

Road Widening Projects in the Second Congressional District in the Province of Sorsogon

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Abstract — This study assess the effects of road widening projects in the second congressional district in the province of Sorsogon Fiscal Year 2019. It specifically sought answer on the effects of road widening projects and the level of satisfaction of the respondents. Likewise, it also determined the problems encountered and the strategies employed by the DPWH to enhance the implementation of the road widening projects. The respondents are chosen purposively from the residents in the second congressional district of Sorsogon residing along Maharlika Highway who are directly affected by the road widening projects, and DPWH personnel. The study used descriptive survey method of research utilizing questionnaire checklist as the main instrument in gathering the data supplemented with structured interview to DPWH personnel. Based on the analysis of the data gathered, the following conclusion can be drawn: the effect to the respondents of the implementation of road widening projects along the identified variables vary from less affected to moderately affected. Also, the respondents are less satisfied about right of way acquisition and local employment, however they are moderately satisfied on road improvement. There are problems encountered by the respondents in the implementation of the road widening projects. Strategies were employed by DPWH to enhance the implementation of road widening projects. The proposed action plan to improve the implementation of road widening projects can be adopted. The study recommends DPWH must constantly conduct consultation to the affected stakeholders prior to commencement of project in the community and must identified and resolved the road right of way problem prior to project implementation. Also, the DPWH may provide solution to address the problems encountered during implementation of road widening. Likewise, the DPWH may have to evaluate the strategies employed to ensure the effectiveness and keep them aligned with the policies and guidelines. Furthermore, the future researcher may concentrate on the effects of road widening or any projects on the environment.

Keywords — effects, level of satisfaction, road widening, strategies.

I. INTRODUCTION

Roads promote economic activity of nation. It is said that the most striking feature of the modern economy and way of life is dependent on highway transportation. People depends on roads for the movement of goods, access to services and travel to workplace. Road helps the rapid pace of global activity, promote mobility and accessibility. Road link up to the exit and entry of a country. In the Philippine and other developing countries, roads infrastructure is a vital service to uplift the socio economic status of the people. Road improvement such as road widening provide safe and reliable road facilities, save people time, and comport in travelling. Moreover, the socio-economic development of the nation depends on the initiatives of the leaders to provide necessary services to the people. One way of adhering to the mandate and responding to the needs of stakeholder is the formulation of plans and program that lead to enhance the economic activity of the people. One of the services of the government are the road infrastructure to give efficient, and effective means of transportation to uplift the quality of life of people. The Department of Public Works and Highways functions as the engineering and construction arm of the Government tasked to continuously develop its technology for the purpose of ensuring the safety of all infrastructure facilities and securing for all public works and highways the highest efficiency and quality in construction. This function is in line with the former President Marcos issued PD 701 in order to accelerate further the national economic development through effective highway administration and to alleviate poverty and ameliorate living conditions of Filipino by providing access to basic services. The government has launched several projects on construction as part of anti-poverty interventions and to generate jobs to alleviate the country from suffering low economic growth. The economic development concept of the government are made possible by implementing the BUILD BUILD BUILD (BBB) program. This program called “The Golden Age of Infrastructure” are consider the most ambitious infrastructure program in the history. This program of the government aims to create more jobs, connectivity and attracts investor to do business in the country. In line with President Rodrigo Duterte’s 10-point Socio-economic Agenda, he envisioned poverty to lessen from 21.6% in 2015 to 13%-15% by 2020. One of

the significant and priority reform that will drive this agenda is the acceleration of infrastructure projects. The government is set to embark on ambitious \$180 billion infrastructure spending bonanza, set to transform the Philippines' economy¹. The DPWH is one of the government agencies usher this BBB program. The DPWH strategic Infrastructure Programs and Policies include: reduced travel time, improve road quality and safety, increased road network capacity, meet international standard for road surface quality, mitigate flood damaged in major river basin and protect lives and property from natural disaster.

II. STATEMENT OF THE PROBLEM

The implementation of infrastructure projects of the DPWH encountered various problems which caused its delay and accidents. Based from the DPWH Stakeholders Relations Service- Stakeholders Affairs Division (SRS-SAD) Citizens Feedback Management Center, there were reported accidents in second district due to unfinished roadworks. The insufficient warning and informative sign and inferior quality were just some of the observed problems. The lack of involvement of residents and the delay of release of just compensation to those affected or claimed areas added to the difficulties in the proposed widening projects.

Research questions

This study assessed the road widening projects in the Second Congressional District of Sorsogon, Fiscal Year 2019.

Specifically, it answered the following questions:

1. How do the road widening projects affect the residents in terms of;
 - a. residence
 - b. livelihood
 - c. road safety
2. What is the level of satisfaction of the respondents on road widening projects in terms of;
 - a. right of way acquisition
 - b. local employment
 - c. road improvement
3. What are the problems encountered in the implementation of road widening projects?
4. What are the strategies employed by the DPWH to enhance the implementation of road widening projects?
5. What action plan could be proposed based from the result of the study?

III. OBJECTIVE OF THE STUDY

The objectives of the study is to assess the effects of road widening projects and to determine the level of satisfaction of respondents on the road widening projects. The specific objectives include:

1. To assess the effects of road widening projects along residence, livelihood and road safety.

2. To determine the level of satisfaction of the respondents in terms of right of way acquisition, local employment and road improvement
3. To find out if there are problems encountered in the implementation of road widening projects.
4. To know the strategies employed by the DPWH to enhance the implementation of road widening projects.
5. To proposed action plan based from the result of the study.

IV. METHODOLOGY

The descriptive method of research was used by the researcher because it describe and assess the road widening projects implemented. The respondents are chosen purposively from the residents in the second congressional district of Sorsogon residing along Maharlika Highway who are directly affected by the road widening projects, and DPWH personnel. The respondent were one hundred twenty (120) residents distributed as follows; Juban (44), Irosin (38), Bulan (7), Matnog (11) and the DPWH personnel (20). The researcher devised a checklist questionnaire and an interview guide as the research instrument and submitted to the panel for evaluations and suggestions. The suggestion of the panel were incorporated and a dry run was conducted. Prior to administration the questionnaire to the respondents and interview to DPWH personnel, a permission was requested from the authorities. Bearing the approved request, the questionnaire was distributed and retrieved personally by the researcher. The data gathered from respondents were tallied and readied for statistical analysis and procedure and interpretation. A weighted mean were used to determine the effects and level of satisfaction on road widening while frequency and rank were used to determine the problems encountered. A modified Likert scale was used to find out the effects and level of satisfaction on road widening projects. A weighted mean of 1.0 – 1.49 interpreted as not affected/not satisfied, 1.50 - 2.49 interpreted as less affected/satisfied, 2.50 – 3.49 interpreted as moderately affected/satisfied, 3.50 – 4.49 interpreted as very much affected/satisfied and weighted mean of 4.5 and above interpreted as very much affected/satisfied were used.

V. DATA ANALYSIS

The respondents were affected residence along Maharlika Highway filled out the questionnaire were 44 from Municipality of Juban and 38 from Municipality of Irosin which covers 37 and 32 % of the total respondents respectively. Seven are from municipality of Bulan that covers 6 % of the respondents, and 11 respondents from Municipality of Matnog and 16% from DPWH personnel comprise of 20 respondents interviewed.

Table 1a: Effects of the road widening projects on the residence of the respondents

Indicators	WM	Description
1. Loss of residential houses that encroached in the road –right of way.	3.18	Moderately Affected
2. Damaged utilities such as waterline and street lights.	3.23	Moderately Affected
3. Increase distances in traversing other side of the road.	3.61	Much Affected
4. Partial loss of dwelling parts like walls and fence.	2.91	Moderately Affected
5. Loss of roadside social venue for talk, smoke, drinks or watch the passersby.	3.64	Much Affected
6. Reduces the extent of flooding in roadside villages due to improved drains.	2.35	Less Affected
7. Provides a space for the local community activities such as parking and drying of farm products.	2.45	Less Affected
Overall weighted mean	3.05	Moderately Affected

The above table shows the effects of road widening projects in terms of residence. It can be gleaned from the table that that out of the seven indicators, loss of roadside social venue for talk, drinks or watch the passersby got the highest weighted mean describe as much affected. On the other hand, reduces the extent of flooding in roadside villages due to the improved drains was the lowest weighted mean described as less affected.

Table 1b: Effects of the road widening projects on the livelihood of the respondents

Indicators	WM	Description
1. Generates employment opportunities for local community.	2.41	Less Affected
2. Loss of productive land due to widened road.	3.06	Moderately Affected
3. Increases income due to opening of variety stores and additional customers.	2.32	Less Affected
4. Loss of business opportunities due to demolished store.	2.84	Moderately Affected
5. Loss of customers due to displaced business establishment.	2.60	Moderately Affected

6. Reduces cost of transport due to easy transport of goods and products	1.76	Less Affected
7. Increases the rental value due to road improvements.	1.59	Less Affected
Overall weighted mean	2.37	Less Affected

The above table shows the effects of road widening projects in terms of livelihood. The loss of productive land due to widened road got the highest weighted mean described as moderately affected, while the increase the rental value due to road improvement got the lowest calculated mean described as less affected.

Table 1c: Effects of the road widening projects on road safety

Indicators	WM	Description
1. Improves road safety risks due to increase traffic speed and flows due to widened road.	3.85	Much Affected
2. Improves road safety measures due to installation of safety signs and construction of pedestrian paths.	3.04	Moderately Affected
3. Reduces accident because of additional safety devices, traffic signs and road information signs.	2.79	Moderately Affected
4. Eliminates road blind spots due to widened road.	3.44	Moderately Affected
5. Decreases unnecessary signages that encroached the road way.	3.36	Moderately Affected
6. Eliminates distraction in the view of the motorists.	3.37	Moderately Affected
7. Creates uncertainty in traffic flow to the drivers due to changes in traffic pattern.	3.76	Much Affected
Overall weighted mean	3.37	Moderately Affected

The above table shows the effects of road widening projects in terms of road safety. It can be gleaned from the table that improves road safety risk due to increase traffic speed and flows due to widened road got the highest weighted mean described as much affected. On the other hand, reduces accidents because of additional safety devices, traffics signs and road information signs got the lowest weighted mean.

Table 2a: Level of satisfaction of the respondents on the road widening projects in terms of right of way acquisition

Indicators	WM	Description
1. Conducts public consultation with the affected stakeholders	2.72	Moderately Satisfied
2. Gives compensation to the affected residents for loss of properties during construction.	1.98	Less Satisfied
3. Explains clearly the process of right-of-way acquisition	2.70	Moderately Satisfied
4. Identify the obstruction and prohibited uses within the right of way of national roads	2.92	Moderately Satisfied
5. Provide documents, information and guidelines on removal of obstruction and illegal structure within right-of-way of national roads	1.78	Less Satisfied
Overall Weighted Mean	2.42	Less Satisfied

The above table shows the level of satisfaction of respondents on the road widening projects in terms of right of way acquisition. It shows that out of five indicators, identify the obstruction and prohibited uses within right of way of national roads got the highest computed weighted mean which interpreted as moderately satisfied while provide documents, information and guidelines on removal of obstruction and illegal structure within right of way of national road got the lowest weighted mean interpreted as less satisfied.

Table 2b: Level of satisfaction of the respondents on the road widening projects in terms of local employment

Indicators	WM	Description
1. Hires skilled construction personnel in the community during construction.	2.10	Less Satisfied
2. Provides temporary employment by hiring of local laborer in the area	2.16	Less Satisfied
3. Gives additional incomes to the residence by leasing of office spaces, stockpile area, or temporary facilities.	1.76	Less Satisfied
4. Provides additional income to the community through operations of variety store, food stall and other stores during construction	1.97	Less Satisfied

5. Generates employment opportunities for drivers, mechanics and technicians.	1.49	Not Satisfied
Overall Weighted Mean	1.90	Less Satisfied

The above table shows the level of satisfaction of the respondents on the road widening project in terms of local employment. It is gleaned from the table that provides temporary employment by hiring local laborer in the area got the highest weighted mean interpreted as less satisfied, and the computed lowest weighted for generates employment opportunities for drivers, mechanics and technicians got the lowest.

Table 2c: Level of satisfaction of the respondents on the road widening projects in terms of road improvement

Indicators	WM	Description
1. Provides reliable travel services leading to greater mobility of people and goods and better access to social services.	3.85	Much Satisfied
2. Improves the tourism due to access to markets and other business industries in the area.	3.11	Moderately Satisfied
3. Reduces the travel time because of the project.	3.89	Much Satisfied
4. Minimizes the road accidents.	1.99	Less Satisfied
5. Improves the convenience in travels.	4.00	Much Satisfied
Overall Weighted Mean	3.37	Moderately Satisfied

The table above shows the level of satisfaction of the respondents on the road widening project in terms of road improvement. It reveals that improves the convenience in travels got the highest weighted mean interpreted as much satisfied. On the other hand, minimize the road accidents got the lowest calculated mean interpreted as less satisfied

Table 3: Problems encountered by the respondents in the implementation of the road widening projects

Problems	f	Rank
Unpaid loss of properties during right of way acquisition.	63	3
Traffic congestion during construction	45	5
Dust and noise during construction	92	1
Inadequate safety devices, signage and barriers during construction.	48	4

Improper disposal of debris and spoiled materials.	27	7
Poor community consultation for the implemented projects.	70	2
Delayed project completion.	21	8.5
Low quality of widened road.	21	8.5
Non-compliance to occupational safety and health standard.	34	6
Accidents happen during construction.	10	10

Based from Table 3, it shows that dust and noise obtained the highest frequency of 92 and rank 1st, poor community consultation has a frequency 70 and ranked second, and the unpaid loss of properties with frequency of 63 ranked third were the top most problems encountered by the respondents in the road widening projects.

VI. INTERPRETATION OF RESULTS

Effects of Road Widening Projects

Table 1a to 3a presents how the residents were affected by the road widening projects in terms of residence, livelihood, and road safety. Weighted mean was used to analyze the data. **Table 1a** revealed that the overall computed weighted mean is 3.05 which describe as moderately affected. This means that the road widening has an average effect to the residence. This implies that road improvements often bring economic and social benefits, but they are also have negative effects on people and in community. For all positive aspects of road projects, they may also have significant negative impacts on nearby communities and the natural environment (Tsunokawa and Hoban, 1997). It revealed that **Table 1b** shows the effects of road widening projects in terms of livelihood. It indicates that road widening has no significant effects on livelihood with the computed overall weighted mean of 2.37 interpreted as less affected. This implies that road widening did not change the respondents source of income. This means that after the respondents have same source of income or same numbers of customers as before. This findings is in contrast with the findings of (Ajayi et.al.2013) revealed that the informal sector especially traders in building materials were adversely affected by the road expansion projects in terms of loss of customers, reduction in profit and unpalatable temporary structures for once booming business premises and poor compensation for displacement among others. It can be gleaned from **Table 1c** the effects of road widening projects in terms of road safety. It shows that the overall computed weighted mean is 3.37 which interpreted as moderately affected. This could mean that the respondent are not much aware of the road safety measures implemented in road widening projects. It

clearly shows that road safety measures are not well appreciated by the road users.

Level of Satisfaction of the respondents on the road widening projects.

Table 2a to 2c illustrates the level of satisfaction of the respondents on the road widening project in terms of right of way acquisition, local employment, and road improvement. To analyze the data, weighted mean was used.

Table 2a reveals the level of satisfaction of the respondents on the road widening project in terms of right of way acquisition. It shows that shows that the respondents are less satisfied on the right of way acquisition with the computed over all weighted mean of 2.42. It indicates that DPWH do not have clear process of right-of-way-acquisition and poor public consultation conducted. It implies that the DPWH should strictly follow the road right of way acquisition procedure in every project being implemented. This was supported by (Cabahug et.al 2018) observed that right of way acquisition rank first to influence the delay of road construction in the Northern Mindanao Philippines. **In table 2b** reveals the level of satisfaction of the respondents on the road widening project in terms of local employment. It shows that the overall computed weighted mean of 1.90 interpreted as less satisfied. This could mean that although local laborer is hired they are only limited slots. It implies that less local worker is hired during road widening. Hence, road widening did not successfully generate more local employment. This was supported by (Sadain, 2019) issued memorandum to comply with the law in hiring local worker where the projects is implemented. **Table 2c** reveals the level of satisfaction of the respondents on the road widening project in terms of road improvement. It shows that the respondent is moderately satisfied with road improvement with the computed overall mean of 3.37. This implies that the respondents are not much aware of benefits of road improvement. (Fajardo 1997) identified the non-quantifiable non-market value cost benefits to highway user of highway construction such as motorist safety, comport and conversion, and aesthetics.

Problems encountered by the respondents in the implementation of the road widening projects.

Table 3 reveals the problems encountered by the respondents on the implementation of the road widening project. Frequency and rank were used to analyze the data.

Dust and noise rank first as the problems encountered because these are inevitable during construction. It

implies that dust and noise has adverse impact to the respondents. This was supported by (Celik and Budayan ,2016) identified that loss of peace and quietude of the neighborhood, cleanliness of the house, and degradation of ambient conditions are the most disturbing nuisances. Poor community consultation ranked second. This is because the respondents are not properly informed of the projects implemented in their community. Some of them are just inform during the start of construction. This implies that information are not promptly disseminate in the community regarding the road widening projects. This problem concur to (Encelan 2016) that the residents are moderately aware about the programs and projects on infrastructure and recommends information dissemination through barangay forms be conducted to inform the people of the infrastructure projects. The third rank problems are the unpaid loss of properties.

Strategies employed by the DPWH to enhance the implementation of the road widening projects.

This study also reveals the strategies employed by DPWH to enhance the implementation of the road widenings projects. Based on the interview with the DPWH personnel, there are several strategies utilized by the DPWH to enhance the implementation of road widening projects. These strategies divided in three stages; preconstruction stage, construction stage and completion stage.

Proposed action plan to enhance the implementation of road widening projects in the Second Congressional District in the Province of Sorsogon.

An action plan could be proposed based on the result of the study.

VII. CONCLUSIONS

- Based on the study, the following conclusions were drawn:
- The effect to the respondents of the implementation of road widening projects of DPWH in the Sorsogon second congressional district along three variables vary from less affected to moderately affected.
- The respondents are less satisfied about right of way acquisition and local employment, however they are moderately satisfied on road improvement.
- There are problems encountered by the respondents in the implementation of the road widening projects.
- Strategies were employed by DPWH to enhance the implementation of road widening projects.
- The proposed action plan to improve the implementation of road widening projects can be adopted.

VIII. RECOMMENDATIONS

- Based from the conclusion drawn, the following are hereby recommended:
- The DPWH may constantly conduct consultation to the affected stakeholders prior to commencement of project in the community.
- The DPWH may identify and resolved the road right of way problem prior to project implementation.
- The DPWH may provide solution to address the problems encountered during implementation of road widening.
- The DPWH may have to evaluate the strategies employed to ensure the effectiveness and keep them aligned with the policies and guidelines.
- Future researcher may concentrate on the effects of road widening or any projects on the environment
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