



Article

Structural Model of Community Social Capital for Enhancing Rural Communities Adaptation against the COVID-19 Pandemic: Empirical Evidence from Pujon Kidul Tourism Village, Malang Regency, Indonesia

Gunawan Prayitno 1,* D, Ainul Hayat 2, Achmad Efendi 3, Aidha Auliah 1 and Dian Dinanti 1

- Regional and Urban Planning Department, Faculty of Engineering, Universitas Brawijaya, Malang 65145, Indonesia
- ² Faculty of Administrative Sciences, Universitas Brawijaya, Malang 65145, Indonesia
- Department of Statistics, Faculty of Mathematics and Natural Sciences, Universitas Brawijaya, Malang 65145, Indonesia
- * Correspondence: gunawan_p@ub.ac.id; Tel.: +62-8119694532

Abstract: Pujon Kidul Village, Pujon District, Malang Regency, is an area with tourism potential that has been developed since 2017 with the concept of agricultural tourism. Throughout the development of tourism villages, Pujon Kidul Village has succeeded in accelerating economic growth and providing jobs for the community. However, during the COVID-19 pandemic, tourism villages have been severely affected, leading to the temporary closure of tourist attractions and community businesses. This research aimed to identify what indicators form social capital variables and the relationship between social capital variables and community adaptation patterns in dealing with pandemics in the study location. This was quantitative research with confirmatory factor analysis to determine the indicators of forming social capital and structural equation modeling analysis to determine the relationship between the variables. Based on the findings, it is known that trust in forming a social network is 0.468. Furthermore, the social network forms community actions of 0.046 and influences community resilience by 0.007. Therefore, good social capital will make it easier for the community to participate in collective action as a form of caring for each other during the pandemic. This action also influences the community to survive in a pandemic crisis, thus creating an adaptation pattern for the Pujon Kidul Tourism Village community in facing a pandemic.

Keywords: social capital; pandemic; collective action; community adaptation; SEM analysis



Citation: Prayitno, G.; Hayat, A.; Efendi, A.; Auliah, A.; Dinanti, D. Structural Model of Community Social Capital for Enhancing Rural Communities Adaptation against the COVID-19 Pandemic: Empirical Evidence from Pujon Kidul Tourism Village, Malang Regency, Indonesia. Sustainability 2022, 14, 12949. https://doi.org/10.3390/su141912949

Academic Editors: Zygmunt Kruczek and Bartłomiej Walas

Received: 4 August 2022 Accepted: 4 October 2022 Published: 10 October 2022

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

1. Introduction

Since December 2019, the world has been shocked by the outbreak of coronavirus COVID-19; this virus is endemic in almost all parts of the world and has become a hot topic of discussion because of the many deaths it causes worldwide. Since then, the number of COVID-19 cases has increased rapidly and caused a pandemic. Several countries, including Indonesia, have established policies such as social distancing to reduce the high rate of disease transmission [1]. This policy is carried out on a large scale and impacts people's lives in small rural areas. Efforts to deal with pandemics in rural areas can be carried out effectively because of community solidarity [2]. Individual or community solidarity is one of the concepts of social capital used to increase individuals' or communities' capacity for social development [3].

The COVID-19 pandemic impacts not only the economic aspect but also the environment and all aspects of people's lives, especially the social aspects of society [4–6]. Likewise, in the face of the current pandemic crisis, the existence of norms, trust, and social networks to support social capital allows individuals to more easily access various sources such as information, assistance, and other shared resources as a form of support between

Sustainability **2022**, 14, 12949 2 of 14

communities [7]. Owned social capital will encourage self-awareness to act and sympathize with others [8]. The three elements of social capital, trust, norms, and social networks, become very important in facilitating collective action [9]. Collective action is a condition in which a group of people acts together [9,10]. Collective action can occur because of social capital, which jointly encourages joint action to benefit a society [11]. It can also be said that collective action will succeed if it is based on strong social capital [12–14]

According to Nugraha et al. (2021), the social capital of rural communities encourages collective action to develop agrotourism for sustainable agriculture. The development of agrotourism that involves the community is a form of social capital relationship with collective action [15]. Likewise, Kusumastuti's research (2016) shows social capital as an element that plays a role in building collective action to survive crises. The existence of social capital in rural communities refers to social norms, trust, and social networks that can facilitate collective action to respond to crises [16].

Pujon Kidul Village is one of the areas located in Pujon District, Malang Regency, which has tourism potential by utilizing agriculture, which is supported by the village's geographical location in the highlands [17]. Pujon Kidul Tourism Village was first developed in 2017 with the concept of agricultural tourism and got a first-place award from the ministry of tourism for community business activities in the tourism sector [18]. The development of a tourism village that involves many communities will reflect the social behavior of the village community itself, which shows how the social capital is built between communities, which includes community social relations. [19]. Support from the community by having strong social capital will make it easier to develop tourism in the region [20–22]. Village communities that have social capital will have a sense of ownership of what is in their area. With that sense of ownership, the community will be involved in supporting development in the village [23]. The sense of ownership will also influence the community in finding ways to get involved [24,25]. Throughout the development of tourism villages, Pujon Kidul Village has succeeded in accelerating economic growth and providing jobs for the community. Pujon Kidul Tourism Village has succeeded in increasing the village original income (PADes) every year since the development of tourism villages in 2017 with only Rp. 3,472,132,500 and continued to increase until in 2019 it reached Rp. 17,658,023,447. The significant increase in PADes shows the effect of village tourism activities on improving the village economy.

However, during the COVID-19 pandemic, Pujon Kidul Tourism Village was affected economically, socially, and culturally. The pandemic has led to the elimination of social and cultural activities such as village cleaning, community service, and cultural villages due to the policy of restrictions from the village government. Pujon Kidul Tourism Village also temporarily closed tourist attractions, which resulted in the laying off of tourism workers, as many as 92 rice field cafe workers, and 30 parking attendants, as well as the closure of community businesses [26]. Social capital is believed to be the society's principal capital in solving various life problems [27–29]. Based on the explanation, in dealing with the COVID-19 pandemic, it is crucial to strengthen the social capital of the community as one of the efforts to support the success of collective action, which is manifested in the resilience of the community in the face of the COVID-19 pandemic. Likewise, Pujon Kidul Village has the status of a tourism village that not only involves the village community but also visiting tourists. Therefore, this research is important to learn the factors that form the community social capital and the relationship of social capital with facilitating collective action to create a resilient community in the face of the COVID-19 pandemic in Pujon Kidul Tourism Village.

2. Materials and Methods

This study had two objectives: to identify the factors that contribute to the village community's social capital and to describe the role of social capital in facilitating collective action and fostering a resilient community in the face of the COVID-19 pandemic. Based on these two objectives, the variables used in this study were social capital (trust, norms,

Sustainability **2022**, 14, 12949 3 of 14

and networks), collective action from community initiatives and collective action from the village government, and community resilience.

2.1. Data Collection Methods

The primary and secondary data collection methods were used to obtain information and data in this study. The secondary data were obtained from literature and agency studies, the primary data—through questionnaires, interviews, and observations. The sampling method in this study used a population of 1250 households living in Pujon Kidul Village. This study used proportional stratified random sampling, taking samples from the subpopulations in the study population considering their size [30]. The sample in this study was determined based on the table of Isaac and Michael (1981). The sample was determined with a 5% margin of error, yielding a sample of 275 households from the population of 1250 households. The distribution of this sample was spread across three hamlets, namely Maron Hamlet, Tulungrejo Hamlet, and Krajan Hamlet.

2.2. Methods of Analysis

This research was conducted using a quantitative approach based on the two research objectives. The first objective was to determine the factors that form social capital using confirmatory factor analysis (CFA). The second objective was to describe the relationship of social capital with collective action and community resilience using structural equation modeling (SEM) analysis.

2.2.1. Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) is part of SEM (structural equation modeling) analysis. In the CFA test, validity and reliability tests are carried out on the indicators forming the latent variables of the study, wherein one variable is measured by one or more indicators [31]. The CFA analysis has the following stages [32]:

- a. Performance of the theoretical model development.
- b. Drawing of a path diagram of the relationship between variables and indicators.
- c. Change of the path diagram in the model into equations.
- d. Obtaining model estimate values.
- e. Assessment of the model identification.
- f. Assessment of the goodness-of-fit criteria.

The CFA in this study was conducted to determine whether the indicators for forming community social capital could adequately form the latent variables of social capital (social networks, norms, and trust).

2.2.2. Structural Equation Modelling (SEM)

This study used structural equation modeling (SEM) analysis, which can analyze the relationship between constructs in research, including indicators and latent variables, as well as measure errors in direct measurement [33]. SEM analysis can be performed after confirmatory factor analysis (CFA). In addition, the following steps can be taken for comprehensive modeling in SEM analysis [32]:

- a. Review of the theories, hypotheses, and previous research literature.
- b. Development of theoretical frameworks.
- c. Development of research model specifications.
- d. Determination of research samples and sample measurements.
- e. Performance of parameter estimates.
- f. Performance of goodness-of-fit tests.
- g. Modification of the model.
- h. Development of the discussion, research suggestions, policy implications, and conclusions.

Sustainability **2022**, 14, 12949 4 of 14

This study used CFA and SEM analysis with AMOS 24 on latent variables and indicators. In addition, this study used SEM to analyze the relationship of the community social capital with collective action during the pandemic in Pujon Kidul Tourism Village.

3. Results and Discussion

3.1. Geographical Conditions in Pujon Kidul Tourism Village

Pujon Kidul Village is administratively located in Pujon District, Malang Regency [34] (Figure 1). According to the Pujon Kidul Village Profile (2021), Pujon Kidul Village has an area of 486.40 hectares and is divided into three hamlets, nine community units (RW), and twenty neighboring units (RT). Pujon Kidul Village is located between $7^{\circ}21'N$ and $7^{\circ}31'LS$ and $110^{\circ}10'W$ and $111^{\circ}40'E$ with the following regional boundaries:

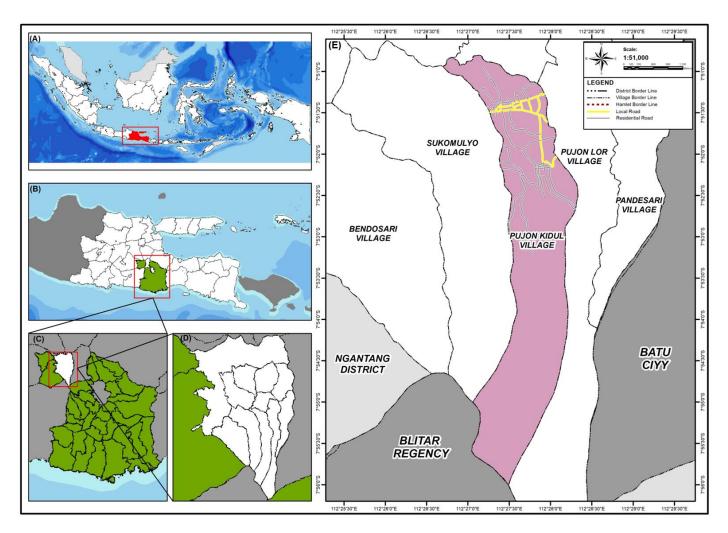


Figure 1. Map of the study area (**A**) East Jawa, Indonesia. (**B**) Malang Regency, East Jawa. (**C**) Map of Malang Regency, the highlighted area shows Pujon District. (**D**) Villages in Pujon District. (**E**) Map of Pujon Kidul Village.

North: Ngroto Village. South Side: Perhutani Forest. East: Pujon Lor Village. West: Sukomulyo Village.

3.2. Economic Conditions in Pujon Kidul Tourism Village

The main potential of Pujon Kidul Village is in agriculture and plantations; with this potential, the majority of community work is in the agricultural and livestock sectors with

Sustainability **2022**, 14, 12949 5 of 14

a total of 1730 people. Therefore, this is an opportunity used by the community to become an agriculture-based tourism village with the main tourist object being cafe sawahs. The existence of these tourism activities makes Pujon Kidul Village an agrotourism village and provides an increase in the economy for the community and the village original income (PADes). Therefore, the economy of Pujon Kidul Village is engaged in the agricultural and tourism sectors.

However, the condition of Pujon Kidul Tourism Village during the COVID-19 pandemic is undoubtedly different from before the outbreak. According to the Pujon Kidul Bumdes data (2022), the most visible impact of changes due to the pandemic is a decrease in the number of tourists, which impacts a decrease in income. For example, the number of tourists visiting tourism villages decreased in 2019 by 601,858, decreasing to 418,272 in 2020, 224,162 in 2021, and as many as 99,254 in April 2022. In addition, due to the pandemic, in Pujon Kidul Village, tourist attractions were also closed temporarily due to the policy of implementing community activity restrictions (PPKM) (Figure 2a,b).





(a) (b)

Figure 2. Empty tourist parking lots due to tourist closures and closed tourist entrances. Source: survey results, 2021.

3.3. Explanation of Social Capital Characteristics during the Pandemic in Pujon Kidul Tourism Village

Characteristics of the Pujon Kidul Tourism Village community social capital can be determined based on the choice of answers to the questions addressed to the respondents. The answers are explained and illustrated with descriptive statistics. There were five answer choices for each question given: strongly disagree (SD), disagree (D), moderately agree (MA), agree (A), and strongly agree (SA). The following are indicators that measure social capital:

- 1. Trust (T). This variable is divided into seven indicators, including trust in neighbors (T1), trust in immigrants (T2), trust in the government (T3), trust in traditional leaders (T4), trust in religious leaders (T5), trust in tourism institutions (T6), and communication between people (T7).
- 2. Norms (N). This variable is divided into two indicators, including obedience to customs (N1) and attendance at traditional events (N2).
- 3. Social networks (NW). This variable consists of five indicators, including willingness to build cooperation (NW1), participation in religious activities (NW2), participation in social activities (NW3), willingness to give opinions during meetings (NW4), and participation in community groups (NW5).

Based on the data on social capital characteristics of Pujon Kidul Village in Table 1, it can be seen that the answers from 275 respondents were dominated by choice five, or strongly agree (SA), for the 14 indicators, which means that the people of Pujon Kidul

Sustainability **2022**, 14, 12949 6 of 14

Village strongly agree with the indicators of trust (K), norms (N), and social networks (J). The detail of the data of respondents is in the supplementary material.

	Table 1.	Characteristics	of social c	apital in Pu	ajon Kidul	Tourism Village.
--	----------	-----------------	-------------	--------------	------------	------------------

Variable	Indicator	Strongly Disagree (SD) (1)	Disagree (D) (2)	Moderately Agree (MA) (3)	Agree (A) (4)	Strongly Agree (SA) (5)	Mode
	T1	0.36%	0.73%	14.18%	24.73%	60.00%	5
	T2	1.82%	3.27%	22.18%	34.55%	38.18%	5
	T3	0.73%	4.00%	20.73%	33.09%	41.45%	5
Trust	T4	0.73%	1.82%	11.27%	36.36%	49.82%	5
	T5	0.73%	10.18%	17.09%	34.55%	37.45%	5
	T6	0.00%	1.45%	19.27%	32.00%	47.27%	5
	T7	0.00%	7.64%	22.55%	32.73%	37.09%	5
Norms	N1	0.00%	0.00%	9.45%	42.55%	48.00%	5
	N2	0.00%	2.55%	17.82%	41.45%	38.18%	4
Social networks	NW1	0.36%	3.27%	9.09%	39.64%	47.64%	5
	NW2	0.36%	0.36%	27.64%	38.55%	33.09%	4
	NW3	0.36%	3.27%	29.82%	40.36%	26.18%	4
	NW4	0.00%	7.27%	21.09%	33.09%	38.55%	5
	NW5	1.09%	5.45%	20.36%	36.36%	36.73%	5

3.4. Explanation of Collective Action Characteristics during the Pandemic in Pujon Kidul Tourism Village

Characteristics of the collective action of the Pujon Kidul Tourism Village community can be determined based on the choice of answers to the questions addressed to the respondents. The answers are explained and illustrated with descriptive statistics. There were five answer choices for each question given: strongly disagree (SD), disagree (D), moderately agree (MA), agree (A), and strongly agree (SA). In addition, the following are indicators that measure collective action:

- a. Collective action from village governments consists of three indicators, including decision-making in taking collective action from the village government (CG1), participation in collective action from the village government (CG2), and frequency of collective action from the village government (CG3)
- b. Collective action from community initiatives consists of three indicators, including decision-making in carrying out collective action from community initiatives (CC1), participation in collective action from community initiatives (CC2), and frequency of taking collective action from community initiatives (CC3).

Based on the data on the characteristics of collective action in Pujon Kidul Village in Table 2, it can be seen that the answers from 275 respondents were dominated by choices three and five. Several types of collective action involving the community dealt with the pandemic in Pujon Kidul Tourism Village.

Table 2. Characteristics of collective action in Pujon Kidul Village.

Variable	Indicator	Strongly Disagree (SD) (1)	Disagree (D) (2)	Moderately Agree (MA) (3)	Agree (A) (4)	Strongly Agree (SA) (5)	Mode
Collective action	CG1	3.27%	12.73%	28.36%	42.18%	13.45%	4
from the village	CG2	3.27%	13.09%	46.18%	26.91%	10.55%	3
government	CG3	20.36%	24.36%	35.27%	12.73%	7.27%	3
Collective action	CC1	0.00%	0.00%	21.45%	24.73%	53.82%	5
from community	CC2	0.00%	11.64%	17.09%	34.18%	37.09%	5
initiatives	CC3	3.64%	12.36%	19.64%	30.91%	33.45%	5

Sustainability **2022**, 14, 12949 7 of 14

The respondents' answer choices are based on the questionnaire results described in Figure 3, illustrating that most respondents were involved in collective action based on the type of action: from the government or from the community. In that case, an action from the community is an action with most respondents often involved. The main difference is that in decision-making, the community more often follows the decision-making of the community's collective action than the decision-making of the collective action of the government. However, even though the community is involved in making decisions for collective action from the community, it is not necessarily the community that participates in taking action from the community, and it is not necessarily the community that participates that takes collective action from the community. Likewise, with collective action from the government (Figure 3), it can be seen that the graph is decreasing for the two types of collective action.

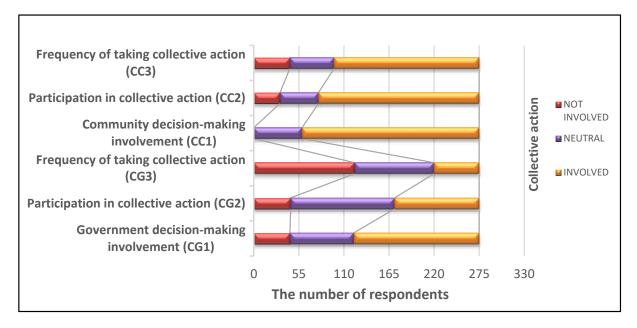


Figure 3. Characteristics of collective action from the government and the community.

The types of activities carried out by the community dealing with COVID-19 are described in Figure 4 in the types of collective action from the community and the government. The community's collective action consists of four activities, while the collective action of the government consists of five activities. Collective action from the community, including distributing necessities and other basic needs, mentoring youth prayer groups, providing health protocol facilities, and cleaning villages, come from community initiatives, while collective action of the village government includes the socialization during the COVID-19 pandemic, social assistance from the village government, distribution of masks, hand sanitizer, and vitamins, procurement of health protocol facilities in public places, and training on tourism products and creative economy.

Sustainability **2022**, 14, 12949 8 of 14

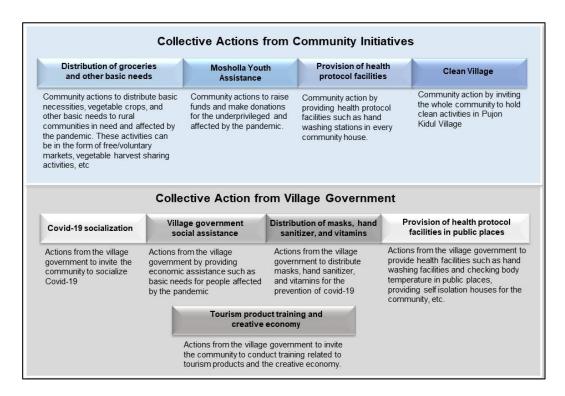


Figure 4. Types of collective action during the pandemic in Pujon Kidul Tourism Village.

3.5. Explanation of Community Resilience Characteristics during the Pandemic in Pujon Kidul Tourism Village

Characteristics of community resilience of the Pujon Kidul Tourism Village community can be determined based on the choice of answers to the questions addressed to the respondents. The answers are explained and illustrated with descriptive statistics. The answer choices consisted of five answer choices for each question given: strongly disagree (SD), disagree (D), moderately agree (MA), agree (A), and strongly agree (SA). Additionally, the following are indicators that measure community resilience: community resilience, knowledge of COVID-19 (CR1), community security (CR2), availability of health protocol facilities in the village (CR3), and community perceptions of assistance and contributions (CR4).

Based on the data on the characteristics of community resilience in Pujon Kidul Village in Table 3, it can be seen that the answers from 275 respondents were dominated by choices four and five.

Variable	Indicator	Strongly Disagree (SD) (1)	Disagree (D) (2)	Moderately Agree (MA) (3)	Agree (A) (4)	Strongly Agree (SA) (5)	Mode
Community resilience	CR1	0.73%	1.09%	3.27%	39.64%	55.27%	5
	CR2	0.36%	1.45%	5.82%	36.73%	55.64%	5
	CR3	0.73%	1.45%	17.45%	47.27%	33.09%	4
	CR4	1.82%	1.82%	23.64%	60.36%	12.36%	4

Table 3. Characteristics of community resilience in Pujon Kidul Village.

Some respondents have a very understanding of COVID-19 and feel very safe in the community. This is supported by the availability of health protocol facilities in good condition that could be used in the village (Figure 5). However, some respondents feel that the community and the government assist the community, but the assistance is only enjoyed by certain groups (Figure 4).

Sustainability **2022**, 14, 12949 9 of 14

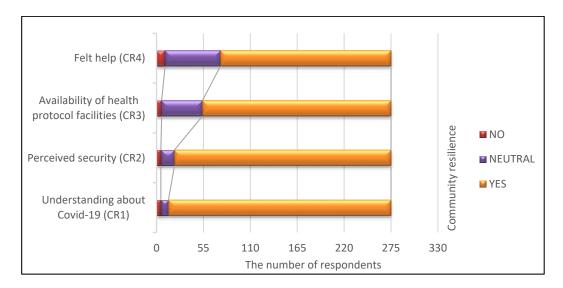


Figure 5. Characteristics of community resilience.

3.6. Confirmatory Factor Analysis (CFA), the Results of the Analysis for the First Purpose of the Research

Confirmatory factor analysis was conducted to analyze the indicators of social capital formation in the study locations. Social networks, beliefs, and norms are the dimensions that make up social capital. The CFA analysis in this study is a second-order CFA. First, the latent variable of trust (T) has indicators including trust in neighbors (T1), trust in immigrants (T2), trust in the government (T3), trust in traditional leaders (T4), trust in religious leaders (T5), trust in tourism institutions (T6), and communication between people (T7). Second, the norms variable (N) consists of obedience to customs (N1) and attendance at traditional events (N2). The social networks variable (NW) consists of willingness to build cooperation (NW1), participation in religious activities (NW2), participation in social activities (NW3), willingness to give opinions during meetings (NW4), and participation in community groups (NW5). The CFA analysis was carried out in two stages with the following estimation results and goodness of fit (Figure 6a,b).

Based on the estimated value and feasibility of goodness of fit (Figure 6), it can be seen that in stage 1, there were two invalid confidence variables because they had a loading factor of 0.5, including T6 (0.097), T7 (0.061), and NW3 (0.469). Two indicators needed to be discarded to proceed to the next stage. In the next stage (second stage), the CFA model fit was recalculated, and the indicators that make up the social capital variable were obtained. The trust variable was formed by trust in neighbors (T1) (0.689), trust in immigrants (T2) (0.533), trust in the government (T3) (0.527), trust in traditional leaders (T4) (0.631), and trust in religious leaders (T5) (0.572). The social networks variable was formed by willingness to build cooperation (NW1) (0.548), participation in religious activities (NW2) (0.526), willingness to give opinions during meetings (NW4) (0.629), and participation in community groups (NW5) (0.719). The norms variable was formed by obedience to customs (N1) (0.747) and attendance at traditional events (N2) (1.099).

The loading factor value describes how much influence the indicator has on the formation of the latent variable. For example, this indicates that the indicator of trust in neighbors was the most influential in forming trust. On the other hand, attendance at traditional events was the most influential in forming norms, and participation in community groups was the most influential indicator in forming social networks in Pujon Kidul Village.

Sustainability **2022**, 14, 12949 10 of 14

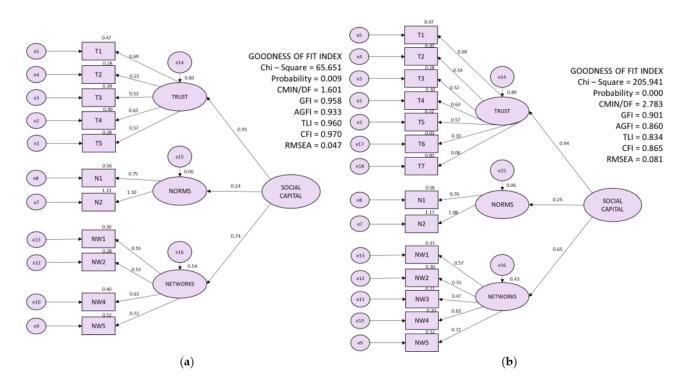


Figure 6. This is a figure from the CFA analysis. (a) The first stage of the social capital CFA model. (b) The second stage of the social capital CFA model.

3.7. Structural Equation Modelling (SEM), the Results of the Analysis for the Second Purpose of the Research

Structural equation modeling was conducted to identify the relationship between social capital and community adaptation patterns depicted through collective action and community resilience in Pujon Kidul Village. SEM analysis was carried out with three alternative models, which described the relationship between the social capital, collective action, and community resilience variables. These three models had different paths. Model 1 described the direct relationship of norms and networks to trust. Then, trust was directly related to the collective action of the government and the community which was considered to affect the community resilience variable. Model 2 described the direct relationship of the social networks and trust variables to the norms variable. The norms were directly related to the collective action of the government and community, which affected the community resilience variables. Finally, model 3 described the direct relationship between the trust, norms, and social networks variables. The social networks were directly related to collective action that was considered to be able to affect community resilience.

In this study, the three models were compared with the estimated value and goodness of fit (Figure 6). Then, one of the fittest models was selected based on the chi-squared, probability, GFI, CMIN/DF, TLI, AGFI, RMSEA, and CFI criteria.

Based on the estimated value and goodness of fit (Figure 7a–c) of the three SEM models, model 3 was the fittest model among the three alternative models. This is because in the path diagram's depiction, the model's eligibility requirements were at least 4–5 GOFI criteria, and the three models were fit. However, model 3 was the fittest because it met five criteria. There is a lower chi-squared limit value of 299.954 (lower than the df limit value), the CMIN/DF value was 1.648, the GFI value was 0.906, the AGFI value was 0.881, the TLI value was 0.962, the CFI value was 0.967, and the RMSEA value was 0.049. Meanwhile, the relationship between the variables described in model 3 is a direct relationship between the two variables of trust and norms. The relationship between the two is directly related to the network, and the network is directly related to the community's collective action that affects community resilience.

Sustainability **2022**, 14, 12949

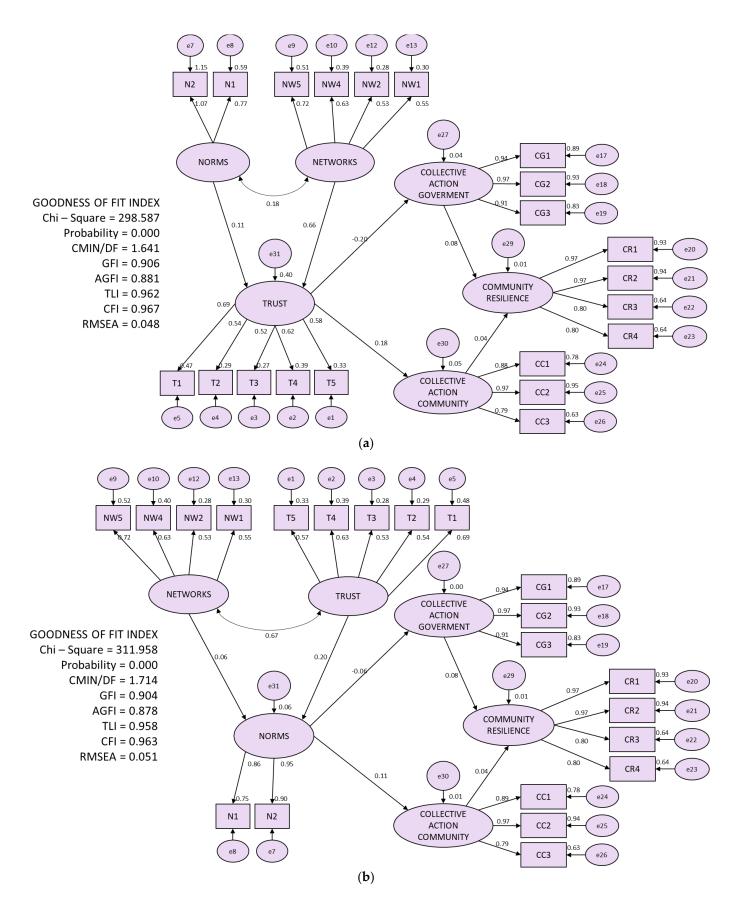


Figure 7. Cont.

Sustainability **2022**, 14, 12949 12 of 14

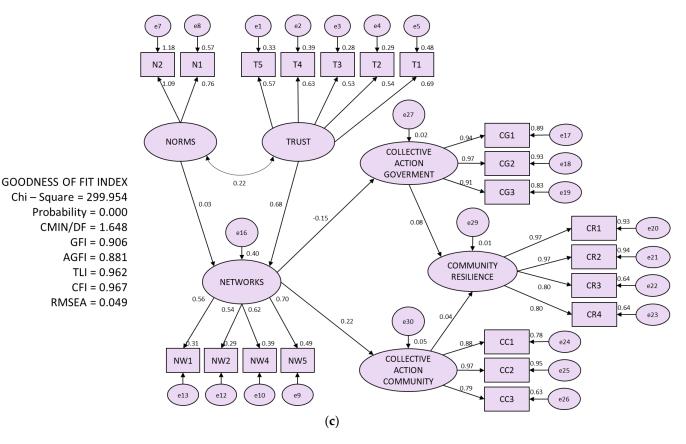


Figure 7. (a) Model 1 SEM, (b) Model 2 SEM (c) Model 3 SEM.

The influence of the relationship between variables in Model 3 can be seen from the values of the Squared Multiple Correlation (R2). First, trust positively influences social networks, which is 0.468. Then the network variable has a positive effect on community action with a value of 0.046, and the community action variable has a positive effect on community resilience with a value of 0.007. The positive effect of community action means that the higher the trust, the better the network formed, and a well-formed network increases the community's initiative to take collective action. Then the higher the community's initiative to take collective action, the better the community's resilience; thus, the relationship between these three variables can form an adaptation pattern during the Pujon Kidul Village community pandemic.

Social capital is the main capital in moving individuals or groups of people to live their daily lives. Strong social capital will raise the public's desire to be in-volved. The Pujon Kidul community, which has good social capital conditions, will make it easier for the community to participate in collective action as a form of caring for each other during the pandemic. Then this action also influences the community to survive in a pandemic crisis. Therefore, social capital can support an adaptation pattern of the Pujon Kidul Village community facing a pandemic.

4. Conclusions

The indicators that describe the latent variable of social capital in Pujon Kidul Tour-ism Village are the latent variable of trust formed by five indicators: trust in neighbors, trust in immigrants, trust in the government, trust in traditional leaders, and trust in religious leaders. Likewise, the latent variable of norms is formed by two indicators consisting of adherence to customs and attendance at traditional events. Finally, the social network variable consists of 4 indicators formed Willingness to build cooperation, Participation in religious activities, Willingness to give opinions during meetings, and Participation in community groups.

Sustainability **2022**, 14, 12949 13 of 14

SEM's findings link social capital variables, collective action, and community resilience interrelationships. For example, model 3 SEM describes the relationship between trust variables that affect network variables by 0.468. The network variables affect community actions by 0.046, and community action variables affect community resilience by 0.007. Therefore, better social capital will form a good pattern of community adaptation through collective action and community resilience during the Pujon Kidul Village pandemic.

Supplementary Materials: The following data of supporting information can be downloaded at: https://www.mdpi.com/article/10.3390/su141912949/s1.

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

Funding: This research was funded by DRPM DIKTI and LPPM Universitas Brawijaya, grant No. 1071.64//UN10.C10/TU/2022, and the APC was funded by DRPM DIKTI and LPPM Universitas Brawijaya.

Institutional Review Board Statement: The study did not require ethical approval. Not applicable for studies not involving humans or animals.

Informed Consent Statement: The study did not involve humans.

Data Availability Statement: Not applicable.

Acknowledgments: This research was made possible with the support of Universitas Brawijaya and DRPM DIKTI. We also acknowledge the Local Government of Pujon Kidul Village's assistance in collecting data from our respondents. Finally, we appreciate the support of the entire survey team.

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

References

- 1. Jason; Roslynlia; Gunawan, A.A.S. Forecasting Social Distancing impact on COVID-19 in Jakarta using SIRD Model. *Procedia Comput. Sci.* **2021**, 179, 662–669. [CrossRef] [PubMed]
- 2. Khotimah, K.; Sarmini, S.; Imron, A. Family based social capital in handling of COVID-19 prevention in blitar district. *J. Partisipatoris* **2020**, *2*, 84–95. [CrossRef]
- 3. Mathbor, G.M. Enhancement of community preparedness for natural disasters: The role of social work in building social capital for sustainable disaster relief and management. *Int. Soc. Work* **2007**, *50*, 357–369. [CrossRef]
- 4. Sadri, A.M.; Ukkusuri, S.V.; Lee, S.; Clawson, R.; Aldrich, D.; Nelson, M.S.; Seipel, J.; Kelly, D. The role of social capital, personal networks, and emergency responders in post-disaster recovery and resilience: A study of rural communities in Indiana. *Nat. Hazards* **2018**, *90*, 1377–1406. [CrossRef]
- 5. Luo, M.; Zhang, D.; Shen, P.; Yin, Y.; Yang, S.; Jia, P. COVID-19 lockdown and social capital changes among youths in China. *Int. J. Health Policy Manag.* **2021**, *11*, 1301–1306. [CrossRef] [PubMed]
- 6. Makridis, C.A.; Wu, C. How social capital helps communities weather the COVID-19 pandemic. *PLoS ONE* **2021**, *16*, e0245135. [CrossRef]
- 7. Reininger, B.M.; Rahbar, M.H.; Lee, M.; Chen, Z.; Alam, S.R.; Pope, J. Social capital and disaster preparedness among low income Mexican Americans in a disaster prone area. *Soc. Sci. Med.* **2013**, *83*, 50–60. [CrossRef]
- 8. Liu, Q.; Wen, S. Does social capital contribute to prevention and control of the COVID-19 pandemic? Empirical evidence from China. *Int. J. Disaster Risk Reduct.* **2021**, *64*, 102501. [CrossRef]
- 9. Nayak, A.K. Developing Social Capital through Self-help Groups. *Indore Manag. J.* 2015, 7, 18–24.
- 10. Hwang, D.; Stewart, W.P. Social Capital and Collective Action in Rural Tourism. J. Travel Res. 2017, 56, 81–93. [CrossRef]
- 11. Grootaert, C.; Van Bastelaer, T. (Eds.) *Understanding and Measuring Social Capital: A Multi-Disciplinary Tool for Practitioners*; World Bank: Washington, DC, USA, 2002.
- 12. Jacobs, E.; Hofman, I. Aid, Social Capital and Local Collective Action: Attitudes Towards Community-Based Health Funds and Village Organizations in Rushan. *Oxf. Univ. Press Community Dev. J.* **2020**, *55*, 399–418. [CrossRef]
- 13. Ido, A. The effect of social capital on collective action in community forest management in cambodia. *Int. J. Commons* **2019**, *13*, 777. [CrossRef]
- 14. Pramanik, P.; Ingkadijaya, R.; Achmadi, M. The Role of Social Capital in Community Based Tourism. *J. Indones. Tour. Dev. Stud.* **2019**, *7*, 62–73. [CrossRef]

Sustainability **2022**, 14, 12949 14 of 14

15. Nugraha, A.T.; Prayitno, G.; Hasyim, A.W.; Roziqin, F. Social capital, collective action, and the development of agritourism for sustainable agriculture in rural Indonesia. *Evergreen* **2021**, *8*, 1–12. [CrossRef]

- 16. Kusumastuti, A. Modal Sosial dan Mekanisme Adaptasi Masyarakat Pedesaan dalam Pengelolaan dan Pembangunan Infrastruktur. *MASYARAKAT J. Sosiol.* **2016**, *20*, 81–97. [CrossRef]
- 17. Prayitno, G.; Dinanti, D.; Efendi, A.; Hayat, A.; Dewi, P.P. Social Capital of Pujon Kidul Communities in Supporting the Development of the COVID-19 Resilience Village. *Int. J. Sustain. Dev. Plan.* **2022**, *17*, 251–257. [CrossRef]
- 18. Ira, W.S.; Muhamad, M. Partisipasi Masyarakat pada Penerapan Pembangunan Pariwisata Berkelanjutan (Studi Kasus Desa Wisata Pujon Kidul, Kabupaten Magelang). *J. Pariwisata Ter.* **2020**, *3*, 124–135. [CrossRef]
- 19. Puspitaningrum, E.; Lubis, D.P. Modal Sosial dan Partisipasi Masyarakat dalam Pembangunan Desa Wisata Tamansari di Kabupaten Banyuwangi. *J. Sains Komun. dan Pengemb. Masy.* **2018**, 2, 465–484. [CrossRef]
- 20. Zhang, Y.; Xiong, Y.; Lee, T.J.; Ye, M.; Nunkoo, R. Sociocultural Sustainability and the Formation of Social Capital from Community-based Tourism. *J. Travel Res.* **2020**, *60*, 656–669. [CrossRef]
- 21. Birendra, K.C.; Morais, D.B.; Seekamp, E.; Smith, J.W.; Peterson, M.N. Bonding and bridging forms of social capital in wildlife tourism microentrepreneurship: An application of social network analysis. *Sustainability* **2018**, *10*, 315. [CrossRef]
- 22. Zhao, W.; Ritchie, J.R.B.; Echtner, C.M. Social capital and tourism entrepreneurship. *Ann. Tour. Res.* **2011**, *38*, 1570–1593. [CrossRef]
- 23. Khazami, N.; Lakner, Z. The mediating role of the social identity on agritourism business. Sustainability 2021, 13, 11540. [CrossRef]
- 24. Setokoe, T.J.; Ramukumba, T. Challenges of community participation in community-based tourism in rural areas. *WIT Trans. Ecol. Environ.* **2020**, 248, 13–22. [CrossRef]
- 25. Kizos, T.; Plieninger, T.; Iosifides, T.; García-Martín, M.; Girod, G.; Karro, K.; Palang, H.; Printsmann, A.; Shaw, B.; Nagy, J.; et al. Responding to landscape change: Stakeholder participation and social capital in five european landscapes. *Land* **2018**, *7*, 14. [CrossRef]
- 26. Irawati, D. Tutup Sementara, Kafe Sawah Pujon Kidul Kehilangan Omzet Miliaran Rupiah. 2020. Available online: https://www.kompas.id/ (accessed on 8 June 2021).
- 27. Deng, X.; Zeng, M.; Xu, D.; Qi, Y. Does social capital help to reduce farmland abandonment? Evidence from big survey data in rural china. *Land* **2020**, *9*, 360. [CrossRef]
- 28. Gorda, A.O.S.; Romayanti, K.N.; Anggreswari, N.P.Y. Social capital, spiritual capital, human capital, and financial capital in the management of child welfare institutions. *Int. J. Soc. Sci. Humanit.* **2018**, 2, 12–20. [CrossRef]
- 29. Garrigos-Simon, F.J.; Botella-Carrubi, M.D.; Gonzalez-Cruz, T.F. Social capital, human capital, and sustainability: A Bibliometric and visualization analysis. *Sustainability* **2018**, *10*, 4751. [CrossRef]
- 30. Arikinto, S. Prosedur Penelitian Suatu Pendekatan Praktek; Rineka Cipta: Jakarta, Indonesia, 2006.
- 31. Wijanto, S.H. Structural Equation Modeling Dengan Lisrel, Konsep dan Tutorial; Graha Ilmu: Jakarta, Indonesia, 2008.
- 32. Haryono, S. *Metode SEM Untuk Penelitian Manajemen Dengan AMOS* 22.00, *LISREL 8.80 dan Smart PLS 3.0*; Badan Penerbit PT; Intermedia Personalia Utama: Jakarta, Indonesia, 2016.
- 33. Haryono, S. Structural Equation Modelling untuk Penelitian Manajemen Menggunakan AMOS. J. Ekon. Bisnis 2014, 7, 23–34.
- 34. BPS. Kecamatan Pujon Dalam Angka (Pujon Sub District in Figures). 2021. Available online: https://malangkab.bps.go.id/publication/2021/09/24/d1fa50a5156012261dedddf0/kecamatan-pujon-dalam-angka-2021.html (accessed on 24 August 2022).