data curation, A.T.N. and A.A.; writing—original draft preparation, G.P. and F.A.A.; writing—review and editing, G.P. and E.S.; visualization, F.A.A. and A.A.; supervision, G.P., A.T.N. and E.S.; project administration, G.P. and I.I.H.; funding acquisition, G.P. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Acknowledgments: I am grateful for the contributions of all interviewed farm households, enumerators, and all staff members of the Pandaan District. In addition, the authors are thankful to our manuscript reviewers for helping to increase the quality.

Conflicts of Interest: The authors declare no conflict of interest.

References

Al Azizi, Faizah Arifiyah, Nindya Sari, and Gunawan Prayitno. 2022. Intensi perubahan lahan petani pemilik lahan LP2B di kecamatan pandaan, kabupaten pasuruan. *Planning for Urban Region and Environment Journal (PURE)* 11: 161–68.

Auer, Alejandra, Jonathan Von Below, Laura Nahuelhual, Matías Enrique Mastrangelo, Andrew Gonzalez, Mariana Gluch, María Vallejos, Luciana Staiano, Pedro Laterra, and José Maria Paruelo. 2020. The role of social capital and collective actions in natural capital conservation and management. *Environmental Science & Policy* 107: 168–78. [CrossRef]

Auliah, Aidha, Gunawan Prayitno, Ismu Rini Dwi Ari, Lusyana Eka Wardani, and Christia Meidiana. 2022. The Role of Social Capital Facing Pandemic COVID-19 in Tourism Village to Support Sustainable Agriculture (Empirical Evidence from Two Tourism Villages in Indonesia). *Economies* 10: 320. [CrossRef]

Bappeda Kabupaten Pasuruan. 2010. Rencana Tata Ruang Wilayah Kabupaten Pasuruan 2009–29. Available online: https://jdih.pasuruankab.go.id/ (accessed on 1 February 2023).

Boni, Yohanes. 2022. Agricultural Development's Influence on Rural Poverty Alleviation in the North Buton Regency, Indonesia—The Mediating Role of Farmer Performance. *Economies* 10: 240. [CrossRef]

BPS Pasuruan. 2020. *Pasuruan in Figure 2020*; Bangil: Pasuruan Regency. Available online: https://pasuruankab.bps.go.id (accessed on 1 February 2023).

Castillo, Gracia Maria Lanza, Alejandra Engler, and Meike Wollni. 2021. Planned behavior and social capital: Understanding farmers' behavior toward pressurized irrigation technologies. *Agricultural Water Management* 243: 106524. [CrossRef]
Central Bureau of Statistics. 2020. *Statistik Indonesia 2020 [Statistic of Indonesia 2020]*; Jakarta: Central Bureau of Statistics. Available online: https://www.bps.go.id (accessed on 1 February 2023).
Cheevapattananuwong, Pornsiri, Claudia Baldwin, Athena Lathouras, and Nnenna Ike. 2020. Social capital in community organizing for land protection and food security. *Land* 9: 69. [CrossRef]
Cox, Eva Maria. 1995. *A Trully Civil Society*. Sydney: ABC Book.
Deng, Xin, Miao Zeng, Dingde Xu, and Yanbin Qi. 2020. Does social capital help to reduce farmland abandonment? Evidence from big survey data in rural china. *Land* 9: 360. [CrossRef]
Eko, Trigus, and Sri Rahayu. 2012. Perubahan penggunaan lahan dan kesesuaiannya terhadap RDTR di wilayah peri-urban studi kasus: Kecamatan Mlati. *Jurnal Perencanaan Wilayah dan Kota* 8: 330–40. [CrossRef]
FAO. 2017. *The Future of Food and Agriculture—Trends and Challenges*. Rome: FAO.
Farisa, Baiq Maulida Riska, Gunawan Prayitno, and Dian Dinanti. 2019. Social Capital and Community Participation on Infrastructure Development in Pajaran Village, Malang Regency Indonesia. *IOP Conference Series: Earth and Environmental Science* 239: 012046. [CrossRef]
Fathy, Rusydan. 2019. Modal Sosial: Konsep, Inklusivitas dan Pemberdayaan Masyarakat. *Journal Pemikiran Sosiologi* 6: 1. [CrossRef]
Field, John. 2003. *Social Capital*. Landon: Routledge.
Fukuyama, Francis. 2001. Social Capital and Development: The Coming Agenda. *The SAIS Review of International Affairs* 22: 23–37. [CrossRef]
Fukuyama, Francis. 1995. *Trust: The Social Virtues and the Creation of Prosperity*. New York: New York Free Press.
Ghozali, Imam. 2008. *Structural Equation Modeling, Metode Alternatif dengan Partial Least Square*. Semarang: Badan Penerbit University Diponegoro.
Haryono, Siswoyo. 2014. Structural Equation Modelling untuk Penelitian Manajemen Menggunakan AMOS. *Journal Ekonomi dan Bisnis* 7: 23–34.
Hidayat, AR Rohman Taufiq, Abdul Wahid Hasyim, Gunawan Prayitno, and Januar Dwi Harisandy. 2021. Farm Owners' Perception toward Farmland Conversion: An Empirical Study from Indonesian Municipality. *Environmental Research, Engineering and Management* 77: 109–24. [CrossRef]
Hunecke, Claudia, Alejandra Engler, Roberto Jara-Rojas, and Marijn Poortvliet. 2017. Understanding the role of social capital in adoption decisions: An application to irrigation technology. *Agricultural Systems* 153: 221–31. [CrossRef]
Hwang, Doohyun, and William P. Stewart. 2017. Social Capital and Collective Action in Rural Tourism. *Journal of Travel Research* 56: 1. [CrossRef]
Ilham, Nyak, Yusman Syaukat, and Supena Friyatno. 2005. Perkembangan Dan Faktor-Faktor Yang Mempengaruhi Konversi Lahan Sawah Serta Dampak Ekonominya. *SOCA: Jurnal Sosial Ekonomi Pertanian* 5: 2.
Irawati, Hedyan, Agus Dwi Wicaksono, and Gunawan Prayitno. 2021. Modal sosial dan partisipasi masyarakat dalam kaitan tingkat kemajuan desa. *Geography: Jurnal Kajian, Penelitian Dan Pengembangan Pendidikan* 9: 1–12.
Kizos, Thanasis, Tobias Plieninger, Theodoros Iosifides, María García-Martín, Geneviève Girod, Krista Karro, Hannes Palang, Anu Printsmann, Brian Shaw, Julianna Nagy, and et al. 2018. Responding to landscape change: Stakeholder participation and social capital in five european landscapes. *Land* 7: 14. [CrossRef]
Lenzi, Michela, Alessio Vieno, Douglas Perkins, Massimiliano Pastore, Massimo Santinello, and Sonia Mazzardis. 2012. Perceived Neighborhood Social Resources as Determinants of Prosocial Behavior in Early Adolescence. *American Journal of Community Psychology* 50: 37–49. [CrossRef]
Nugraha, Tjachja Achmad, Gunawan Prayitno, Abdul Wahid Hasyim, and Fauzan Roziqin. 2021. Social capital, collective action, and the development of agritourism for sustainable agriculture in rural Indonesia. *Evergreen* 8: 1–12. [CrossRef]
Nugraha, Tjachja Achmad, Gunawan Prayitno, Rahmawati, and Aidha Auliah. 2022. Farmers' Social Capital in Supporting Sustainable Agriculture: The Case of Pujon Kidul Tourism Village, Indonesia. *Journal of Civil Engineering and Environmental Sciences A* 5: 235–49. [CrossRef]
OECD/FAO. 2018. *OECD-FAO Agricultural Outlook 2018–2027*. Paris: OECD Publishing. Rome: FAO. [CrossRef]
Prayitno, Gunawan, Ainul Hayat, Achmad Efendi, Hagus Tarno, Fikriyah, and Septia Hana Fauziah. 2022a. Structural Model of Social Capital and Quality of Life of Farmers in Supporting Sustainable Agriculture (Evidence: Sedayulawas Village, Lamongan Regency—Indonesia). *Sustainability* 14: 12487. [CrossRef]
Prayitno, Gunawan, Aris Subagiyo, Dian Dinanti, Rahmawati, and Aidha Auliah. 2021a. *Place Attachment & Alih Fungsi Lahan Pertanian: Pentingnya Lahan Pertanian di Perdesaan*. Malang: UB Media.
Prayitno, Gunawan, Dian Dinanti, Achmad Efendi, Ainul Hayat, and Pradnya Paramitha Dewi. 2022b. Social Capital of Pujon Kidul Communities in Supporting the Development of the COVID-19 Resilience Village. *International Journal of Sustainable Development and Planning* 17: 251–57. [CrossRef]
Prayitno, Gunawan, Dian Dinanti, Izzatul Ihsansi Hidayana, and Tjachja Achmad Nugraha. 2021b. Place attachment and agricultural land conversion for sustainable agriculture in Indonesia. *Heliyon* 7: e07546. [CrossRef] [PubMed]
Prayitno, Gunawan, Dian Dinanti, Safira Aulia Rusmi, Surjono, and Zakiyah Dwi Maulidatuz. 2019a. *Place Attachment Index of Landowners in Pandaan Sub-District*; Bangil: Pasuruan Regency. [CrossRef]

Prayitno, Gunawan, Nindya Sari, Abdul Wahid Hasyim, and Nyoman Suluh Wijaya. 2020. Land-use prediction in Pandaan District pasuruan regency. *International Journal of GEOMATE* 18: 64–71. [CrossRef]
Prayitno, Gunawan, Nindya Sari, Rohman Taufiq Hidayat, Nyoman Suluh Wijaya, and Zakiyah Dwi Maulidatuz. 2019b. Soil/land use changes and urban sprawl identification in Pandaan District, Indonesia. *International Journal of GEOMATE* 16: 148–53. [CrossRef]
Prayitno, Gunawan, Surjono, Rohman Taufiq Hidayat, Aris Subagiyo, and Nindya Kinanti Paramasasi. 2018. Factors that effect to land use change in Pandaan District. *IOP Conference Series: Earth and Environmental Science* 202: 012006. [CrossRef]
Putnam, Robert. 1993a. *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton: Princeton University Press. [CrossRef]
Putnam, Robert. 1993b. Social Capital and Public Life. *The American Prospect* 4: 35–42.
Putnam, Robert. 1993c. The Prosperous Community. *The American Prospect* 19: 475–82. [CrossRef]
Putnam, Robert. 2001. *Bowling Alone: The Collapse and Revival of American Community*. New York: Touchstone Books by Simon & Schuster.
Rahayu, Sri. 2009. Kajian Konversi Lahan Pertanian di Daerah Pinggiran Kota Yogyakarta Bagian Selatan (Studi Kasus di Sebagian Daerah Kecamatan Umbulharjo). *Jurnal Pembangunan Wilayah dan Kota* 5: 365–37.
Rajpar, Habibullah, Anlu Zhang, Amar Razzaq, Khalid Mehmood, Maula Bux Pirzado, and Weiyan Hu. 2019. Agricultural land abandonment and farmers' perceptions of land use change in the indus plains of Pakistan: A case study of Sindh province. *Sustainability* 11: 4663. [CrossRef]
Rondhi, Mohammad, Pravitasari Anjar Pratiwi, Vivi Trisna Handini, Aryo Fajar Sunartomo, and Subhan Arif Budiman. 2018. Agricultural land conversion, land economic value, and sustainable agriculture: A case study in East Java, Indonesia. *Land* 7: 148. [CrossRef]
Rosyidie, Arief. 2013. Banjir: Fakta dan Dampaknya. Serta Pengaruh dari Perubahan Guna Lahan. *Journal of Regional and City Planning*. [CrossRef]
Sawatsky, Tara Anne. 2008. The influence of social capital on the development of nature tourism: A case study from Bahia Magdalena. *Mexico* 2008: 1–147.
Setiawan, Trio Pendi, Elok Ebrilyani, and Erina Nur Azilla. 2020. Modal Sosial Dalam Keberlanjutan Pertanian Di Tengah Alih Fungsi Lahan Di Kelurahan Bintoro Kecamatan Patrang Kabupaten Jember. *Agricore: Jurnal Agribisnis dan Sosial Ekonomi Pertanian Unpad* 5. [CrossRef]
Sobels, Jonathan, Allan Curtis, and Stewart Lockie. 2001. The role of Landcare group networks in rural Australia: Exploring the contribution of social capital. *Journal of Rural Studies* 17: 265–76. [CrossRef]
Surya, Batara, Despry Nur Annisa Ahmad, Harry Hardian Sakti, and Hernita Sahban. 2020. Land use change, spatial interaction, and sustainable development in the metropolitan urban areas, south Sulawesi province, Indonesia. *Land* 9: 95. [CrossRef]
Wang, Jing, Yifan Lin, Anthony Glendinning, and Yueqing Xu. 2018. Land-use changes and land policies evolution in China's urbanization processes. *Land Use Policy* 75: 375–87. [CrossRef]