IMPORTANT ISSUES OF FACILITIES AND INFRASTRUCTURE DEVELOPMENT IN RURAL SYSTEMS OF SELF-MANAGEMENT; A STUDY OF FUTURE STUDY

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ABSTRACT

Background and purpose: Discourses regarding the fulfillment and quality of the construction of facilities and infrastructure are now focused on villages because there are still gaps between villages and cities. Several countries, both developing and developed countries, have a similar model for overcoming this gap, namely financing (funds) for villages. The focus discussed is the development of village facilities and infrastructure (infrastructure) with a self-management system.

Methods: The study aims to reveal important issues and topics produced by previous researchers. Using a journal-based review study approach.

Results: The research findings emphasize future studies (as a research position). The first is innovation, precise targeting, and measurable, proportional use of local resources such as labor and raw materials. Both qualities comply with quality standards. The third is responsive to technical problems (development of facilities and infrastructure). Fourth, open or transparent (maximum accommodating community aspirations regarding development proposals) and accountable.

Research implication: As a differentiator, originality, and opportunities for new research are focused on two things, namely taking studies in coastal villages; as well as using analysis techniques IPA and CSI.

Keywords: Village Funds, Facilities and Infrastructure, Self-Management, State of the Art.

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RESUMO

Antecedentes e objetivos: Os discursos sobre a realização e qualidade da construção de instalações e infraestrutura estão agora focados em aldeias porque ainda há lacunas entre aldeias e cidades. Vários países, tanto países em desenvolvimento como países desenvolvidos, têm um modelo semelhante para superar esta lacuna, nomeadamente

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1 INTRODUCTION

This thinking of rural development started when there was a wave of rapid urbanization, and this has become a global concern. Development has so far focused on urban areas by providing decent housing. According to Xu et al., (2021) in his study stated that current and future development needs to use a reverse approach from the usual, namely rural development planning. This concept has started to be implemented in China (China) to reduce the effects of rapid urbanization in cities. The impetus to focus on rural development is at least for food security, promoting culture and heritage, addressing (urban) overcapacity, emphasizing environmental protection, and eradicating poverty (Gao & Shen, 2023; and Xu et al., (2021).

Village development aims to improve the welfare of rural communities and the quality of human life as well as reduce poverty, through the fulfillment of basic needs including the development of village facilities and infrastructure, development of the local economic portion, and sustainable use of natural resources and the environment. The policy model with village funds (VF) as an implementation in developing the economy at the village level can reduce inequality and reduce village poverty rates. This is supported by allocating village funds (VF) by the government which increases every year, thus the position of the village and village community as subjects of development can proceed according to their authority.

Many villages have experienced development growth. For example, some villages are more successful in obtaining income from village original income (PADes) than from village funds. Villagers, families, or households who are actors or actors in the economy play an important role in economic growth as well as beneficiaries of this growth. Communities as economic actors play an important role as a driving force for the economy of a region (Birdsall et al., 2001). This movement had an impact on the household economy (Foster & Rosenzweig, 2002; and Harmadi et al., 2020).

The village development paradigm has now changed where villages are given funds (direct transfers) to plan developed specifically to fulfill infrastructure services which have been a major problem. Apart from that, empowerment programs in village funds are also the main focus. Antlöv et al., (2016; and 2003) in their study stated that community empowerment in labor-intensive programs is strengthened through village government institutions, increasing the village budget as a driver of the village economy, and the role of the village head as a key
factor in driving village development. Then Harmadi et al., (2020) continued that increasing the village development budget through Village funds offers new hope for village development as well as a driver for the village economy which is supported by the authority given to the Village Government to develop its village by compiling and formulating village regulations that are integrated with development in districts/cities.

The implementation of the Village Fund program in village development and improving the economy of rural communities in recent years has been quite good. This is also supported by some previous research including (Hendri et al., 2016); (Soñianto et al., 2017); (Sari & Abdullah, 2017); and (Fajri, 2017) state that the effective and well-performing use of Village funds can improve the quality of development according to the needs and conditions of the village community, one of which is through increasing the availability of facilities and infrastructure. From this study, it is known that the use of village funds in village development with the self-management system has fulfilled the principles of their use by utilizing natural and human resources as well as village local wisdom.

The self-managed (swakelola) village development approach is the implementation of work that is planned, carried out, and supervised by themselves, in this case, the Village Government. Development in a village with a self-management system generally uses its own labor, and/or external forces, both experts and piece-rate workers. In implementing that village development with village funds the self-management system has been able to increase budget absorption which increases every year and the output is getting better in terms of physical facilities (infrastructure) (Setyorini & Susilowati, 2019). The granting of authority to carry out development from Central Government assistance (village funds) also has good implications for village governance which is quite good, there is community participation, and maximizing village resources (Diatmika & Purba, 2019). Furthermore, Fadli et al., (2020) in his study stated that village development (facilities and infrastructure) is currently transparent, and there is room for participation provided to discuss development priorities. In fact, according to Wong et al., (2013) the quality of work tends to be better when funding sources come from the Central Government because there is fairly good supervision, supported by collaboration between related governments.

In a developing country like Indonesia, the rural development in the village fund program that is of concern is reducing poverty (although it is recognized that the development of facilities and infrastructure is not the sole variable in alleviating rural poverty). The problem that arises is the mechanism for determining the number of village funds because in the formulation the distribution of FV is based on the number of villages, not based on the number of poor people in the village. Regions with many villages, even though the population is poor, receive more funds. The fact is that poverty reduction has occurred in almost all regions, including areas that do not receive village funds, especially the regions of Java and Sumatra. This is supported by research by Julianto & Jumario (2018) which found that road infrastructure development only contributes 3% to reducing poverty and the rest (97%) is influenced by other variables. Hasibuan et al., (2019); and Gusti et al., (2020) in their research stated that the use of village funds had not been able to have a positive effect on reducing poverty, meaning that an increase in the amount of village funds was not followed by a reduction in poverty.

The facts above indicate a gap between the objectives of the village fund program and improving the living standards of rural communities. This means that the increase in the availability of facilities and infrastructure has not been very strong in giving a role in increasing people's living standards. Setyorini & Susilowati (2019) in their research found that the problem of managing FV in the self-management system found various problems including the determination of overlapping programs between related parties in the village government so that several programs that had been set at the beginning of the budgeting process were shifted by programs from other ministries. This is due to the absence of coordination from the internal...
village government or between government departments that are higher than the village government. Setyorini & Susilowati (2019) stated that the reasons for not maximizing the performance of the construction of facilities and infrastructure are closely related to governance. In his study, it was stated that the governance of procurement of goods and services includes not only the ability to understand overlapping regulations between related parties and the Government, and the implementation often changes, as a result, several programs that have been set at the beginning of the budgeting process are shifted by other programs. This shows that the quality of the planning process experiences many problems, if the planning is not appropriate then the process and results will also experience many problems.

The above is supported by several previous studies such as Noor & Mursadin, (2021) that weaknesses in the management of self-managed rural infrastructure development are found in the quality standards of work that are not yet appropriate, the village government has not been responsive to work problems that are found to be of poor quality during construction, not all aspirations have been fulfilled. accommodated for the improvement of facilities and infrastructure (roads), transportation, and procedures for procuring goods and services that were found to be not in accordance with existing regulations. The aspect of governance in development planning is also inseparable from the problems that arise which are thought to result in the ineffectiveness of development implementation. This is as revealed by Madyan et al., (2020) study found that there are indications that there is still poor governance in the village fund management program; as well as a low level of participation, and lack of transparency, in the handling of village fund instruments. Likewise, Chahyadi & Prasetia, (2019) in their study found that the dominant factors causing the lack of success in the development of self-management system facilities and infrastructure lie in planning, resources, and management and reporting of activity results. As a result of the development governance described above, the quality of work on facilities and infrastructure is not satisfactory to the community. Chen et al., (2018) in his study concluded that community satisfaction with the results of self-managed village infrastructure development was relatively low and the community gave a bad impression of the function and implementation of rural infrastructure.

In order to update the issues that have been reviewed, the research tries to review relevant studies to uncover and map the important and latest (state-of-the-art) points that need to be further explored related to the development of self-management system facilities and infrastructure in general, then focus on the construction of facilities and infrastructure sourced from village funds or a similar model is applied in several countries. The results of this mapping can be constructed as a road map for further research which is useful both scientifically (scientific contribution) and practically for policymakers and practitioners of the development of village facilities and infrastructure in a self-managed system.

2 RESEARCH METHODOLOGY

Study based on literature study. The stages of the study are carried out by determining the topic and scope/limitation of the study, the second is identifying relevant and credible sources, the third is conducting literature analysis, and the last making conclusions and interpretations.

This study involved around 54 journals, five (5) of which were supporting journals. The majority of reference journals (sampling) are reputable international journals (Scopus indexed, international databases, and credited national journals). Journal searches focused on managing village funds and similar program names (in several countries), as well as the use of village funds in infrastructure development and/or regional facilities and infrastructure supporting accessibility and regional connectivity. Reviewing journal sources was carried out using meta-analysis techniques. A number of journals that were successfully identified with the focus of
discussion as mentioned starting from the year of publication 2001 to 2022 spread from all countries in the world.

The analysis is carried out systematically, explicitly, and reproducibly to identify, evaluate, and synthesize reputable scientific works. the output of the analysis generates important issues as state-of-the-art keywords for future studies (road map). It then presents several theories and concepts that are widely used by researchers in explaining the development of village facilities and infrastructure in the self-management system originating from village funds. This point then becomes the basis of the findings (novelty) of this research.

3 RESULT AND DISCUSSIONS

3.1 Studies Regarding the Implementation of Development Sourced from the Village Fund Program and/or Similar

There are 41 journals identified with a focus on the implementation of village fund programs (VF) and/or similar programs (in other countries) as presented in Table 1. The village fund program (VF) in Indonesia has programs similar to other countries that aim at increasing the ability of villages to plan and carry out their own development according to their potential. These countries are Zambia, Bolivia, Thailand, Egypt, Japan, Philippines, and Nepal.

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Country</th>
<th>Study Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permatasari et al., (2021); Yazid et al., (2019).</td>
<td>Indonesia</td>
<td>Village fund program and sustainable development goals</td>
</tr>
</tbody>
</table>
| Udjianto et al., (2021); Dwitayanti et al., (2020); Sari & Abdullah (2017); Darmiah (2016). | Indonesia | a. Village Fund policy implementation and model  
   b. Participation  
   c. Village community welfare (poverty reduction) |
| Arifin et al., (2020) | Indonesia | Village Fund, BumDes and employment |
| Batubara et al., (2020); Gusti et al., (2020); Malengga et al., (2020); Dwitayanti et al., (2020); Savitri et al., (2019); Sulila, (2019); Bustang et al., (2018). | Indonesia | a. Village Fund Effectiveness  
   b. Poverty reduction, and  
   c. Improvement of community welfare |
| Parajuli et al., (2012) | Nepal | a. Implementation of Village Funds,  
   b. Public welfare,  
   c. Manager religiosity behavior |
| Kadafi et al., (2020) | Indonesia | Poverty, malnutrition, literacy (education), health, and community and apparatus empowerment |
| Labonne (2013) | Philipinnes | |
| Lubis, (2020) | Indonesia | a. Implementation of Village Funds,  
   b. Public welfare,  
   c. Manager religiosity behavior |
| Marhaeni & Sudibia (2010); Nurhakim & Yudianto (2018); Hendri et al., (2016). | Indonesia | Management and capacity of village fund managers, as well as village fund management facilities and infrastructure |
| Arifin et al., (2020) | Indonesia | Impact of village funds on village-owned enterprises and employment opportunities |
| Diarsari, (2023); Setyorini & Susilowati (2019); Ragayu & Fettry (2017); Hendri et al., (2016) | Indonesia | a. Human resource quality,  
   b. Village Fund Accountability  
   c. Self-managed (swakelola) procurement of Goods and Services |
| Ito et al., (2019) | Japan | Funds for villages in preventing agricultural land abandonment |
| Astawa & Utama (2020); Lubis, (2020); Madyan et al., (2020) Kalontong et al., (2019); Nurhakim & Yudianto (2018); | Indonesia | a. Village fund management  
   b. Good government  
   c. Improved development |
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There are several important points that are the topic and focus of analysis related to the village fund program (FV) and similar programs during 2001-2021. There were eleven topics that were widely discussed, the majority related to the economy and welfare as well as managing village funds. The eleven topics are simply illustrated in Figure 1 below,

![Figure 1. Topic of study on village fund programs and similar programs](Source: Authors (2023)).

3.2 Study on Development of Village Facilities and Infrastructure Village Swakelola System Based on Village Funds and Similar Programs

Studies that specifically address the topic of building self-management system facilities and infrastructure are sourced from village fund programs and/or similar programs, there are 17 journals identified from the 2008-2021 publishing period. Most of the studies are based in Indonesia, and the others are spread over 5 countries, namely the Czech Republic, India, China, Afghanistan, and Senegal. The results of mapping topics and/or issues discussed in several journals in relation to the construction of facilities and infrastructure (village infrastructure) are presented in Table 2.

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Country</th>
<th>Study Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meutia &amp; Liliana</td>
<td>Thailand</td>
<td>Economy and Quality of Life of rural communities:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>a. Impact on income and expenditure on poverty reduction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Village funds and sub-district funds for the household economy</td>
</tr>
<tr>
<td>Boonperm et al.</td>
<td>Indonesia</td>
<td>Health, water and education</td>
</tr>
<tr>
<td>Chandyoevith et al.</td>
<td></td>
<td>Benefits of social funds to households</td>
</tr>
</tbody>
</table>

Source: Authors (2023)

Table 2. Research mapping of the implementation of the development of facilities and infrastructure for the self-management system sourced from the village fund program and/or similar
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<table>
<thead>
<tr>
<th>Authors</th>
<th>Country</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marhaeni &amp; Sudibia (2020); Akbar &amp; Sihaloho (2019).</td>
<td>Indonesia</td>
<td>The influence and/or impact of village funds on infrastructure conditions and community welfare</td>
</tr>
<tr>
<td>Fadli et al., (2020)</td>
<td>Indonesia</td>
<td>Management of the cost of building village facilities and infrastructure from village funds</td>
</tr>
<tr>
<td>Madyan et al., (2020); Diatmika &amp; Purba (2019)</td>
<td>Indonesia</td>
<td>Governance of village funds and community participation in self-management development</td>
</tr>
<tr>
<td>Diansari., (2023); Setyorini &amp; Susilowati, (2019); Hendri et al., (2016)</td>
<td>Indonesia</td>
<td>a. Human resources quality, b. Accountability, c. Self-managed procurement of goods and services</td>
</tr>
<tr>
<td>Chen et al., (2018); Wong et al., (2013)</td>
<td>China</td>
<td>Quality, and Evaluation of special rural infrastructure development (village funds) from the farmer's perspective</td>
</tr>
<tr>
<td>Fajri (2017)</td>
<td>Indonesia</td>
<td>Infrastructure development for people's welfare</td>
</tr>
<tr>
<td>Aziz (2016)</td>
<td>Indonesia</td>
<td>Village fund effectiveness, goal attainment, timeliness, and benefits of infrastructure development</td>
</tr>
<tr>
<td>Beath et al., (2015)</td>
<td>Afganistan</td>
<td>Democratic processes, access to utilities, and economic well-being. Improvement of the amount of infrastructure at low quality</td>
</tr>
<tr>
<td>Arcand &amp; Bassole (2008)</td>
<td>Senegal</td>
<td>Rural infrastructure on access to basic services, household spending, and children's physical condition</td>
</tr>
</tbody>
</table>

Source: Authors (2023)

The implementation of the construction of facilities and infrastructure for the self-management system originating from the village fund program and/or similar which has been mapped resulted in eleven (11) topics or issues that were widely discussed as presented in Figure 2.

![Figure 2. Development of self-management system facilities and infrastructure sourced from the village fund program and/or similar](image)

Source: Authors (2023).

Judging from the current context (the latest journal publication period (2021 and 2022), there are at least five (5) focuses (research positions) for further investigation, namely: 1) Sustainable development, 2) Satisfaction (performance), and importance (importance), 3) Supporting factors and barriers/challenges, 4) Policy models and directions for quality improvement, and 5) Participation is included in the evaluation and community empowerment. Research that specifically reveals weaknesses and provides suggestions for further research such as Noor & Mursadin, (2021); Mukaddas et al., (2021); Fadli et al., (2020); Madyan et al., (2020); Diatmika & Purba (2019); Chahyadi & Prasetia (2019); Chen et al., (2018); and Wong et al., (2013).
The intended research suggestion is manifested as a research position while at the same time strengthening the position of the issues to be discussed as reviewed. Suggestions for further research are as follows: 1) The Village Fund self-management system requires innovation, targeting accuracy and measurability, proportionate use of local resources such as labor and raw materials; 2) Development of facilities and infrastructure in accordance with quality standards; 3) The village government is slow to solve technical problems in the construction of facilities and infrastructure; 4) The village government has not optimally accommodated community aspirations regarding development proposals; 5) Not as a whole the project has a clear project board in every development activity; 6) Procurement of goods and services has not complied with regulations and can be accounted for; 7) There needs to be a study from other aspects, not only in farming communities; and 8) Comparative analysis (mix methods) or qualitative or quantitative separate to reveal community interests and satisfaction with the development of self-management facilities and infrastructure sourced from village funds.

Points 1 to 6 are closely related to the five issues or topics of the latest studies (2021 and 2022) as stated above. Specifically, as a differentiator and strength of future studies are points 7 and 8. Point 7 emphasizes the non-monotonous study subject in a village characterized by agriculture. On this basis, future studies can take other characteristics such as the coast. The coastal issue is consistent with the characteristics of Indonesia and Southeast Asia in general as maritime countries. The second emphasis is on disclosing the research position above (points 1-7) a more robust research approach can be used. Quantitative studies using the Importance Performance Analysis (IPA) analysis tool have been used, so that further researchers can consider this analytical technique (IPA), and can be strengthened by evaluating the Customer Satisfaction Index (CSI) technique. The construction model of the research position (state of the art) is simply shown in Figure 3 below.

**Figure 3.** State of the art construction model research implementation of development of village facilities and infrastructure sourced from village funds.

**Source:** Authors (2023).

A performance analysis approach based on interests and benefits (such as IPA and CSI) is urgently needed as an effort to ensure quality and more importantly sustainable development.
(infrastructure) benefits. At the same time, it also serves as a yardstick for assessing the social responsibility of implementing development. Social responsibility has now become a quality standard for development, especially physical and/or other civil construction (Garcia et al., 2023). A further highlight is that the future studies mentioned above can be developed and/or expanded to uncover regulatory and implementation frameworks that lead to increased participation. This departs from the research results of Awhefeada et al., (2023) that the current legal and regulatory framework is not in line with or contradicts the concept of increasing community participation. Because of this, future studies can at least explain what the legal framework for participation looks like, in what ways can participation be, and what things cannot be reached by community participation in the process of building facilities and infrastructure.

4 CONCLUSION

The study of development justice (rural-urban) is still a concern by some recent research. The discussion on this matter is motivated by the existence of gaps (development) between villages and cities. Development programs focused on villages are not only carried out by developing countries (Indonesia and Southeast Asian countries in general), countries in parts of Africa (Zambia and Senegal), North Africa-Middle East (Egypt), and parts of South America (Bolivia). The focus on village development (direct financing model) is also carried out by developed countries, such as China, Japan, and even Europe (Czech Republic).

Future studies regarding the implementation of development will focus on fulfilling village infrastructure, generally using the self-management model (based on local resources, by and for the community). The results of the analysis found that studies on village funds and similar programs began from 2001 to 2021. The latest study (2020-2021) as a development from previous studies is now on five topics of discussion, namely the integration of sustainable development goals; satisfaction (performance) and interest (importance); supporting factors and obstacles/challenges; model of quality improvement policy and directives; and participation is included in evaluation and community empowerment. Following up on these five points, some researchers emphasize further studies to investigate; The first is innovation, precise targeting and measurable, proportional use of local resources such as labor and raw materials; Both qualities comply with quality standards; Third, responsiveness to technical problems (construction of facilities and infrastructure); and Fourth, open or transparent (maximum to accommodate community aspirations regarding development proposals) and accountable. As a differentiator, originality and opportunities for new research are focused on two things, namely taking studies in coastal villages; as well as using analysis techniques Importance Performance Analysis (IPA) and Customer Satisfaction Index (CSI).

ACKNOWLEDGEMENTS

This study is purely self-funded, as one of the requirements (final study) for the doctoral program in management science (engineering management interest). As an emphasis, this study is free from the ties of other parties (funding institutions) so that there are no conflicts of interest in the future.

REFERENCES


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https://doi.org/10.1371/journal.pone.0204563.


