

Household Experiences of Displacement Due to Selected Road Expansion Projects in Iloilo City, Philippines

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ABSTRACT

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The research investigated the experience of displacement among certain road improvement projects in Iloilo City, Philippines through their perceptions about the economic, social, and health implications, and government support provided. Although there is general agreement that infrastructure building is an important contributor to economic prosperity, mobility, and urbanization, little attention has been paid to the effects of such constructions at the local level, especially issues of displacement and relocation in the case of Philippines. A descriptive survey design was used where the sample consists of 306 displaced households randomly chosen from a list verified by the concerned local government units. The data collection instrument was a researcher-created questionnaire which assessed the changes in the respondents' condition among economically, socially, and in terms of health. Descriptive statistical analysis such as weighted mean and percentage difference was utilized to interpret the results. The findings indicate that respondents perceived declines in their economic conditions following relocation, particularly in terms of income sources, employment opportunities, savings, and occupational stability. In the social dimension, respondents reported disruptions in social relationships, community cohesion, and perceptions of peace and order. Regarding health and well-being, respondents expressed concerns about increased exposure to environmental stressors, such as noise and pollution, as well as reduced life satisfaction and psychosocial well-being. The findings further suggest that government resettlement assistance was primarily directed toward the provision of alternative housing, while livelihood restoration, financial compensation, and skills development were perceived as receiving comparatively less emphasis. These results imply that the resettlement approach was more focused on physical relocation than on broader socio-economic rehabilitation. Based on the results discussed above, it can be concluded that road expansion initiatives are associated both with positive effects (urbanization, improved transport links), as well as negative consequences such as livelihood disruptions and related health stresses experienced by relocated families. Therefore, there is an urgent need to devise better resettlement strategies focusing on a wide range of factors rather than purely housing issues. Improving participatory planning in combination with subsequent support of relocated communities can go a long way in ensuring that infrastructure development does not just help achieve purely economic goals.

1. INTRODUCTION

The expansion of transport infrastructure, particularly roads, is widely recognized as a key driver of economic development and spatial cohesion by improving mobility and reducing travel time and logistics costs. Such improvements enhance productivity and strengthen regional market integration by facilitating the efficient movement of goods and services [1]. Transportation infrastructure lowers travel time and logistics costs, enhances productivity, and strengthens regional market integration through improved accessibility and spatial economic linkages [2].

The road network within an urban area influences the way land is used, as well as the long-term spatial development and sustainability of the environment [3]. At a global level,

infrastructure investment is recognized as essential for achieving sustainable development, particularly through Sustainable Development Goal (SDG) 9, which seeks to "build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation," and SDG 11, which aims to "make cities and human settlements inclusive, safe, resilient and sustainable" [4]. Modernization of infrastructure continues to be a key strategic emphasis in the Philippines, especially under the Philippine Development Plan (PDP) 2017–2022 through the development of transport infrastructure to reduce regional disparities, improve access to economic opportunities, and enhance access to public services [5]. Initiatives aimed at enhancing the transportation and infrastructure of roads around the country included "Build, Build, Build" programs that were executed as a national

agency. There were a number of benefits associated with each of these programs such as service and connections between communities due to expanded access to roads for residents/commuters through modernization.

In Western Visayas, particularly in Iloilo City, road widening and transport connectivity projects have intensified in response to rapid urbanization, economic growth, and increasing mobility demands. Infrastructure developments in Iloilo, including road widening and upgrading works, have been implemented to improve connectivity between urban districts, transport terminals, commercial centers, and neighboring municipalities [6, 7]. Studies on urban mobility in Iloilo City indicate that transport infrastructure development, including road improvements and active mobility systems, significantly influences travel behavior and urban accessibility [8]. Furthermore, official economic reports indicate that Western Visayas, including Iloilo City, continues to experience economic expansion, reflected in increasing gross regional domestic product and sustained growth in key sectors [9].

Households that have been displaced from their homes in an urban setting tend to rely heavily on their livelihoods based on location, neighborhood-based support systems, and proximity to employment and public services. Therefore, relocation due to road expansion projects may significantly affect their daily living conditions and overall well-being [10]. Various forms of assistance from government agencies commonly include financial compensation for loss of property, relocation assistance, livelihood support, and access to social welfare services [11]. However, little has been done to investigate the local context of Iloilo City to determine how effective these forms of assistance are perceived to be. It is generally expected that road expansion projects will generate economic and mobility benefits; however, they may also result in significant social consequences associated with infrastructure development [10, 11]. International evidence shows that involuntary displacement associated with infrastructure projects can lead to livelihood disruption, social dislocation, and increased vulnerability, particularly among low-income and location-dependent households when resettlement measures are inadequate [10, 11]. In many urban areas, affected households depend on proximity to employment, informal businesses, and established social networks; thus, displacement creates both social and economic challenges.

In Iloilo City, road expansions have impacted numerous households along proposed widening corridors and transport improvement zones. While many infrastructure projects are generally assessed in terms of their engineering success, traffic efficiency, and economic productivity, there is little consideration of the actual experience of displaced households; this includes their social adjustment, livelihood recovery and access to government support after the loss of their homes due to displacement. The majority of research to date has historically focused on macro level outcomes associated with infrastructure development, while limited empirical research has been conducted regarding how displaced households have experienced the relocation and reintegration process within the local context (Iloilo City).

Most research on Iloilo City's growing infrastructure focuses on the engineering side, transportation efficiency, and macroeconomic outcomes. There has been little empirical study on the perceptions and impacts on households due to road expansion projects, who, if any, received tangible benefits and/or assistance from government through

displacement. This is an important gap as contemporary development frameworks recognize that the assessment of infrastructure development should be based not only on its completion and economic performance, but also on the social/human aspects of that development. Goals 9 and 11 of the SDGs recognize the need for infrastructure systems that are inclusive, resilient and sustainable; and to balance the economic growth created by such systems with social and community benefits [4].

This research is about people whose homes have been affected by certain road expansion projects in Iloilo City (Philippines). In doing so, it will focus on the economic, social, and health conditions of affected people before and after their homes were destroyed due to these road expansion projects, and the assistance that was received by affected households from the government (and other sources). The goal of this research is to provide a more socially-based and community-oriented perspective on how infrastructure development and displacement occur in Iloilo City through the experiences and perceptions of affected households in a well-defined geographical area.

2. REVIEW OF RELATED LITERATURE

The development of infrastructure, particularly in the transport sector, has received significant scholarly attention due to its implications for sustainable development and environmental planning. Contemporary literature emphasizes that road expansion projects are not merely economic interventions but also spatial and environmental transformations that influence land use patterns, ecosystems, and human settlements. Therefore, there is growing recognition of the need for integrated infrastructure planning that balances economic efficiency, environmental sustainability, and social equity [12, 13]. This knowledge is also consistent with findings from around the world showing that investments in infrastructure have both positive and negative impacts on the environment. Research has shown that transportation systems improve mobility [3] and allows for the development of new areas, but also change how people live by making it easier or harder to move to a new location. These changes will be felt differently among different populations [14].

The Environmental Impact Assessment (EIA) is widely regarded as an essential tool in planning and policymaking for sustainable infrastructure development. It functions as a structured and forward-looking process that enables planners, decision-makers, and stakeholders to anticipate and evaluate potential environmental effects of proposed projects before implementation [15]. International environmental assessment literature further emphasizes that EIA serves as a preventive decision-support instrument that integrates environmental considerations into the early stages of development planning, rather than addressing impacts after project implementation [16, 17]. In this way, EIA ensures that environmental concerns such as air and noise pollution, biodiversity loss, ecosystem disruption, and land-use changes are systematically incorporated into planning and approval processes. Through structured evaluation, EIA promotes environmentally sound decision-making by encouraging mitigation measures, evaluating alternative project designs, and supporting sustainable development objectives [13, 17].

Nevertheless, EIA implementation has been found to be

insufficiently executed by real-world studies. Glasson et al. [15] discovered that there was inadequate and late-stage stakeholder participation, which restricted the extent of community involvement in the decision-making processes affecting project-related environmental assessments, the value of public consultation and ultimately the overall effectiveness of the environmental assessment process. This issue has been noted in a broader body of literature on governance, which demonstrates the fact that participatory planning has not been consistently implemented within developing nations [16]. In the case of the Philippines, there has also been a lack of implementation of public infrastructure governance in terms of project execution and project follow-up execution [18].

A continuing challenge is that EIA recommendations are enforced weakly. While mitigative actions are identified during the environmental planning processes, many times those actions are poorly implemented for institutional reasons, political reasons and due to regulatory deficiencies. This creates a discrepancy between the environmental outcomes of projects as planned and as implemented; therefore, there is a gap between the objectives of the environmental planning process and the final implementation of the projects. EIA generally puts biophysical impacts at the forefront of its assessments but often downplays the impacts of project-related activities on social systems like losing one's home, job, or sense of connection with other community members. Therefore, EIA primarily focuses on environmental dimensions, while social impacts such as displacement, livelihood loss, and community disruption are more appropriately addressed through complementary tools such as Social Impact Assessment (SIA). This distinction highlights the importance of integrating both environmental and social assessment frameworks in infrastructure planning.

The Impoverishment Risks and Reconstruction (IRR) model identifies key risks associated with forced displacement, including landlessness, joblessness, homelessness, marginalization, and food insecurity [10]. These risks indicate that displacement is not merely physical relocation but a multidimensional process affecting livelihoods and social structures. Cernea and McDowell [10]'s IRR framework emphasizes that without adequate resettlement planning, displaced populations may experience long-term impoverishment and vulnerability [10]. Environmental assessment systems tend to emphasize biophysical impacts while often underrepresenting social dimensions of displacement. These gaps are well acknowledged within the literature on environmental governance with calls for better integration of SIA frameworks [10, 13]. The IRR framework [10] is one of the most influential models for analyzing the phenomenon of displacement. This model outlines various key risks associated with displacement (e.g., landlessness, joblessness, homelessness, or marginalization, food insecurity, and the loss of social networks); thus, illustrating that displacement should not be considered just an act of physical relocation but rather as a complex multifaceted socio-economic process that can lead to heightened levels of vulnerability if not properly managed.

The literature on involuntary displacement is closely linked to infrastructure development and environmental assessment studies. The IRR model provides a widely accepted framework for understanding displacement risks and emphasizes that inadequate resettlement planning can result in long-term impoverishment [10]. Studies confirm that displaced populations often experience loss of income, weakened social

networks, and difficulty adapting to new environments. Without adequate safeguards, displacement may deepen poverty cycles and increase vulnerability [10, 13].

In relation to this, international resettlement studies and policy frameworks indicate that infrastructure-induced displacement may result in long-term socioeconomic instability, impoverishment, and livelihood disruption when resettlement planning, compensation, and rehabilitation measures are inadequately implemented [10, 19]. These studies emphasize that displacement is not merely a physical relocation process but a complex socio-economic transformation that disrupts livelihoods, social networks, and community stability. Empirical evidence from development-induced displacement research further demonstrates that inadequate resettlement planning can result in impoverishment risks such as landlessness, joblessness, homelessness, marginalization, and social disarticulation, particularly among vulnerable populations [10, 13]. In addition, international safeguard frameworks stress that effective resettlement planning must include livelihood restoration, social protection, and compensation mechanisms to minimize adverse impacts on affected households [11, 13].

According to the Asian Development Bank, infrastructure development within Asia is associated with broader regional development trends, including improvements in connectivity and economic performance as reflected in development indicators [12]. In the Philippines, infrastructure programs such as Build, Build, Build, and Build Better More have contributed to improved mobility, logistics efficiency, and regional connectivity [9, 12]. In a similar vein, Banister and Berechman [3] argued that transport infrastructure investment should be evaluated not only upon improvements in mobility or economic efficiency, but also upon their broader distributional impacts (including social equity) and environmental effects. Evidence from the most recent public documents that outline the country's infrastructure policies indicates that Build, Build, Build and Build Better More have played a large role in fostering the economic growth of the Philippines by providing jobs and improving connections between regions within the country. Data provided by government and foreign agencies regarding the effectiveness of infrastructure investments show that investing in infrastructure supports the overall development of the nation by enhancing mobility and logistics performance, as well as promoting regional integration in the Philippines [9, 12]. However, there is evidence in safeguard literature that although infrastructure programs generate significant economic benefits, inadequate resettlement planning and weak safeguard implementation can result in adverse social impacts, particularly when displacement occurs [11, 13]. Development-induced displacement literature indicates that expanded infrastructure projects can exert pressure on communities to relocate, disrupt livelihoods, and create social adjustment challenges associated with rapid urban development [10, 11]. This suggests that there is still a considerable gap between the benefits of infrastructure-led economic growth and inclusive social protection outcomes.

At the local level, there are examples from cases in Iloilo and other urban development literature – and thus there is evidence – that infrastructure expansion creates both economic growth (development) and social (e.g. resettlement) costs. Recently, Iloilo City has experienced rapid growth of its infrastructure; as a result (of the additional infrastructure), there has been an improvement in connectivity, mobility, and

urban economic activity [20]. However, empirical research on infrastructure-related resettlement has shown that the development associated with the infrastructure also creates disparities in the distribution of housing quality, access to services, and the ability of displaced households to recover their livelihoods [21]. In addition, analyses of infrastructure-related and climate-change-related resettlement in Iloilo City suggest that relocation processes may generate new vulnerabilities when compensation mechanisms and reintegration support are unevenly implemented, leading to differentiated recovery outcomes among affected households [22, 23].

In recent research, Iloilo has been emphasized as one of the key locations for urban transformation in the Philippines that is based on infrastructure improvements. This includes evidence that from sustained political and institutional arrangements, there have been continual infrastructure improvements, especially related to urban service delivery and economic development [20]. However, these improvements also present challenges regarding equity, governance, and inclusive urban planning, particularly with regard to the equitable distribution of infrastructure benefits among social groups. When researching resettlement and urban vulnerability in Iloilo, empirical evidence indicates that individual households may experience improvements in housing and lower levels of exposure to environmental risk through relocation programs, while creating new forms of exclusion and inequity through loss of opportunities for livelihood recovery and accessing services [21, 22].

2.1 Synthesis of literature

According to the literature, transport infrastructure development is critical to economic growth, mobility and regional integration but also provides the basis for brevity and social consequences, such as land-use change, ecosystem disruption, and population displacement [3, 12, 13]. Although EIAs are widely used to manage the impact of transport infrastructure development on the environment, studies indicate that EIA effectiveness is often constrained by poor stakeholder participation, ineffective implementation and integration into project planning too late [15, 16].

Further evidence shows that EIAs tend to focus on the environmental impacts generated by production projects at the expense of fully considering the social impacts, particularly those associated with displacement and disruption to livelihoods. The IRR model [10] describes the multiple impoverishment risks associated with displacement including joblessness, landlessness and social disarticulation. Specifically, recent examples of transport infrastructure projects in both the global and Philippine contexts illustrate that although they can create significant development gains, they have also been shown to lead to a range of unequal resettlement outcomes and long-term socio-economic vulnerability, where effective safeguards did not exist [13].

Several studies conducted at the local level in Iloilo corroborate both sides of the dual effect produced by the impact of infrastructure developments on increased connectivity and increased levels of economic activity; however, these studies on the negative side of infrastructure developments also point out the problems caused by the housing, inequality, and livelihoods of those displaced due to developments. Overall, it is concluded from the literature that more integrated planning is needed to enhance the

environmental safeguards and social protection of people through the development of infrastructure.

Despite extensive global, national, and local literature, several gaps remain. First, most studies focus on macro-level outcomes such as infrastructure efficiency, economic growth, and policy implementation, with limited attention to household-level lived experiences of displacement. Second, Philippine and Iloilo-based studies remain fragmented and largely administrative in nature, lacking integrated empirical assessments of economic, social, and health impacts at the community level. Third, limited research simultaneously examines economic, social, health, and perceived government assistance experiences of displaced households within a unified analytical framework. Therefore, there is a clear gap in understanding the localized and multidimensional lived experiences of households affected by road expansion projects in Iloilo City. This study addresses this gap by providing a community-level empirical analysis of infrastructure-induced displacement impacts.

3. METHODOLOGY

The purpose of this research was to study and analyze people's views on how proposed changes made to a roadway have impacted local households in terms of their experiences with their social, economic, health, and government services. A descriptive survey design was the right choice for collecting and analyzing the data needed because it allows for describing people's views and experiences without altering or controlling the independent variables. Descriptive surveys also provide good baseline empirical information about different populations, and these types of surveys are very valuable to researchers working on social and community issues [24, 25].

Descriptive surveys are useful for gathering information about respondents' characteristics, experiences, perceptions, and attitudes, allowing researchers to describe conditions within a target population systematically [26].

The study was conducted in selected barangays in Iloilo City that were directly affected by government-implemented road widening and expansion projects. Data collection was carried out over a ten-month period from June 2018 to March 2019 to allow sufficient time for coordination with community stakeholders, securing necessary permissions, scheduling of respondents, and completion of surveys in the selected communities.

The target population consisted of households directly affected by the road expansion project, including those who experienced full displacement, relocation, structural demolition, or changes in access to livelihood and basic services. The household head or an adult representative served as the respondent, provided that they met the inclusion criteria of being directly affected, residing in the area, and voluntarily agreeing to participate in the study. The sampling frame was constructed using official lists of affected households obtained from barangay offices and validated through coordination with Local Government Unit (LGU) records and community verification. This list was further cross-checked with barangay officials to ensure completeness and accuracy. From the validated sampling frame, each eligible household was assigned a unique identification number. Simple random sampling was then applied using a computerized random number generator, ensuring that every household had an equal chance of being selected. This procedure minimized selection

bias and ensured representativeness of the sample [27].

The researcher initially identified 330 households that were eligible for the study. Out of these, 306 participated in the study. Thus, the response rate was 92.73%. The reasons for non-participation were due to being temporarily out of the area or for refusing to participate. To maintain the randomness of the original sampling method, no additional samples were drawn to replace the non-participating households. The final sample size was considered sufficient to perform descriptive statistical analysis and to adequately describe the experiences of the households impacted by the displacement.

The primary data collection method utilized a researcher-designed questionnaire based on the literature and prior research regarding the displacement of infrastructure, the assessment of social impacts of this type of displacement, and the design of government welfare programs. The questionnaire was composed of three sections: demographic information, perceived impact of the displacement, and government assistance received. Likert scales are a common measurement approach in social science research that are appropriate for the quantification of perceptions and attitudes because they have well-established validity and reliability and are relatively easy for researchers to use [28]. The key variables were organized into a structured manner and rated on a 5-point Likert scale in order to assess people's perceived conditions and condition changes prior to and following implementation of the project. Economic indicators were measured using a series of indicators (self-employment, income, savings) and all other economic indicators related to (occupation/employment/cost of living/compensation/community related) economic issues. Social indicators were measured by looking at: 1) social relationships (peace/order/social relations/safety), 2) family and neighborhood relationships (infrastructure access/social conflict/crime/gambling/cultural preservation), 3) health (life satisfaction/peace of mind/compassion/noise created health outcomes/pollution effects/blasting/cocaine effects), 4) government assistance (for relocation, replacement of materials that were lost, financial support and training provided for livelihoods/skills).

Content validity was established through a review by experts [29], which is a common method of verifying measurement relevance and clarity when developing a survey instrument. A pilot test was also conducted with 30 respondents from a nearby barangay who had characteristics similar to the study population but were not part of the final sample. Pilot testing is recommended to identify ambiguous or problematic survey items and to improve the validity and reliability of questionnaires before full-scale data collection [30]. Reliability of the instrument was determined using Cronbach's alpha, which produced an overall reliability coefficient of 0.85, demonstrating that the instrument has good internal consistency. According to Bonett and Wright [31], Cronbach's alpha continues to be the most frequently cited measure of scale reliability in behavioral or social science research.

Before the conduct of the study, approval and permission were secured from the relevant local government and barangay authorities. The study adhered to established ethical standards for social research by ensuring informed consent, voluntary participation, confidentiality, anonymity, and the participants' right to discontinue their involvement at any stage of the research process [32]. The information collected contained no personal identifiers, and the data collected were coded numerically to maintain anonymity. The data were analyzed

using descriptive statistical methods such as frequency counts, percentages, weighted means, and ranking.

Descriptive statistical tools are the best way to summarize survey responses and to identify patterns in population-level responses without testing causal relationships between variables [33]. Since this study is purely descriptive, there were no inferential statistics or hypothesis testing performed. Lastly, although sample size was based on population coverage and random sampling methods to include enough participants for analyses, the researchers did not perform any type of power analysis (e.g., G*Power) prior to conducting the study since their intent was not to test a hypothesis or use inferential statistical methods in this research but only to describe certain characteristics of the population [34].

4. RESULTS AND DISCUSSION

This section discusses the results of the study conducted through interviews with affected families living in the vicinity of road construction projects in Iloilo province. The results of this study are presented in four parts and will be used as a basis to address any questions related to the reliability of the study. These four parts include: (1) characteristics of the respondents; (2) indicators used to collect survey data; (3) descriptive statistical values by mean before and after their relocation or displacement; and (4) calculated rates of change for residents based upon what they believed to have experienced before and after the completion of the road work. All data in this study must not be regarded as causally produced effects, but instead, they must only be understood as self-described perceptions that are reported by affected families.

This study gathers information through a standard survey tool that measures perceived condition before and after removal in three areas: economic, social and health. The study results are based on self-reported Likert-type responses and must be understood to reflect perceived condition changes and not objectively verified longitudinal or experimental outcomes.

4.1 General information of the affected households

Table 1 presents the demographic profile of respondents. The analysis shows that the majority were female (64.1%), married (69.0%), and within the 20–60 age range. Most respondents reported secondary education (51.0%), and the majority of households consisted of adult members aged 15–60 years (58.2%).

In terms of housing characteristics, most respondents lived in concrete structures (93.1%) and owned their homes (98.0%). Regarding livelihood, respondents were mainly self-employed (40.2%), with monthly incomes commonly ranging between ₱6,000–₱10,000 (46.4%) and monthly expenses mostly below ₱5,000 (55.6%).

4.2 Analysis of impact of road expansion project

Road expansion projects are commonly associated with improvements in transportation efficiency, regional accessibility, and economic activity. However, infrastructure development may also generate social, economic, and health consequences for communities directly affected by displacement and relocation.

EIA frameworks emphasize that infrastructure projects

should be evaluated not only according to physical outputs and economic gains, but also according to their implications for social well-being, environmental sustainability, and community resilience [35, 36].

The findings presented in this study are based solely on the self-reported perceptions of affected households residing in selected road expansion areas in Iloilo City. The study does not claim direct causal relationships between road expansion and long-term socio-economic outcomes. Instead, the results reflect respondents' perceived changes in conditions before and after displacement or relocation associated with the project.

Table 1. General information of the affected households

Variables	Frequency	Percentage
<i>Gender</i>		
Male	110	35.9
Female	196	64.1
<i>Age</i>		
20–40 years old	136	44.4
41–60 years old	129	42.2
61 years and above	41	13.4
<i>Marital Status</i>		
Single	61	19.9
Married	211	69.0
Widowed/Divorce	34	11.1
<i>Educational Attainment</i>		
Unschooler	3	1.0
Primary	9	2.9
Secondary	156	51.0
Certificate/Diploma	38	12.4
Bachelor's Degree	100	32.7
<i>Family Members</i>		
Children (0–14 years old)	92	30.1
Adults (15–60 years old)	178	58.2
Seniors (60 years old)	36	11.8
<i>Housing Structure</i>		
Concrete	285	93.1
Light	18	5.9
Wood	3	1.0
<i>Residential Land Use</i>		
Owned	300	98.0
Rented	6	2.0
<i>Source of Income</i>		
Self employed	123	40.2
Employed in government organization	22	7.2
Employed in private business	75	24.5
Daily labor	50	16.3
Others	36	11.8
<i>Type of Disposed Materials</i>		
Residential	299	97.7
Commercial	7	2.3
<i>Estimated Monthly Income</i>		
Below 5,000	115	37.6
6,000–10,000	142	46.4
11,000–20,000	29	9.5
≥ 21,000	20	6.5
<i>Estimated Monthly Expenses</i>		
Below 5,000	170	55.6
6,000–10,000	114	37.3
11,000–20,000	18	5.9
≥ 21,000	4	1.3

4.3 Survey indicators and basis for interpretation

Table 2 presents the survey indicators used to assess the economic, social, and health impacts of relocation. The

structured surveys covering three dimensions (economic, social and health) were used in the current study to increase empirical transparency. Mean scores and percentage changes were calculated based on the perceptions of respondents' perception before and after relocation. Negative percentages represent perceived declines after relocation.

Some of the most frequent examples of indicators used to represent the effects of relocation on individuals included the following: Employment Opportunities; Income; Savings; Relationships with Others; Feeling Safe; Peace of Mind; Environmental Health Concerns; and Access to Healthy Community Resources and Activities.

Table 2. Survey indicators used in assessing the impacts

Dimension	Indicators/Survey Items
Economic Impact	self-employment opportunities, income, savings, employment status, occupational stability, compensation
	satisfaction, cost of living
Social Impact	peace and order, safety of life and property, social relationships, mutual respect, family happiness, neighborhood relationships, congestion, crime, gambling, preservation of culture
	life satisfaction, peace of mind, mutual compassion, environmental pollution, noise-related health effects, headaches from blasting activities, substance abuse concerns
Health Impact	

4.4 Economic impact

The findings in Table 3 indicate perceived declines in several economic conditions among affected households after displacement and relocation. Respondents reported decreases in self-employment opportunities, income, savings, occupational stability, and employment opportunities. The largest perceived declines were observed in self-employment opportunities (-18.79%), followed by income (-14.04%), and savings (-13.37%), while lower declines were observed in employment stability and occupational status.

Table 3. Economic impact indicators before and after the road expansion project

Economic Impact	Mean		Rate of Change
	Before	After	
Positive Impact			
Chance of better self-employment	3.30	2.68	-18.79%
Increase in income	3.42	2.94	-14.04%
Savings	3.29	2.85	-13.37%
To the status of occupation	3.39	2.97	-12.39%
Career as before	3.34	3.02	-9.58%
The employment	3.30	3.01	-8.79%
Negative Impact			
The struggle for the interests of the community	3.36	2.78	-17.26%
Influence village culture due to inflow of outsiders	3.30	2.72	-17.58%
Unsatisfactory compensation	3.12	2.58	-17.31%
The cost of living	3.36	2.91	-13.39%

These findings suggest that respondents perceived disruptions in their livelihood conditions following relocation, particularly in self-employment and income-generating activities. Development-induced displacement literature consistently identifies livelihood disruption, economic marginalization, and reduced access to employment

opportunities as major risks experienced by displaced households. Development-induced displacement is strongly associated with joblessness, loss of income sources, and increased economic vulnerability among affected populations [10]. Similarly, infrastructure projects often produce uneven socio-economic outcomes, where displaced groups experience greater economic stress compared to non-affected communities [37]. Lee et al. [38] further emphasized that transport infrastructure development may intensify socio-economic inequalities, particularly among marginalized and displaced populations who face reduced access to stable livelihoods and recovery opportunities. These literature references are used as interpretive lenses, not as confirmation of causal effects in the present study. Also, these conditions provide a clear explanatory lens for the observed outcomes in Table 3, particularly the moderate declines in self-employment opportunities (-18.79%), income levels (-14.04%), and household savings (-13.37%).

The perceived possible declines in savings and increases in living pressures that respondents reported may reflect a larger set of adjustment costs related to moving. According to the Bangko Sentral ng Pilipinas [39], supply- and demand-side factors, global commodity prices, and domestic economic conditions influence the inflation outlook, which in turn affects household purchasing power and the cost of living.

While some survey participants expressed negative perceptions about the economy after moving, other respondents saw an increase in their ability to travel to get from one place to another, because new roads have made it easier for people to get where they want to go. Research has shown that investments in road infrastructure can enhance the ability of people and businesses to move efficiently throughout their regions, which promotes economic growth through the integration of local economies. Many researchers believe that the primary reason infrastructure has such a huge influence on the growth of a region is because it reduces the cost of doing business and allows businesses in one area to sell products or provide services to customers in another area through the improved flow of products and services throughout their region [14]. Other researchers have stated that infrastructure has been found to promote economic growth because it allows businesses and consumers to remain connected and integrated with one another across a wide variety of locations [40]. But not everyone experiences the benefits of new infrastructure development, as the distribution of these benefits is often uneven across affected populations and communities [41].

Besides this, transportation infrastructure can generate varied economic outcomes depending on location and social positioning. Earlier studies, however, indicate that transportation investments do not benefit the same way throughout a region; thus, they could create negative effects on certain populations (such as low-income or geographically disadvantaged populations). The nature of transportation investments and how they affect communities can cause changes to how communities access goods and services but also, in many instances, impact the types of jobs available within a community [37, 38]. This overall pattern reveals that adequate opportunities are lacking for individuals who do not live near areas where transportation improvements occur. Thus, if transportation investments are not equitably distributed or do not benefit all community members equally, then an alternative planning process that includes all members of a community is necessary to prevent furthering already-existing disparities.

4.5 Social impact

Table 4 presents the respondents' perceptions of the social impacts before and after the road expansion project. According to survey results, there was a perceived decline in many of the indicators associated with community stability and social cohesion. Respondents reported lower ratings for the following indicators: peace and order in the community; social relationships; safety of life and property; neighborhood relationships; and family well-being.

Table 4. Social impact indicators before and after the road expansion project

Social Impact	Mean		Rate of Change
	Before	After	
Positive Impact			
The peace and order of the community	3.58	2.95	-17.60%
Social relationship and value within your community	3.56	2.93	-17.70%
The safety of life	3.54	2.98	-15.82%
The safety of property	3.50	2.96	-15.43%
Increase social status	3.48	3.05	-12.36%
The family's happiness	3.80	3.40	-10.53%
The relationship with its neighbors	3.69	3.28	-11.11%
Avail better infrastructure facilities	3.33	2.92	-12.31%
A mutual respect for the rights of the residents in the community	3.61	3.29	-8.86%
Negative Impact			
The issue of conflict of ideas	3.21	2.74	-14.64%
The congestion of living	3.46	3.10	-10.40%
The problem of crime	3.00	2.66	-11.33%
The problem of gambling	2.97	2.69	-9.43%
Preservation of local culture and traditions	3.48	3.29	-5.46%

The indicators that showed the greatest decline were peace and order within the community (-17.60%), social relationships/values (-17.70%), and safety of life (-15.82%), and safety of property (-15.43%). These responses suggest that respondents perceived a moderate weakening of social relationships and community cohesion after relocating.

The literature on social cohesion supports this notion, and indicates that relocation or displacement tends to diminish trust within a neighborhood or community, decrease mutual support, and erode established community networks [42]. Displacement and relocation processes may cause such social connections to break down, thereby disrupting the established network of informal support systems. Additionally, Lucas et al. [37] indicated that when these connections are broken, there is a reduction in social interaction and loss of relationship within the community, ultimately affecting the stability and resiliency of the population that was displaced or relocated.

The research on the implications of resettlement and/or displacement has demonstrated that relocation can lead to a loss of social cohesion as adult household members are removed from long-standing neighborhood relationships and social support systems [10]. The displaced had experienced a decline in their relationships with neighbors, and an increase in concern regarding conflicts within the community, which is consistent with prior adjustments to new social environments caused by being forced to relocate to an unfamiliar place. Similar results were found by researchers of involuntary resettlement and displacement [43].

Previous research on community severance indicates that

major roadway infrastructure has the potential to create physical and social fragmentation in neighborhoods by physically separating residents from one another, and providing a psychological barrier to social interaction between people from that neighborhood, better known as “community severance” [44]. Furthermore, transportation/roadway infrastructure may play a role in socio-spatial fragmentation and disconnect the established neighborhood network [38], placing additional emphasis on the social costs of large-scale infrastructure development.

The study presents additional evidence of diminished local culture preservation as a result of displacement from transportation systems. It is possible that displacement will change how people in an area interact with one another and result in a weakened sense of community identity. Long-term changes in the way land are used for development of infrastructure may change the physical structure of a community, often resulting in reduced social interaction of members of the affected communities and a decrease in cultural cohesion [38, 45]. Environmental changes may disrupt existing social systems and cultural practices connected to specific locations [38, 45], and therefore influencing their development of community identity and provide a means of interaction. Communities that are considered to have a close relationship with their natural environment are likely to experience a similar result when roads constructed for an expanding metropolitan area disrupt their existing networks within their community [46].

Whenever residents are removed from their communities due to the development of infrastructure, such as new road construction, that will displace them to an area that has different social structures than those in which they resided, they experience similar changes in community interactions and participation in cultural activities [45]. Previous research supports this finding that the built environment and displacement can weaken the traditional structure of a community or disrupt the identity of a neighborhood.

Overall, the overall investigation demonstrates that while improved movement options and physical accessibility can provide benefits, there are many detrimental effects to be found within the community as a result of expanded roadway projects. Such effects include reduction in your neighborhood social interaction and so forth between two or more groups within their particular areas creating a lesser sense of belonging; therefore providing evidence of the social consequences of displacement due to infrastructure improvements being undertaken.

4.6 Health impact

Table 5 indicates that respondents generally perceived a decline in health and well-being after displacement and relocation. Specifically, respondents reported decreases in life satisfaction, peace of mind, mutual compassion, and increased concerns related to environmental stressors such as noise and pollution.

In terms of the greatest perceived declines, “Noise causes health problems” recorded the highest decrease (-16.22%), followed by “Struggle for competition” (-15.66%), and “Satisfaction in life” (-12.22%). These results suggest that respondents perceived moderate environmental and psychosocial stressors following relocation.

As described in the public health literature [44, 45], environmental stressors associated with transportation

infrastructure development may negatively affect public health. Several studies document that infrastructure projects can generate adverse environmental exposures such as traffic noise, air pollution, and reduced social cohesion, which may contribute to negative health outcomes. Changes in transportation infrastructure may also alter the built environment, influencing patterns of exposure and community interaction.

Table 5. Health impact indicators before and after the road expansion project

Health Impact	Mean		Rate of Change
	Before	After	
Positive Impact			
The struggle for competition	3.32	2.80	-15.66%
The satisfaction in life	3.52	3.09	-12.22%
The peace of mind	3.54	3.22	-9.04%
The mutual compassion	3.34	3.02	-9.58%
Negative Impact			
Noise causes health problems	3.39	2.84	-16.22%
Blasting affects health (headache)	3.22	2.87	-10.87%
Create different types of pollution	3.02	2.67	-11.59%
The problem of drugs	2.86	2.63	-8.04%

The built environment plays a significant role in shaping health outcomes, particularly through exposure to environmental stressors such as traffic congestion, noise, and air pollution. Studies on urban transport systems have identified traffic-related noise, environmental degradation, and weakened social cohesion as key factors associated with stress, anxiety, and reduced quality of life among affected populations [42, 45]. In addition, transportation-related emissions have been linked to respiratory and cardiovascular risks in densely populated urban areas [47].

Respondents additionally perceived declines in indicators associated with environmental quality including pollution-related concerns and headache-related effects from construction activities. Although these findings are based on subjective perceptions rather than clinical measurements, they reflect continuing concerns among residents regarding environmental conditions and personal well-being after relocation. Infrastructure works and increased traffic exposure often generate noise pollution, air pollution, and other environmental disruptions that negatively affect residents’ perceived quality of life and overall perceived health status [38, 48].

Results indicate that although transport infrastructure has the potential to enhance mobility and access, it can also create additional environmental and psychosocial stressors that compromise the well-being of communities. Other studies examining transport-related infrastructures exhibit similar patterns, with positive outcomes seen through greater accessibility to services and increased economic opportunity against negative outcomes on communities in proximity to new infrastructure projects [40, 41]. Thus, transportation infrastructure can enhance individuals’ mobility and access to services, jobs, and opportunities [49], while creating additional localized environmental and psychosocial stressors for individuals residing near the facility [38]. This dual impact of infrastructure development shows that while infrastructure development contributes to functional and economic gains within communities, infrastructure development may pose risks to the overall well-being of the community, and the risks associated with infrastructure development can be mitigated

through inclusive and health-sensitive planning processes.

Based on the results of the study, it appears that there is mixed evidence regarding the perceived effects of road construction and relocation on health and well-being. Respondents expressed concern about their environment and psychosocial well-being after being displaced from their homes due to road construction and/or relocation. While respondents reported increased mobility and accessibility due to the construction of new roads and/or relocation, they also reported experiencing environmental stresses and difficulties adjusting socially and psychologically because of the changes imposed on them. This clearly demonstrates the importance of considering both environmental health-related safeguards and community-sensitive planning when undertaking infrastructure projects.

4.7 Benefits received by affected households from the government

Table 6 presents the benefits received by affected households from the government following the road expansion project. Findings indicate that the majority of those responding received relocation assistance through an Alternative Housing Site. Additionally, while the overall support provided to affected households can be considered to be primarily focused on the provision of physical resettlement assistance (i.e., housing), and therefore relatively little on support for restoring livelihoods, restoring socio-economic systems through an effective means of resettling displaced households, (e.g., support for obtaining and maintaining income).

Table 6. Benefits received by affected households on the road expansion project

Benefits Received	Frequency	Percentage
Alternative site /relocation	260	85.0
Replacement of lost materials	124	40.5
In monetary term	9	2.9
Training to develop skill		
Own business development, management and supervision	7	2.3
Financial management/ saving	14	4.6
Basic skill training	13	4.2
Technical training for livelihood means	5	1.6

This same pattern is found frequently within the context of infrastructure-induced displacement, in which, program objectives related to the desired outcomes of an effective resettlement strategy ("shelter" or temporary), will usually dominate the provision of resettlement assistance compared with supporting a family to achieve or restore the needed components of their income, (e.g. creating a source of employment; establishing family networks and support systems). As noted throughout the resettlement literature, the provision of adequate housing does not fully address other socio-economic factors resulting from involuntary displacements [43].

Cernea [43] has developed an IRR Framework that recognizes the multiple risks associated with being displaced (for example: landlessness, joblessness, lack of access to services) and stresses the need for comprehensive mitigation strategies that extend beyond just physically relocating people [10]. Relatedly, there are guidelines established by international organizations governing the acquisition of land

and compensation for land taken from people, which state that to minimize the social and economic risks of displacement through resettlement, resettlement programs have to be fair, transparent and context-sensitive [50].

Both of these sets of guidelines highlight that successful resettlement requires a holistic strategy, providing not only housing but also restoring livelihoods and providing social support systems and implementing ongoing measures to rehabilitate people who have been displaced.

In this study, while some participants indicated they were provided with assistance for their livelihoods, those responses indicated assistance for their livelihoods was secondary to provision of housing. Thus, although post-displacement assistance may help impacted households recover economically, it may not adequately address their needs in regards to generating income and/or maintaining stable employment.

The resettlement literature emphasizes the need for effective integrated programs as part of an overall support system, including participatory arrangements, social services, and long-term restoration of livelihoods for displaced persons [10, 50]. These components are necessary, or else displaced persons will continue to be at high risk of socio-economic vulnerability even after being physically relocated.

In this case, resettlement assistance appears to be largely limited to housing, and there is little focus on social or livelihood rehabilitation. The findings provide evidence of a significant gap between current relocation implementation and internationally accepted standards for sustainable and inclusive resettlement.

5. CONCLUSIONS

The findings of this study indicate that affected households in selected road expansion areas in Iloilo reported perceived changes across economic, social, and health dimensions following displacement and relocation associated with the infrastructure project. These results are based on self-reported perceptions and do not establish causal effects of the road expansion project.

In the economic dimension, respondents generally reported perceived declines in self-employment opportunities, income, savings, and occupational stability. These perceived changes suggest possible livelihood disruptions and adjustment challenges among displaced households, particularly in relation to income-generating activities and economic continuity after relocation.

In the social dimension, respondents reported perceived weakening of social relationships, reduced community cohesion, and changes in neighborhood interaction. These findings suggest that relocation may be associated with disruptions in established social networks and community ties, which are important components of social support and collective well-being.

In the health dimension, respondents perceived increases in environmental stressors such as noise, pollution, and psychosocial strain, alongside declines in life satisfaction and peace of mind. These perceptions reflect adjustment difficulties and environmental concerns experienced in relocation areas.

The findings further indicate that government assistance was primarily concentrated on physical relocation support, particularly housing provision, with limited coverage of

livelihood restoration and skills development programs. This suggests that while immediate shelter needs were addressed, broader socio-economic rehabilitation measures were less evident among respondents.

Overall, the study suggests that respondents perceived economic, social, and health adjustments following relocation associated with road expansion projects, particularly where relocation support is primarily housing-focused. These findings highlight the importance of integrating livelihood support, social reintegration, and environmental safeguards in infrastructure-related resettlement programs. Future infrastructure planning may benefit from strengthening participatory processes that involve affected households in relocation decisions and from enhancing post-relocation support systems that extend beyond housing provision to include livelihood recovery and social services.

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