JKAP (Jurnal Kebijakan dan Administrasi Publik)
Vol.23 (1), May 2019, 77-91
ISSN 0852-9213 (Print), ISSN 2477-4693 (Online)
Available Online at https://journal.ugm.ac.id/jkap

Public (Dis)Engagement in a Toll Road Project: A Case Study from Indonesia

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Abstract

Although numerous studies have established the importance of public participation in development, in practice, the government or companies in charge of infrastructure development often obscure public perception about its potential impact on development outcomes. This research aims to provide a more detailed description of the impact of toll road construction projects with low public participation. This research is study is a case study that employed qualitative research design approach. The study provides a deeper understanding the impact that ignoring public engagement has on the construction toll road. Results of this study underscore the importance of participatory public project planning and implementation on project outcomes and impact. Specifically, results of the study showed that public disengagement in the construction of road toll impacts public perception [during the project preconstruction and construction stages; willingness to accept change in land use change that is necessary to realize the project; and ultimately the social impact of similar project. Study results are valuable inputs into decision making process on the need for participatory infrastructure development to enhance project acceptability, effectiveness and social impact; the importance of good development planning that involves taking into consideration all the scenarios during the implementation phase.

Keywords: *public engagement, public disengagement, toll road construction, Indonesia*

INTRODUCTION

The construction of toll roads is one of the infrastructure projects that contributes to the improvement of quality of life of citizenry and economic development. Constructing toll roads generates a lot of benefits, including, creation of an efficient flow of traffic in developing areas (Berawi, Miraj, Berawi, Gunawan, & Mikaelse, 2018; Nahry & Fadillah, 2018; Yan, Chong, Sheng, & Wang, 2017); improved efficiency and effectiveness of the distribution of goods and services to support economic development (Brandao & Saraiva, 2008; Low & Odgers, 2012; Newell, Wing Chau, & Kei Wong, 2009); and lessening the burden on the government expenditure by increasing the participation of toll road users (Brandão, Bastian-Pinto, Gomes, & Labes, 2012; Carbonara, Costantino, & Pellegrino, 2014; Cheah & Liu, 2006; Liu, Bennon, Garvin, & Wang, 2017).

Nonetheless, the impact of investment in transportation on communities tends to vary (Chen & Subprasom, 2007). Environmental justice becomes an issue when minority groups or low-income communities receive lower level of benefits and face disproportionate burden of transportation investments. Such burden may be manifested in negative environmental, economic, or social impact for people living in the vicinity of toll road projects.

The public being one of the key stakeholders in the construction of toll roads (Rohman, Doloi, & Heywood, 2017; Villalba-Romero, Liyanage, & Roumboutsos, 2015), implies that failure of the infrastructure development project to meet its expectations is likely to result into underperformance or total failure of the project (Almahmoud & Doloi, 2015; Doloi, 2012). To that end, public participation minimizes the negative impact by taking into consideration interests and aspirations of all key stakeholders into project design and implementation. That way, project development ensures benefits that the toll road construction generates are distributed fairly among affected communities.

Although several studies on infrastructure development emphasize the importance of public participation in all stages of project development (Almahmoud & Doloi, 2015; Doloi, 2012; Rohman et al., 2017; Villalba-Romero et al., 2015), there is yet no research that identifies the impact of public disengagement in toll road construction. Previous literature on infrastructure development projects largely focuses on economic aspect, while social and environmental aspects are ignored. Concretely, today the focus of research on infrastructure development projects lays more emphasis on project funding models (Carmichael, Nguyen, & Shen, 2019; Chan, Yeung, Yu, Wang, & Ke, 2011; Chu, Wang, & Feng, 2017; Heravi & Hajihosseini, 2012; Jain & Cullinane, 2002; Kaminsky, 2018; Ke, Wang, & Chan, 2010; Nguyen, Mollik, & Chih, 2018; Palcic, Reeves, & Stafford, 2018; Pradono, Muromachi, Harata, & Ohta, 2000; Yu, Chan, Chen, & Darko, 2018; Zhang, 2005); and economic impact of infrastructure development projects (Anas, Tamin, Tamin, & Wibowo, 2017; Chi & Waugaman, 2010; Chung, 2002; Gordon et al., 2015; Standish & van Zyl, 2007; Vadali, 2008).

In practice, public participation is an often ignored aspect of project development (Rohman et al., 2017). This is the case, despite the reality that, public participation in the construction of toll road is very crucial for the success of such infrastructure projects (Almahmoud & Doloi, 2015; Doloi, 2012; Rohman et al., 2017; Villalba-Romero et al., 2015). Public participation in development increases public acceptance of the project because the company in charge of the infrastructure development takes into consideration perspectives of the community in project design and implementation, which minimizes the probability of project failure. Moreover, public engagement in the long term also encourages public utilization of the finished project, which is indeed the ultimate objective of the project.

The Indonesian government plans to construct toll roads stretching on the order of 4,620,510 km (Table 1). Unfortunately, only 757,470 km (16%) of that length, has been constructed to date. Several studies on toll road construction site show that the problem of low public participation and attendant resistance as a factor that has contributed to the low level of toll road completion

Table 1. The Length of Finished and projected Toll roads

No	National Toll Roads	Length of Roads (KM)	
		Operational	To-Be-Constructed
1	Sumatera Island	42,700	2,805,200
2	Java Island	697,120	1,675,710
3	Bali Island	-	9,700
4	Kalimantan Island	-	84,000
5	Sulawesi Island	17,650	46.000
	Total	757,470	4,620,510

Source: Attachment B of Public Works Ministerial Decree No. 92/KPTS/M/2011 on the First Amendment of Public Works Ministerial Decree No. 567/KPTS/M/2010 as ultimately amended by the Public Works Ministerial Decree No. 250/KPTS/M/2015

(Sandhyavitri, Talha, Fauzi, & Sutikno, 2017; Sihombing, 2017; Wirahadikusumah, Sapitri, Susanti, & Soemardi, 2018). It is the line of thinking that this study takes, by trying to provide a more detailed description of the impact of that non-involvement of the project has on the construction of toll roads in Indonesia. Based on study results, involving the public in different stages of the toll road construction can help the government to anticipate negative impact from infrastructure development, thereby reducing public resistance. Consequently, project implementation runs smoothly, leading to faster completion rates, and higher contribution to social and economic development.

Research findings help to fill a research gap in the absence of an empirical study that conducted a comprehensive assessment of the impact of non-involvement on the public in all phases of project development on the perception about its outcomes and impact on local communities.

METHODS

Growing environmental protection concerns, which are increasingly being associated with toll road construction, is once the key motivation for this study. The research is a case study, which used qualitative methods to collect data that helped to gain deeper insights and understanding about impact that absence of public participation in all the various phases of toll road construction has on project performance. The case study approach was chosen because of its ability to provide answers to various interrelated and interdependent as well as contesting factors that influence project design, implementation, completion, outcomes, and impact (Yin, 2014). Data collection was based on observation of project implementation, reading project documentations (Table 3), and conducting survey of public perception towards the toll road construction (Table 2).

This research assessed the management of the Trans-Java toll road construction, specifically the Solo-Kertosono toll road section in terms of its toll road. Choice of the Solo-Kertosono toll road section as the focus of the research was because the section has reached land acquisition and construction stages. The toll road section passes through productive agricultural land, which has stretches of food crop farm. The toll road runs through several regencies, including Boyolali, Karanganyar, and Sragen in the Central Java Province; and Ngawi, Magetan, Madiun, and Nganjuk regencies, East Java Province, which are the top five farming regions East Java, which is one of Indonesia's national food basket. A number of research locations relating to the regional governments were conducted at the institutions located in the Solo-Kertosono toll road, which goes through the administrative re-

Table 2. List of respondents interviewed

Institution	Location	Subject/Respondent	Position of Research Subject
Center for Data and Information Technology (Pusdatin) and the Directorate General of Highways, Ministry of Public Works and Housing (Kemen PUPR)	Jakarta	The legal bureau and the official in charge of toll road construction	Source
Directorate General for Law Enforcement of the Ministry of Environment	Jakarta	Official in charge at the Directorate for Forest and Environ-	Source
Toll Road Regulatory Agency of the Ministry of Public Works and Housing	Jakarta Solo	The head of the Solo-Kertosono Work Unit	Source
Regional Development Planning Agency, Administrative Section of the Regional Secretariat, Regional Environmental Office	Surakarta Municipality, Regencies of Boyolali, Karanganyar , Sragen, Ngawi, Magetan, Madiun, and Nganjuk	Heads of relevant Agency/ Office/ Team	Sources and Respondents
Districts and Villages that the development goes through	Sampling in areas of Boyolali, Karanganyar, Sragen, Ngawi, Magetan, Madiun, and Nganjuk	District and Village Heads, community figures, land owners, communities around the development areas, CSOs and NGOs	Respondents

gions of Central and East Java Provinces.

In addition, to confirm the accuracy of information obtained from interviews and literature review, a survey was used to gauge the perception of members of the community who have been directly affected by construction of the toll road. Data analysis involved description, tabulation, assessing and interpretation of information collected from documents, interviews and survey. The process led to identifying patterns among issues and factors relating to project development, which led to common themes that were evaluated for interpretation and drawing conclusion as well as making policy implications.

FINDINGS AND DISCUSSION

The Construction of the Solo-Kertosono Toll Road

The construction of Trans-Java Toll Road Solo-Kertosono section is stipulated in the 2005-2025 National Long Term Development Plan (RPJPN) as mandated in Law 17/2007, and the 2004-2009 National Medium Term Development Plan (RPJMN), which Presidential Regulation No.7/2005 mandates in. In addition, the above planning policies fall within the general planning arrangement of the National Road Network Master Plan, which in turn is stipulated in the 2005 Public Works Ministerial Decree No. 369/KPTS/M/2005 established through a legislation drafting process. In its implementation, the construction of the Trans-Java Toll Road Solo-Kertosono section is specified in Attachment I.1B, which breaks up the construction plan into the 58 km long Solo-Mantingan section, the 27 km long Mantingan-Ngawi section, and the 84 km Ngawi-Kertosono section.

Specifically, the construction of the Solo-Kertosono toll road was divided into two work sections. The Toll Road Regulatory Agency (BPJT) which is the government institution (initiator) that is authorized to operate the toll road, entered into a Toll Road Concession Agreement (PPJT) on the 28th of June, 2011 for the 62.90 km long Solo-Ngawi section with PT. Solo Ngawi Jaya. The PPJT eventually became a Toll Road Business Entity (BUJT), and with that PT Solo Ngawi Jaya received an additional con-

Table 3. List of Secondary Documents

No	Data	Document	Indicator
1	Planning Policies	National Long-Term Development Plan (RPJPN), National Medium-Term Development Plan (RPJMN), Government Work Plan (RKP), Strategic Plan (Renstra) of the Ministry of Public Works and Housing, National Road Network	Include/ does not include environmental protection content
2	Technical/General Planning	FS (Feasibility Study), DED (Detailed Engineering Design), EIA (Environmental Impact Assessment), SEA (Strategic Environmental Assessment), and other instruments	Include/ does not include environmental protection content
3	Laws and regulations	Law 32/2009 (Environmental Protection and Management Law), Law 38/2004 (Road Law), Governmental Regulation 15/2005 on Toll Road and its Amendments, Presidential Regulation/ Presidential Decree, Public Works Ministerial Regulation, and other relevant regulations	Include/ does not include environmental protection contents

struction target of 90.10 km, which was divided into 4 sections with an overall total cost of 5.14 trillion rupiahs in investment and IDR 1.778 trillion rupiahs for land acquisition. BPJT and PT. Ngawi completed the construction of the PPJT for the Ngawi-Kertosono section Kertosono Jaya on 28th of June, 2011. The construction of a 49.50 km long toll road was achieved at a cost of 3.88 trillion rupiahs. However, the construction of an additional stretch which was entrusted to BUJT in 2015, meant that the project length increased to 87.02 km. Meanwhile, the construction of Ngawi-Kertosono section was achieved at a cost of IDR 3.83 trillion and IDR 1.084 trillion for development and land acquisition, respectively.

Public Engagement in the Construction of the Solo-Kertosono Toll Road Section

Information dissemination forums, which BPJT held during the pre-construction stage and those that PT Solo Ngawi Jaya and PT Ngawi Kertosono Jaya during the construction stage, provided space for public engagement in the construction of the Solo-Kertosono Toll Road Section. The forums, which consisted of 1-5 meetings, involved direct communication with the public on issues that related to the construction of toll roads at the predetermined locations and a follow-up measures on the land acquisition process.

Unfortunately, the information dissemination efforts did not provide sufficient information to change their perception about the benefits of the project to the community in general and its long term impact on the environment in particular (including environmental risk such as pollution and land degradation). In any case, project initiators did not involve the public in project planning phases. According to respondents who participated in the meetings, they were only

Table 4. Public Perception about The Solo-Kertosono Toll Road Construction Plan

Section	Support the program	Oppose the program	Abstain
Solo-Mantingan	68%	31.2%	0.8%
Mantingan-Ngawi	80%	20%	-
Ngawi-Kertosono	95.8%	4.2%	-

Source: Data Analysis

limited to becoming passive recipients of prepared information about the construction of the toll road which was to pass through their villages.

In addition, lack of information on the impact of the construction of the toll road was compounded by the time interval that transpired between the meetings and the actual construction of the project, created a disconnection that in turn obscured public understanding and knowledge about the project, leading to resistance. Consequently, the public had to set their sights on the potential impact of the project on land use change land acquisition issues. This was attested by the reality that during construction of the project, some government employees who had played an important part in disseminating information about the project during pre-construction phase, had retired from service.

That said, public perception about the project did not translate into conflicts and disputes during the construction of Solo-Kertosono section. The argument that this study makes is that public perception about the project would have been better if the government took measures to involve them in project design and implementation.

A case in point, was the fact that landowners and other people who were directly impacted by the construction of the project, did not receive sufficient information about the impact that the project would have on their land, property and livelihoods. Instead, information disseminated focused on regional government officials and related offices including local government secretariat, local government public works office, Research and Development Planning Agency (BAPPELITBANG, which was previously called BAPPEDA), and District and Village Heads and their staff. Moreover, there was high turnover of personnel who were charged with disseminating information due to transfers between offices. Consequently, the absence of officials who were well informed about the details of the project, made the process of obtaining sufficient information concerning project construction and its impact on society became difficult. It is not surprising that public attention and interest was channeled toward the process of land acquisition, specifically, land that would be covered, calculation of compensation, and pre-requisites that were needed.

Thus, it can be argued that the little public engagement that occurred was limited to seeking legitimacy for project development, hence it was achieved through manipulated participation rather than well intentioned, that would have been driven by the need to ensure public acceptance, ownership of the project and the impact on the community.

The Impact of the Solo-Kertosono Toll Road Construction on the Social Environment

While the construction of the Solo-Kertosono section is still underway, this section discusses the public perception about the project planning and construction, change in social cohesion, and change in land use. Discussing the above impact can shed light on the potential future disputes, which are rooted in poor public perception about the project conception and implementation.

1. Public Perception at the Pre-Construction Stage

The pre-construction stage of the Trans -Java toll road Solo-Kertosono section was

Table 5. Public Perception After The Solo-Kertosono Toll Road Construction

Indicator	Support to the program	Opposed to the program
Public Perception	91%	9%
Perception toward the impact of toll road development	67% construction would not damage the environment	33% construction would damage the environment

Source: Data Analysis

based on a feasibility study that involved the regional/municipal governments of Boyolali, Surakarta, Sragen, Ngawi, Magetan, Madiun, and Nganjuk. The pre-construction stage included land acquisition, survey, and publication activities. The publication of results of feasibility studies was expected to change public perception about toll road construction. The land acquisition, survey, and publication activities focused on the land acquisition process. Based on the projected impact of land acquisition, the process would lead to changes in land use and social dynamics, for communities living near and around the toll road construction area.

BPJT conducted pre-construction stage activities for the Solo-Kertosono toll road section that involved regional governments and the village administration officials. Nonetheless, pre-construction impact surveys did not anticipate thoroughly the impact that the construction of the toll road would have on land use changes for people who were directly impacted by the project. The impact on affected communities that would have anticipated at the outset was the need to change livelihoods. This is because such a process is not only difficult but is also fraught with psychological and sentimental effects as people have leave locations where they have lived for very long time.

The negative perception about the project may be attributed to an incomplete understanding of the long-term impact of the toll road construction. The most important issue that affected public perception was change in land use. Based on table 4 results from a survey of 64 respondents, drawn from Karanganyar and Sragen, 68% of them were supportive of the project construction, while 31.2% expressed opposition. Meanwhile, for the Mantingan-Ngawi section out of 60 respondents from Ngawi, 80% were supportive and 20% were opposed to the construction. As for the Ngawi-Kertosono toll road section, out of 120 respondents who were residents of Ngawi, Madiun, and Nganjuk, 95.8% expressed support, while 4.2% were opposed. To that end, based on survey of public perception about the construction of Solo-Kertosono toll road project, 80% expressed support for the project and 20 percent were opposed to the preconstruction stage.

2. Public Perception at the Construction Stage

This section presents results of public perception about the construction of the project after 10 years since it begun. Table 5 shows the results of perception survey. Results indicate that while 91% of respondents expressed support for the construction of the project and only 9% were opposed. For those who opposed project construction, the main arguments they cited included fear that project construction would have detrimental effects on the environment, and the danger to livelihoods of local communities engaged in agriculture. Nonetheless, it is not only those respondents who were opposed to the project construction that sited the potential danger for the environment to back their argument, but also, surprisingly those respondents were supportive of the project had similar views.

In other words, respondents supported the project despite fears that would harm the environment because it is a government project they cannot refuse. Some landowners, despite nursing fears that the project would harm the environment, they supported it because of the potential advantages it would bring to the region, specifically its contribu-

tion to improving transportation. One participant said:

> *"We agree to the project because the construction of toll road is a government program, which the local population cannot refuse. This is despite the potential to damage the environment."*

Some respondents also argued if it was not a government program which they cannot refuse, if they were given a choice, they prefer to keep their land for agricultural use rather than surrender it for the construction of the toll road. This because, according to them, the construction of the toll road, would damage the environment, impact adversely on road network in the area and irrigation. Respondents knew very well despite their opposition; they could not stop the construction of the toll road simply because it was a government project. In other words, the argument this paper makes is that public support for the project was not entirely because they were conceived of the future benefits to their community and livelihoods rather the felling that their objection would not change the decision to build it.

Survey results of public perception about the ongoing construction process, showed that out of 93 respondents, 31 respondents (33%) expressed the view that project construction would damage the local environment, citing impact on irrigation channels that support farmland in the area, reduction of farm land, noise and air pollution in and around the toll road construction sites. Nonetheless, 67% of the respondents perceived toll road construction as posing no danger to the environment. On the contrary, it would improve transportation flow, and any potential damage would be anticipated technically and measures taken to minimize it during the construction process. In general, however, there was a lot of misunderstanding and uncertainty not only among the public but also government officials, about the potential damage that the construction of the project would have on the environment. Such a condition, underscores absence of sufficient and timely information about project impact to all stakeholders, both project implementers and members of the general public alike.

Reasons that respondents who expressed opposition to the toll road construction during the construction phase were similar to those given at the preconstruction phase, that is fear of potential damage to the environment (as many as 33%), noise and air pollution, disruption to the local irrigation system a reduction of open green space, and damage to local roads. Meanwhile respondents who expressed the view that toll road construction would not harm the environment sited the fact that its only impact would be on reducing agricultural land, and that to the advantage of improving local transportation.

3. Social Impact

Field study results showed that the toll road construction has changed social relationships among residents. This is discernible from the difficulty community members faced in their efforts to interact with one another. In the aftermath of the toll road construction, disconnection occurred which has increased the distance between households that were near to each other. Places of work that were near, are distant today. This is because residents have to walk or ride around the toll road structure. An excerpt of an interview with one of the respondents corroborates that reality:

> *"The construction of toll roads has undermined interaction among residents, because access has been diverted if not cut off by the toll road. What used to be close relationships among residents have been disrupted. The work places for residents that used to be near are today distant and far away became of the need to detour in order to reach them. Shortcuts are no longer available".*

To this day, community members are waiting for the construction of pathways that connect villages, which if accomplished would help to reduce the long distance they are forced to take while moving from one village to the other. A distance that was 100-200 meters has since start of the construction of the toll road projected increased to more than 2 kilometers. To avoid the long dis-

tance, some community members use the paths that pass through the toll road construction project to shorten distances from one village to another. However, that is only possible in the short term before the project is completed. Upon completion, it will not be possible for people to use such shortcuts. For that reason, community members hope that either an underpass or overpass is conducted to reduce traveling time from one nearby village to another.

The disruption in social cohesion affects the entire section of the Solo-Kertosono toll road. Communities living in the vicinity of Ngawi-Kertosono construction site also shared similar concerns. It is apparent that project designers did not take into consideration the impact of the project on economic activities of the local community. Consequently, the construction of the project has led to disruptions in economic activities which is coupled with an increase in transportation costs, has aggravated the burden on them. Disjointed local roads, shortcuts that are no longer available, and failure of the local government with the collaboration of authorities charged with construction of the toll road project to develop alternative shortcuts in the forms of an underpass or an overpass has not made things better for the local community.

Meanwhile, efforts to accelerate the completion of project construction by removing transportation hurdles may in the short term distract public concern about the magnitude of social disruption that has ensued in the wake of the project implementation, and constructing underpass and overpass may somewhat mitigate public feeling of disconnect between those living in one village and the colleagues in other neighboring villages, there is no denying the reality on the ground that disconnected communities will never be the same again. This is because the changing social cohesion brought by the construction of the toll road. Even if underpasses and overpasses are constructed, the number that will be developed will not be enough to replace the many shortcuts that were obliterated by the construction of the toll road structure. In any event, disrupted local roads, some of which lead to nowhere, will remain unusable hence relics of the memories of easy and quick connections and interaction that local community will never have the opportunity to revisit it.

The Impact of Change in Land Use

Based on records obtained from the Commitment Making Officer (PPK) of the Solo-Mantingan Work Unit, BPJT, as of December 2017, land required to constructing the Solo-Kertosono toll road section consists of two stretches of land: the 114.6 km long Solo-Mantingan section (510.99 hectares), and the 124.61 km long Ngawi-Kertosono section (882.33 hectares). Most of the land was originally farmland, and some residential areas, forests areas, and government properties in the form of office buildings or land belonging to village communities

Former owners of land that has been designated as Solo-Kertosono toll road construction site expressed agreement with the project because they received compensation for their land. However, their agreement with the project development and compensation for their land was, in part, because the land they surrendered was not used for productive purposes (farmland), an implication that its loss did not affect their livelihoods. Nonetheless, for some who had to give up land that was being used for growing crops, they resolved to accept their fate which entailed changing their professions from farmers to other alternatives. The problem was that compensation some former landowners received was not sufficient to buy new productive land they could use for farming. The main source of the problem was the surge in land prices which was attributable to speculation triggered plans to construct the toll road. The increase in money circulating in the surrounding communities from compensation also compounded the problem.

There is little doubt that the land acquisition process was plagued by rising land disputes. Land disputes related to land acquisition can by and large, attributable to two factors objection to land use change from agricultural land to non-agricultural land use (built environment, which in this case was the construction of the toll road project); and disagreement between land owners and government officials over compensation the latter proposed, which the for-

mer considered insufficient. In many cases, resolution of the disputes between the two parties was not possible, which led to litigation in the courts in areas affected by the toll road project. Evidence of this is abound in secondary data on land compensation in Ngawi, Boyolali, and Madiun Regencies.

Nonetheless, there were some landowners who were opposed to the very idea of converting agricultural land into non-agricultural uses. Djoko Wijono, was a land owner in Watualang Village, Ngawi District, Ngawi Regency. He filed a lawsuit in the State Administrative Court (Pengadilan Tata Usaha Negara – PTUN) in 2007. Djoko Wiyono's reason to file the case was that he was opposed to the government intention to construct a toll road on his land, a plan that was not disseminated to the local community. Even the mapping and measuring exercise of land that stretched between 84,000 and 85,000 kilometers (Watualang – Ngawi section of the toll road) that formed part of the designated land for the toll road project did not involve local landowners and other members of the local community. Consequently, some landowners suffer losses due to the fact that estimates of land surveyors was an underestimate of the actual land area, which implied potential losses in compensation

Toll road construction by its nature cannot occur with land acquisition. Indonesia, which is a country where land ownership in part takes the form of private holdings, disputes over land compensation are bound to occur. It is also important to note that the issue of land disputes is not limited to disagreement over compensation amount, but also attributable to sentimental issues such as culture, belief, and the other economic motivations. That said, land disputes that affected the construction of Solo-Kertosono toll road project, were by and large, as a result of lack of sufficient involvement of local community in the project design and implementation process. This lead to contesting perspectives over land that was to receive compensation, price of land that was deemed fair, and resistance of some individuals, which while was purportedly driven by sentimental reasons and being ignored in a project that affected both their livelihoods and welfare of the community.

This provided an in-depth assessment of the impact of not involving the public in toll road construction policy on project acceptability and perception of its long-term importance to the community. In infrastructure development, public engagement can enhance public trust, acceptance, and use of the infrastructure constructed (Osei – Kyei & Chan, 2016; Xu, Long, & Zhang, 2016). Generally speaking, by using the prism of citizen participation (Arnstein,1969), based on results of this study, it is very clear that any public participation that occurred during the construction of the Solo-Kertosono toll road was perfunctory, if not manipulative in nature. The evidence of this is discernible from the failure of those in charge of project preparation and construction to provide sufficient information about the potential damage the project would have on the environment.

Consequently, the public were indignant at the social and environment which preparations and construction phases of the project had on their landscape and livelihoods. Some of the indicators of public indignation was the decision by some landowners to desist even resist compensation that project administrators promised for their land, while others took the case to the courts as a result of frustration with the way they were treated. Doubtless, not all community members either agreed or disagreed with project preparations and construction, a problem that created divisions in what was once a community that was proud of its solidarity.

During project construction, issues that became the concerns of local community related to the potential for damage to the environment, local road networks, irrigation systems, and disruption of social connections and relations. It should be remembered that the issue of environmental damage was common to all community members, both that showed support and those that expressed opposition to it, for various reasons. To that end, effective and sustainable project implementation, should ensure that interests of stakeholders, both opposed and those that are supportive are taken into consideration and handled in the best way possible. Other-

wise, in the event that the project is plagued by any problem in future, it is not easy to rule out that those who were very beginning opposed to the project, will end up convincing those who provided staunch support for the project at the time its prospects seemed very good (Kerahroodi, 2016). Thus, as Yong (2010) argues, public awareness efforts should characterize the entire course of the project, to ensure project acceptability and sense of ownership, both of which are essential to cultivate the importance of the project to the community in both the short term and long term.

Indeed, some of the fears have been borne out by the impact of the toll road construction on social life of the community. The construction of the toll road has disrupted community interaction by closing shortcuts that used to means that people used to connect with their peers in neighboring villages and going to places of work. Local roads have not been spared as well. The solution to the problem which local community members thought would not take long to materialize-construction of underpasses and overpassed to ease the gridlock, are yet to be developed. Even then, completion of such alternatives will not relieve the immense sense of loss that local people feel for losing what to them was unimpeded and natural interaction and collectiveness. There is little doubt that if project initiators ad implementers sought advice of members of the local community about project design that would have minimized such social disruption, project development would have been not as detrimental to the local community as it has turned to be (Ng, Wong, & Wong, 2010). Meeting development goals must be achieved through development means that take into uphold observation and respect of social, economic, and cultural rights of citizens, including fair compensation for their property that is affected by the project (OECD, 2010).

The impact of project conception and implementation on the economy of the local community has been manifested in land use change, which by implication, has led to some people to change trades and occupations; land use conversation from agriculture to build environment also implies that projection construction contributed to the rise in the shift of land use from economic activities that direct support the growing of foldscopes and environment support services decrease to other uses (infrastructure, real estate, etc.). Absence of sufficient, timely and regular information about the project from the design to implementation meant that the local community, including those on whose land part of the project was to be constructed, were passive recipients of decisions made by others, even as such decisions had serious consequences for their livelihoods and the wellbeing of their communities. Well informed planning of outreach and communication with the local population, which was affected by the project would have avoided such problems including disputes, bitter feeling of being ignored, and a pawn in the pursuit of development at any cost (Osei-Kyei & Chan, 2015).

To that end, effective project development, should take serious the need for public engagement in all phases of the project, including setting project goals and objectives, strategy formulation, designing the organizational structure to spearhead the project, project implementation, monitoring and evaluation. There is no doubt that high public engagement in project development should lead to faster project execution, lower cost, and improved project quality, and higher public satisfaction with not only the project, but more importantly, the government that conceives and implements it (Müller & Turner (2007).

CONCLUSION

Public engagement is imperative for effective toll road management, in part due to the fact that construction of toll roads is not only a highly complex development project but also an endeavor that directs affects and is affected by the community. To that end, the degree to which infrastructure development projects involve public participation, influences either its success or failure. Study findings showed that lack of public engagement in all phases of the project development, adversely impacts public perception about its benefit to society, disrupt social cohesion, and foments public resistance.

Absence of sufficient information about project long term goals, implementation and projected impact on local communities, induced division in society into those who agreed with the project development entirely, others that were totally opposed to it, and those in between (those who in agreement with project development expressed concerns about the potential damage it would have on the environment). That said, it is absence of sufficient information about the results of environmental impact assessment that generated strong support for the project. In that case, therefore, lack of information concerning long term impact of the project on the environment and livelihoods, having played role in winning project support, means that it was deliberate hence tantamount to manipulation.

Results of this research can serve as inputs in future policies on designing and implementing quality, participatory, infrastructure projects that are acceptable and at developed at low cost thanks to the strong sense of belonging they elicit from local communities. The limitation of this research lies in the use of a single project, the outcomes of which cannot be generalized to other projects in other social, economic and cultural contexts. Future research that should widen the sample of projects and regions covered.

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