The Economic Conditions of a 3D Tourism Village in the Application of Pro-poor Tourism and Social Capital


*Department of Regional and Urban Planning, Universitas Brawijaya, 65145 Malang, Indonesia
**Individual Consultant, in Department of Highways and Spatial Planning of West Java Province, 40111 Bandung, Indonesia

ABSTRACT

Kesatrian Village has received global attention for successfully changing the image of the slum area into one of the must-visit tourist destinations in Malang City. The application of the Pro-Poor Tourism (PPT) concept to create Kampung Tridi saw village residents participate in tourism activities. This study examines the relationship between social capital and PPT tourism activities on poverty conditions. The analytical methods applied in this study include social network analysis (SNA) and descriptive analysis. PPT activities positively affect all aspects of people's lives. First, better community social capital is assumed to lead to better tourism management. Second, the relationship between social capital and tourism is directly proportional to the community's economic condition, in which more social capital generates better tourism activities, thereby reducing poverty in Kampung Tridi.

Keywords: Pro-poor tourism; Poverty; Social Network Analysis; Social Capital

1. Introduction

This study was situated in a slum area in Malang City with a high rate of poverty. Tourism activities based on the Pro-Poor Tourism (PPT) concept were implemented in Kampung Tridi, located in Kesatrian Village Malang City, Indonesia. In 2016, the image of the slum area attached to Kesatrian Village changed, as a result of Kesatrian Village has grown to become one of Malang's most popular tourist destinations. Tourism in Kesatrian Village, Kampung Tridi, employs the PPT concept and successfully manages tourism activities. While tourism is typically associated with growth and economic development, the primary goal of tourism activities in this instance is to alleviate poverty in the area. Poverty alleviation has been associated with sustainable development by the United Nations [1]. Within the densely populated settlements in the city center, the tourism activities directly managed by the community of Kampung Tridi, which glass bridges and photo spots (three-dimensional paintings and thematic images), are running well and creating positive economic and social impacts on the community.

Kampung Tridi is one of the urban villages of Kesatrian Village Malang City. Strong interpersonal relationships are associated with increased social capital, helping to improve economic conditions, especially in rural areas. Therein, the higher the social capital, the lower the poverty in the region [2]. Social capital in rural areas has been suggested as a positive mediating factor, given that social capital is associated with improved chances for employment; health is also positively affected [3]. Rapoport in [4] explains that people who live on the banks of rivers in the city center have strong relationships with other individuals. Therefore, one of the keys to the successful application of PPT is the community’s high level of social capital. The concept of PPT combines sustainable and community-based tourism, where an essential aspect of both ideas is social capital [5]. It can be concluded that social capital is critical in poverty alleviation and applying PPT. Reducing poverty and increasing income is expected to reduce inequality by constructing better infrastructure and facilities [6]. But the relationship is not necessarily circular: PPT efforts may improve infrastructure.
[7], but transfers to the poor must be made a priority, as there is a potential for misallocation [1].

The question arises as to whether the significant changes, from a village with a high rate of poverty and a slum neighborhood to a village that is a popular tourist destination and can alleviate the poverty of its own populace, are due to the community’s strong social capital or tourism activities. This study was carried out before the Covid-19 pandemic (in 2019) to determine what changes had occurred and the causes of significant changes following tourism activities in absolute terms without special conditions.

2. Method

This study aims to examine the factors that influence change in poverty levels from two perspectives: social capital and tourism activities from the perspective of PPT. The following methods are applied in this study.

2.1. Research Methods

This study applied analytical methods of descriptive analysis for pro-poor tourism (PPT) and Social Network Analysis (SNA).

2.1.1. Pro-poor Tourism (PPT) Analysis

This study applied descriptive analysis to assess the success of the PPT approach. The quantitative descriptive analysis describes the research subject based on the variable data obtained. This analysis can be presented as a frequency distribution or histogram table. The information presented in this analysis takes the form of community income, business, and employment opportunities for residents due to tourism activities, the collective advantages of tourism, raising the caliber of local resources, and environmental effects. The current condition of the study area can be explored and adjusted to the PPT variable.

2.1.2. Social Network Analysis (SNA)

The level of social capital was determined by applying SNA analysis. SNA can be mapping the relationships, analyze the structure of relationships, and influence each resident (actor) in the study area by describing the three components of SNA, including the level of participation (rate of participation), density, and centrality. Three typologies of social structure can be identified for centrality. Ucinet 6.528 software was used to support this study in determining the value of the calculation results and then interpreting the results. However, this study’s social capital condition was not only based on SNA analysis. The social capital variables analyzed are related to poverty conditions, namely trust, norm, network, and level of participation of each actor in Kampung Tridi that was analyzed by applying descriptive analysis.

2.2. Research Variable

The research variables were chosen based on related factors and goals from this study. There are three variables: social capital level analysed by SNA and descriptive analysis. In addition, the PPT concept was analyzed by applying a descriptive analysis called Pro-Poor Tourism Analysis and Poverty Condition in Kampung Tridi. This study’s research variables are described in detail in Table 1.

2.3. Method of Collecting Data

In this study, data was conducted in two ways: through a primary survey and a secondary survey. The survey was carried out in 2019. All individuals counted in Kampung Tridi family units made up the population used in this study. However, it should be noted the data applied in this study was data before the Covid-19 pandemic. Therefore, the data was taken in 2019, enabling the capture phenomena that occur in absolute terms without intervention from special conditions. Primary data was collected by conducting direct observations in the study area to see the current situation, obtain the necessary preliminary data, and distribute questionnaires and interviews from the community. The primary data collected includes the number of existing institutions, people’s income before and after tourism activities, the ease with which the community can access basic facilities and infrastructure, community participation in tourism activities (tourism institutions), and other relevant data.

Secondary data collection was conducted in Kampung Tridi to obtain population data and data on the poor, obtained from the village office of the study location. Secondary data from this study were used to conduct SEM analysis to determine the relationship between social capital, PPT, and poverty variables.

2.4. Population and Research Sample

The population applied in this study is the whole community calculated in units of families residing in Kampung Tridi, located in the village RW.12 Kesatrian, Malang. A population (also known as census) study was conducted. A population study is one of the research activities intended to measure the characteristics present in the population. The study was conducted on 217 households in the study area. Respondents who comprise the population include the head of the family and other family members who participate in Kampung Tridi tourism activities. Although one of the focuses of this study is related to changes in community poverty, it does not differentiate between the poor and the non-poor in data collection. The difference is that in SEM-CFA, analysis of the data is lacking, and the poor who work in the tourism sector are applied to measure changes and the impact of tourism activities.

<table>
<thead>
<tr>
<th>No</th>
<th>Research variables</th>
<th>Sub Variables</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Social capital level</td>
<td>Rate of Participation (RoP); Density; Centrality; Respondent participation rate (MS4)</td>
<td>[8]–[11]</td>
</tr>
<tr>
<td>2.</td>
<td>Pro-poor tourism (PPT)</td>
<td>Community income (PPT1); Business and employment opportunities (people working in tourism/PPT2); Human Resources Quality Improvement (PPT3); Impact on social and culture (PPT4); Community participation in tourism activities (PPT5); Accessibility to facilities and infrastructure (PPT6); Government policies that support tourism activities (PPT7); Cooperation with the private sector (PPT8); Collective advantage (PPT9); Impact on the environment (PPT10)</td>
<td>[5], [12]–[15]</td>
</tr>
<tr>
<td>3.</td>
<td>Poverty</td>
<td>Poverty data (K1); Income difference (K2); The poor working in the tourism sector(K3)</td>
<td>[14], [16]</td>
</tr>
</tbody>
</table>
3. Results

The result of each analysis described in this section is as follows:

3.1. Analysis of social capital level

The preliminary survey results found four types of active institutions in Kampung Tridi. Namely Tahil/recitation Qur'an group, PKK, Karang Taruna (young group), and Paguyuban Kampung Tridi. There are 217 households residing in Kampung Tridi spread over four RTs in RW.12, Kesatrian Village.

3.1.1. Rate of Participation (RoP)

The level of community participation in Kampung Tridi is classified into three categories: low (0-1.3 interval), medium (1.4-2.6 interval), and high (2.7-4 interval). The interval range for each class is calculated by subtracting the maximum number of participants from the minimum number of participants and then dividing it by three classes. The value of the participation level of the Kampung Tridi respondents is 1.73, falling in the 1.4-2.6 interval class. It can be interpreted that the Kampung Tridi respondent's participation level is moderate. Based on the respondent's answers in the questionnaire survey, the average respondent follows 1 to 2 institutions, out of a total of 4 active institutions in Kampung Tridi, namely the PKK (Building Family Wellbeing), Karang Taruna (Youth Organization), Tahil, and Kampung Tridi Association. Age, gender, household composition, ethnicity, culture, social status, and employment status can all impact Kampung Tridi participation rates [17]. The population's overall effort, a sum of participation rates, is not always reflected in participation rates, though [18]. Furthermore, Tosun [19] added that many citizens in developing nations do not appreciate participating in regional management and decision-making. Passive participation means that the primary goal of development is to avoid hasty population intervention by providing residents with opportunities for long-term, sustainable participation. Therefore, the participation of local communities in institutional decision-making has, at least until now, relied on a stage of passive participation where some people want to and are involved but do so from a relatively low resource base.

3.1.2. Density

Based on the processed density analysis results from the UCINET 6645 software, the density value of Kampung Tridi is 0.576. The density value of Kampung Tridi can be categorized as a medium, given the value is in the interval 0.334-0.666. The probability of one respondent to another respondent being connected in the same institution is 57%. Thus, it can be said that collective action is not easy, considering the medium population density or the attachment between actors in the group is moderate, and only 57% have goals or involvement in the same group. The medium density value indicates that the relationship in Kampung Tridi is neither too tight nor loose. This could be explained by the population's heterogeneous demographic profile, with 38% of the population being immigrants, implying that there is still a separation between actors. Even though it is medium density, the network connections can be applied to distribute information.

3.1.3. Centrality

Centrality analysis examines the roles or functions of actors in the network, which can later be known to the central actors in Kampung Tridi. Results of the centralization analysis in RW 12 Kampung Tridi are as follows:

3.1.3.1. Value of Degree Centrality (Cd)

Based on the results of the centrality calculation in Kampung Tridi, there are 37 actors with low degree values, 85 actors with medium degree values, and 95 actors with high degree values. Wasserman and Faust [8] explained that it could also be seen whether the actor tends to accept or make decisions or choices from the degree value. The degree value of 50% of the middle and high-class respondents indicates that the actors in Kampung Tridi tend to make decisions. This is reflected in the early creation of tourism activities. This choice can be seen in the residents of Tridi Village's strategy for reducing poverty, which includes creating tourist attractions in the form of mural-adorned photo spots. The lack of tools and data that can be used to guide tourism policy and decision-making is the main obstacle to achieving tourism sustainability in this regard [20]. There is local incentive for tourists, which may have an advantage in influencing travel choices. Among Tridi Village residents, decisions regarding tourism may result from actions taken or from a process [21]. Based on the results of the interview with the Treasurer of the Kampung Tridi Community Association (Adnan), it was found that the first community proposed RW.12 Kesatrian Village to be developed like Jodipan Village, thereby generating the creation of Kampung Tridi.

3.1.3.2. Value of Betweenness Centrality (Cb)

The greater the value of betweenness leads to the higher importance of the actor's role as a liaison between other groups of actors, as a distributor of information, or as a gatekeeper of the existing network. Based on the calculation of the closeness value, it is known that 217 actors are in the 0.00-0.33 class or are in the low-value class. This shows that it is generally known that there are no actors as mediators or main liaisons. Although all Cs class positions are low, the actors with higher Cs scores than other actors cannot be ruled out. This is because the actor has a role as a liaison, channeling information, and plays an important role in interacting with other actors who are not directly related, even though a small percentage.

3.1.3.3. Value Closeness Centrality (Cc)

Closeness centrality is applied to see the average distance between nodes or actors in a network. If the closeness value is smaller, the closer the actor will connect with other actors. Actors involved in the network or isolated actors do not calculate the closeness value. Thus, as many as 37 actors were not involved. Based on the closeness centrality analysis results, 170 actors are in the high-value class, and ten are in the medium-value class. It can be concluded that Kampung Tridi can easily interact directly through close distances. A maximum closeness value of 1 indicates that these actors can quickly reach all actors with a minimum number of steps. Therefore, these 41 actors can efficiently and effectively channel the information received and influence other actors.
Based on the results of the centrality analysis carried out in Kampung Tridi, it is interpreted from the three centrality analyses that there are 41 central actors in this study. Each central actor has one thing in common: being directly involved in the tourism activities of Kampung Tridi. The 41 actors are central, considering that the Kampung Tridi Community is an active institution with the greatest strength among other institutions. Wasserman and Faust [8] argue that an actor is central if the actor's bond makes the actor visible to other actors in the network. Thus, if analyzed based on the roles and positions of actors in the network, involving actors who hold formal and informal power, become the main central actors in Kampung Tridi, Valentinus, Adnan, Nuryanto, and Moh. Lutfi. They have formal and informal power, which shows that the central actor in Kampung Tridi has great power to influence other actors in the network. Actors may view complex outcomes as effective; they use collaborative processes as proxies to judge effectiveness.

Additionally, actors participate in the network to address significant issues. Without complex outcomes, actors legitimize their continued participation in the network by using the network's collaborative processes. Therefore, actors perceive goal-oriented networks as a legitimate way of organizing. Thus, actors consider goal-oriented networks a proper form of organization [22].

The level of social capital in Kampung Tridi is between bonding social capital and bridging social capital. This is shown from the characteristics of the network in Kampung Tridi, which has high strength as presented by the high closeness value. The low betweenness value indicates that the network is a closed type with high network strength. The degree value, which is in the medium-high class, indicates that the actors in the network can make or have made decisions related to institutional activities. The density in the network is in the medium class, and the level of participation in the four active institutions is in the medium class, all of which indicate that the network is a closed type. Social capital in the network that causes decisions must result from the consensus of all actors so that the decisions taken are solid and valid. Therefore, Kampung Tridi is at the level of capital between bonding and bridging social capital. This is advantageous because the Kampung Tridi community efficiently carries out regional development programs and interacts with outside parties. The pattern of relationship density is not average, and it is easy for outsiders to enter the network. However, it will be challenging to carry out activities or programs because collective action must result from consensus and deliberation of all actors first. However, in the early stages of the entry program, a third party is needed to help the community understand. After that, the community will manage it, including existing tourism activities. The Kampung Tridi actors have become intermediaries between their institutions and other institutions or parties with power, such as those related to painting maintenance activities. Given that the concept of a mural is central to Kampung Tridi's appeal as a tourist destination, it stands to reason that the paint on the murals could eventually fade and require maintenance. Some actors have a role in dealing directly with the paint company to carry out a collaborative process every year.

4. Discussion

4.1. Pro-poor Tourism Analysis

Kampung Tridi was inaugurated as one of the Thematic Villages of Malang City in October 2016. Like its predecessor, KWJ (Kampung Warna-Warni Jodipan), Kampung Tridi is also under the guidance of Guys of Public Relations (GuysPro) (GuysPro is a Public Relations, Communication Studies, Muhammadiyah Malang University student practice comprised of 8 students) and in collaboration with PT. Indana Paint. Based on the interview with the Treasurer of the Kampung Tridi Community Association, it was found that during the planning process, a different concept of tourism development was drawn up from KWJ, namely the creation of 3-dimensional (3D) painting. The attraction of 3D painting in Kampung Tridi is the main attraction for tourists.

Figure 1. Condition of Kampung Tridi before tourism activities in 2016

Figure 1 retrieved from detik.com indicates the condition of KWJ when the development of tourism activities has been carried out (right) compared to Kampung Tridi (left), which still looks shabby and disorganized. The impact of tourism in Kampung Tridi is illustrated in Table 2.

4.2. The poverty condition of Kampung Tridi

The poverty condition of Kampung Tridi can be measured from three sub-variables described in Table 1. Poverty data in Kampung Tridi (K1) was obtained from secondary data from the Kesatrian Village Government, Malang City. There are 33 households out of 217 households in Kampung Tridi, which are classified as poor households. In addition, supporting data is needed to know whether conditions of the economic changes in Kampung Tridi can be seen. To assess this, supporting data of income before and after tourism activities in Kampung Tridi is needed.

An increase in income was experienced by 38% or 83 of the 217 respondents who live in Kampung Tridi. All respondents who have increased revenue after tourism activities are respondents who work and are involved in the tourism sector. However, to ensure that low-income families as the main object of this research realise a positive change from an economic perspective, data for MBR of who works in the tourism sector (K3) are needed. There are 33 low-income families in Kampung Tridi, of which 32 low-income families have family members who work in the tourism sector. Therefore, these data explained that tourism activities help to change the economy of low-income families in Kampung Tridi.
1. Increasing community income
The increase in resident’s income occurred due to economic activities in the tourism sector in Kampung Tridi. Related economic activities in the tourism sector are ticket guards, parking, souvenir craftsmen, and new traders. The study results show that 62% of respondents did not experience an increase in income; 27% increased by more than IDR. 500,001, and 11% increased but less than IDR. 500,000.

2. People working in the tourism sector
To measure the economic impact of tourism activities, it is necessary to know whether a resident’s work in the tourism sector is the main job or additional work is. In terms of the income increase data, 62% of respondents did not experience an increase in income, so they did not work in the tourism sector. However, 28% of respondents in Kampung Tridi work in the tourism sector as an additional job, and 11% of respondents work in tourism as their main job.

3. Human resources quality improvement
After the tourism activities, the social conditions of Kampung Tridi, if examined based on the level of education, did not change drastically; this noted, when viewed from an increase in skills, the changes are seen. All respondents agree that tourism activities did not harm human resources in Kampung Tridi. Changes in the quality of human resources in Kampung Tridi also occurred due to community skills training. Tangible evidence is the training in making souvenirs that are sold to the Kampung Tridi Community and applied as entrance tickets in Kampung Tridi. In addition, training in English language and as tour guides for students in the community living in the Kampung Tridi area. The tourism activities create enhanced human resources and capacity in Kampung Tridi. The higher the rate of human resources in Kampung Tridi, the greater the opportunity for the sustainability of tourism activities.

4. Impact on society and culture
The social impacts can be shown from physical changes, such as creating a new institution, the Kampung Tridi Community. However, they can also be measured through changes felt by the residents of Kampung Tridi. Data was collected from respondents in Kampung Tridi regarding PPT4 items. All respondents agree that there is no negative impact on the socio-cultural aspects of Kampung Tridi tourism activities. The distribution of responses with the most significant percentage value, namely 30% of respondents, agreed that tourism activities positively impacted socio-cultural conditions. One of which can be shown is creating “Kuala Lampung” cultural preservation activities in Kampung Tridi.

5. Community participation in tourism activities
The classification of community participation in the tourism sector is determined from the role of respondents, where those who participate by working in Kampung Tridi were allocated a value of 1, and those who participate in the Kampung Tridi Association were allocated a value of 2, and so on. Resulting in 12 respondents being allocated a value of 5, 29 respondents allocated a value of 4, 2 respondents allocated a value of 3, 42 respondents allocated a value of 1 and 132 respondents were not allocated a value or were considered not to participate. Not participating means that the respondent does not work in the tourism sector, does not participate in the Kampung Tridi Community, or both.

6. Accessibility to facilities and infrastructure
As many as 69%, or 149 respondents in Kampung Tridi stated that facilities and infrastructure, health, education, and worship facilities in Kampung Tridi are easily accessed. At the same time, the other 31% admitted that the existing infrastructure was accessible. Kampung Tridi is in the city center where facilities and infrastructure are accessible. The environmental road conditions in Kampung Tridi are of good quality. Drainage conditions are dominated by closed drainage and access to clean water, through PDAM.

7. Government and private sector support for pro-poor tourism
Kampung Tridi, formed after the establishment of KWJ, and the importance of private sector and government roles in implementing tourism development plans in Kampung Tridi is noted. According to the interviews with Kampung Tridi residents, 100% agreed that the Malang City Government-supported tourism activities in Kampung Tridi were instrumental in the program’s success. For example, in 2019, the Brantas River Festival was held in Kampung Tridi. The Malang City Government and all Pokdarwis upstream and downstream of the Brantas River attended the festival. The role of the private sector in the sustainability of tourism in Tridi (3D) Village cannot be separated from the part of the government. One hundred percent of respondents agree with the role of the private sector, particularly PT. Indana Paint has a significant impact on tourism activities in Kampung Tridi.

8. Collective advantage
The collective economic impact is derived from money from ticket sales and parking. Based on the results of interviews with the Treasurer of the Kampung Tridi Community, the average number of tourists visiting Kampung Tridi on active days is 450-500 tourists/day and ±1,000-2,000 tourists/day on holidays. Kampung Tridi tourism activities managed directly by the Kampung Tridi Community are reapplied for the community and Kampung Tridi management. The income is reinvested in the activities and needs of the Kampung Tridi community, such as food distribution, salary for the administrator of Paguyuban Kampung Tridi, death fees (to encourage community participation in the donation drive for accident victims’ families and reduce the burden on disaster-affected families), religious studies, allowances for the sick, competitions held in Kampung Tridi every August 17, and Qurban fees. In addition to community contributions, the remaining money is applied for image maintenance and rides in Kampung Tridi. Based on the survey results, 100% of respondents think that the activities have a very positive collective impact.

The environmental impact was also felt after the Kampung Tridi tourism activities. Based on the results of the primary survey, 100% of respondents in Kampung Tridi agreed that tourism activities could improve the environmental quality of Kampung Tridi. Environmental improvements are also felt around Kampung Tridi. One example is the Kampung Tridi Community Association which also formed a picket for community service and collaborated with KWJ to clean riverbanks and glass bridges.

6. Accessibility to facilities and infrastructure
As many as 69%, or 149 respondents in Kampung Tridi stated that facilities and infrastructure, health, education, and worship facilities in Kampung Tridi are easily accessed. At the same time, the other 31% admitted that the existing infrastructure was accessible. Kampung Tridi is in the city center where facilities and infrastructure are accessible. The environmental road conditions in Kampung Tridi are of good quality. Drainage conditions are dominated by closed drainage and access to clean water, through PDAM.

5. Conclusion
Based on the research, it can be concluded that:

a. Institutional ties dominate the type of ties in Kampung Tridi. The existing ties do not have robust strength, supported by the dominance of the level of trust in the regular class. This condition is motivated by the diversity of community backgrounds where many immigrants exist. This situation shows that social capital is bridging
social capital. However, some norms maintained that bind people's lives indicate bonding social capital. Then the condition of social capital is between bonding and bridging social capital. Social capital in the network tends to cause decisions resulting from the consensus of all actors so that the decisions taken are strong and valid.

b. PPT activities in Kampung Tridi benefit or positively impact the Kampung Tridi community, including those in poverty and thus most in need.

c. The PPT and social capital variables negatively correlate with the poverty condition in Kampung Tridi, in line with previous research. The analysis results indicate that poverty will decrease if the social capital value is high. When the magnitude of the value is considered, the PPT and social capital variables are more influential in influencing poverty conditions in Kampung Tridi.

Acknowledgment

We want to show our gratitude to Paguyuban Kampung Tridi, Kesatian Village Officer, and all of Kampung Tridi’s residents for helping us accomplish this research.

Author Declaration

Authors’ contributions and responsibilities

The authors made substantial contributions to the conception and design of the study. The authors took responsibility for data analysis, interpretation and discussion of results. The authors read and approved the final manuscript.

Funding

No funding information from the authors.

Availability of data and materials

All data are available from the authors.

Competing interests

The authors declare no competing interest.

Additional information

No additional information from the authors.

References


[18] T. van der Hammen and C. Chen, “Participation rate and demographic profile in recreational angling in The


