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The socio-economic impacts of Multan-Sukkur motorway investment on the people of Pano Aqil, Sukkur, Pakistan

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This study aimed to find the socio-economic impacts of Multan-Sukkur motorway in Pano Aqil, a Tehsil of District Sukkur. The project has already brought a positive socio-economic change in the outlook of the area. The most conspicuous ones include increase in employment opportunities and mobility, a major boost in real estate prices, increase in construction activities, a significant increase in the demand for raw material and tradable commodities such as vegetables, fruits and cash crops. Agriculture sector is expected to grow further as crop productivity would increase as fruits and vegetables will be transported to other cities through the motorway. People, although adequately compensated for losses, were not consulted before construction. They were not helped in dislocation and rehabilitation either. The respondents frequently reported some minor complications such as air and noise pollution and bifurcation of villages and people's connectivity. These issues could have been dealt with easily, had the government paid a little heed to the genuine grievances of the people. Besides, government should consult the people before the displacement in order to minimize the negative impacts of mega-projects.

Keywords: Infrastructure, socio-economic impacts, Multan-Sukkur motorway, human development

INTRODUCTION

This paper assesses the socio-economic impact of Multan-Sukkur motorway on people living in Pano Aqil Tehsil and the kinds of economic activities Multan-Sukkur motorway would generate in Pano Aqil. Infrastructure plays a spearheading role in economic development of a country. Like a foundation stone, soundness of infrastructure project sets the tone of nation's development. Regardless of its size and type, any infrastructure project contributes in economic development. For instance, roads of a country are used as an indicator of development (Aldagheiri, 2009). They come with short-term and long-term benefits. In the short term, roads provide jobs to the locals; create a temporary economic boom and increase demand for raw material. While in the long run, they reduce friction of distance, facilitate trade, increase the people's mobility and provide regional connectivity. Besides, roads also remove social barriers and improve the living standards of people through enhanced integration. In fact, the aim of every infrastructure project, regardless of its size or nature, is to bring a positive socio-economic change in the society. Provided the short-term problems of the displaced people are addressed, every infrastructure project can revolutionize the fate of the area in which it is proposed, planned and executed.
If the prime objective of an infrastructure project is to boost economic uplift of an area, then plethora of advantages is believed to accrue to the local communities (Lehovec, 2004).

Displacees get above market compensation for their wherewithal such as land, houses and standing crops whereas the latter group witnesses rising cost of their lands, availability of employment opportunities and provision of raw materials for the project and its associated workers. Many people from nearby areas temporarily immigrate to the project site for harnessing the rewards arising out of the project. Positive economic gains include provision of employment, welfare and market accessibility for the locals (WCD, 2000). Whereas easier access to higher education, tertiary health care, reduced fatalities and road accidents and promotion of tourism are counted as the major benefits arising out of transportation infrastructure (EURF, 2007). People living near the project site get employment opportunities. Majority of unskilled jobs go to the landless peasants, uneducated youth, laborers and daily wagers, whereas educated and skilled people are engaged in offices and in a variety of vocational jobs. The companies impart training to the locals for technical jobs such as carpentry, plumbing, and electrical work as well as some non-industrial training: such as mushroom cultivation (Chandy, et al. 2012). Market access to the local products such as industrial and agricultural, boost in local tourism and local's access for good health and education facilities in nearby cities are added advantages that come up with development of transport infrastructure.

Nevertheless, mega infrastructure projects, especially highways come up with some ordinary costs too. Displacees are the ones to bear major burden, as they lose their property for providing access to the motorway. Negative impacts also comprise of frequent accidents, noise pollution and improper drainage network on and along the roads. Indubitably, in majority of the cases resettlement plans are provided for Development-Induced Displacees (DIDs) with an aim to improve the quality of their lives (Oruonye, 2012). Such involuntary resettlements do not come cheaply. Land has to be purchased, civic amenities are to be arranged and temporary

financial grants are to be provided to the displacees. The ultimate purpose of any involuntary resettlement scheme is to prevent people from falling below the poverty line due to development of a certain project. Hence, every development-oriented project that involves displacement must be initiated with a proper resettlement and rehabilitation scheme and culminated with careful execution so that people should be better off than they had already been.

It is estimated that around 15 million people are displaced every year in the world due to construction of mega development projects (Cernea, 2008). In Pakistan, construction of Mangla dam alone displaced 40,000 people, while erasing 7,000 houses. According to the World Bank 60% of DIDs, i.e. 6 million per annum, is related to urban infrastructure and transportation projects. This percentage in Pakistan can be higher as the focus of the elected government from 2013 to 2018 was mainly on building motorways and highways. Although displacement from transportation related displacement is low yet high frequency of such projects pushes the total number of displacees to the higher side (Cernea, 1996). This proportion is further augmented in densely populated areas. Ellis and Roberts (2015) suggests that the ratio of urban population in Pakistan is 39 percent, which is far higher than that of South Asia, which is 33 percent. This indicates that a comprehensive resettlement policy and plan must be devised to reduce displacement and resettle the displacees, especially in the urban areas of Pakistan. For instance, internationally approved plans and policies may be adopted as standard guidelines for addressing socio-economic issues of the displaced communities especially in the post-construction phase of the project.

Infrastructure development fulfill Sustainable Development Goal 9 and pillar 7 of Pakistan vision 2025. Multan-Sukkur motorway is a tiny part of a mega investment plan devised by China and Pakistan under a mutually agreed framework popularly known as CPEC (China-Pakistan Economic Corridor). Many such infrastructure projects are under construction in various parts of the country. These projects besides bringing a positive change in the socio-economic status of the country may possibly have some downsides, which have been considered in this work. Study of both positive and negative impacts of the project on the local people is sine qua non. This research covers both features in greater detail so that loopholes can be identified and addressed whereas positive impacts are amplified in such a way that they can have a lasting impact on the nation's development.

The paper is organized as follows. Section 2 presents the review of relevant literature. Section 3 discusses in detail the conceptual framework of the study. Section 4 highlights the feature of the local context (study area). In section 5 we discuss the research design and methodology. Section 6 reports and discusses the main findings of the study. Finally, section 7 concludes.

REVIEW OF LITERATURE

Development is a multi-dimensional process of which transport is one of crucial components (Todaro, 1981; Weisbrod and Weisbrod, 1997). Positive impacts of transportation infrastructure include easier competition in global markets through reduced prices, reduction of internal trade barriers, quick access to markets for both raw and finished products (Agbigbe, 2016). Majority of the transport projects bring enormous benefits for the locals. For instance, people get jobs and construction contracts whereas local economy receives a boost due to influx of people at construction site. The villagers are given supply jobs for variety of items, such as sand and stones, food provision for company canteens and building materials. Large contractors and suppliers invest their earnings in assets such as buildings or vehicles, which ensure long-term returns (Chandy, et al. 2012). In short construction of motorways enhances road transport, which is crucial for productivity, turnover and employment. These in turn bring both social and economic benefits.

Historically, road transport has greatly contributed in shaping Europe's economies by enabling the emergence of a modern supply chain management. Today transport infrastructure is the key element for many European businesses, which seek to gain a competitive edge over their rivals (Vatanen, 2007). This is one of the many economic advantages, which can be counted under the head of economic gains. Lack of adequate transport can be a barrier to the access of medical services, resulting in increased costs to health care providers due to missed appointments and delayed interventions. These challenges can be met by providing easy road access to the people living in far-flung areas so that they can have better health and educational opportunities. Undoubtedly, roads will bring positive social change, but motorways have the greatest impact, which cannot be matched by any other infrastructure project no matter how big or technologically advanced it may be.

Here are some social and economic benefits of motorways. Social benefits also abound if motorway is constructed through a populated area. Lack of it would cause impoverishment, illiteracy, unhealthy society and even ignorance. For instance, Vatanen (2007) asserted that lack of adequate transport could be a contributing factor to poor educational achievements of children from lower social stratum. Economic benefits include the increase in the value of land that relate to the construction of motorway. It is hypothesized that there is a strong positive relationship between Light Rail Transport (LRT) and land values (Topalovic et al. 2012). They believe that land value increases even in the pre-construction phase of the transit system. However, rising cost of land increases the vulnerability of those who do not have their own abodes and who intend to construct their houses. On the one hand rising cost of land increases its economic value while at the same time it makes it inaccessible for the have-nots who intent to construct their houses. In such cases the state will have to intervene and provide housing to the needy people so that they do not fall behind economically and socially.

Furthermore, Sen, (2007) argues that land expropriated forcefully for development must not be mere agricultural land; rather it must be seen in competition with industrial or commercial use and should be considered on its market value. Thus, cost of land must be determined while keeping in view its commercial, residential and post-construction phase cost scenarios so that in case people who have lost their lands may purchase similar areas of land as they had lost to the construction project.

Moreover, benefits of motorways are not limited to the people living along the motorways. Such projects have important spillover effects that usually accrue to third parties in accidental and unexpected ways. The social returns on infrastructure investment and use may exceed the private returns because society realizes the benefits above and beyond those gained by direct users. Spillovers may be difficult to observe and accounted fully in a microeconomic framework focused on in-system behavior and that infrastructure resources are intermediate capital resources that serve as critical foundations for productive behavior within economic and social systems (Frischmann, 2005). Indeed, spillover effects are hard to measure by because people from adjacent towns and cities move in for technical and non-technical jobs. Demand for land and labor increases sharply not only within the area where infrastructure is under construction but also in the nearby localities. Thus, one would safely presume that spillover effects of motorway are spread far and wide than one would expect ordinarily.

Despite these benefits, unfortunately, fifteen million people are displaced due to development projects every year and majority of them are left economically and socially worse off. Policies made for forced displacement and resettlement especially by World Bank, China and the developed world; many countries lack on both policy and implementation fronts. Even if there is enough will and capacity to carry out resettlement, many schemes in China were not successful with regards to income generation (De Wet, 2006). Their impact on biosphere is hardly discernible as few studies are conducted on this vital topic. Traditionally, the DIDs experts believe that the policy objective on this subject should focus on 'restoring the income-generating capacity of resettlers on priority basis (Cernea, 1996). Onward come the cultural and political costs with resettlement. Rew et al. (2006) developed a three-tier model in this regard. The first tier is policy-making level where the broad contours of policy are made for development and resettlement. The middle tier is related to state or regional administrative centers where policy directives are coordinated and implemented. Swamp is the last tier in which real implementation and service delivery is carried out. Ignorance or non-observance of any tier would jeopardize the resettlement efforts of the organizers and project developers.

Generally, it is believed that the compensation alone is sufficient for the expropriation and displacement of the people. However, numerous projects that do provide enough compensation, fail to restore livelihoods while leaving people economically worse off (Cernea, 2008). Undoubtedly, compensation is obligatory. But it is not enough to cater to all the blows that displacement inflicts upon people. Hence state intervention is must in every big infrastructure project. Ignoring this vital aspect would result in backlash and resentment against the government, which aims to alter the living conditions of people by pulling them out of poverty line through construction of motorways, railways and dams.

The existing literature has found mixed impacts of DIDs resettlement, ranging from highly satisfied to extremely unsatisfied resettlement. It depends upon the policy makers that how development-induced resettlement is planned, executed and the affectees are compensated. For example, in China Shikou and Yantan dams, displacees' incomes and living standards improved while they were highly satisfied of resettlement (Picciotto et al. 2001). On the contrary, in Guatemala's Chixoy Dam, hundreds of Maya Achi Indians people were massacred by local civil patrol (Stewart et al. 1995). In this study, in the light of existing literature, we assess the impact of motorway (Multan-Sukkur) abject poverty and destitution by providing economic opportunities and access to nearby commercial centers for business and trade. Research literature proves that poverty and infrastructure development have a positive relationship. Research on poverty alleviation has underscored on community empowerment or encouraging participation of poor people in decision-making process through access to infrastructure including transportation (Agbigbe, 2016). Estache et al. (2002) have also found a direct co-relationship between poverty alleviation and infrastructure reforms in Latin America. Fan and Chan-Kang (2005) and Stivastava and Shaw (2016) examined the impacts of various types of public investment on economic growth and rural poverty alleviation in China and determined that transport infrastructure has the largest effect on poverty alleviation than irrigation, telecommunication, rural education, power generation, targeted poverty alleviation and agricultural research and development. Since Southern Punjab and Upper Sindh are poorer areas of Pakistan, so connecting these areas with the mainstream through Multan-Sukkur motorway would have significant bearing on poverty alleviation of the region.

Conceptual Framework

Theoretical models on socio-economic impacts of infrastructure development are discussed for this study as follows. These models depict that how infrastructure projects generate economic growth and what are their possible drawbacks. These are discussed in greater detail for knowing the underpinning of how these benefits are strengthened whereas the possible negative fallouts are minimized.

Social Overhead Capital (SOC)

SOC is defined as the investment for transport, power, and water supply without which other productive activities cannot survive. Nurkse, (1955) asserted that without SOC consumer goods factories would not survive. Moreover, SOC cannot be imported and it takes more time for maturity hence must be built domestically (Nurske, 1955). Hirschman (1958) reviewed the concept of SOC and included services like

transportation, communication, power, health, water supply, irrigation and drainage system through which primary, secondary and tertiary activities in an economy born and thrive. Rostow (1960) also emphasized on SOC for being a pre-condition for takeoff for a self-sustained growth. All these development practitioners unanimously agree that strategic infrastructure is a prerequisite for national development. Indeed, it can neither be imported nor ignored for in the longer run. The sooner the government realizes this fact the better it would be for the national economy to develop and people are pulled out of the poverty line.

Theory of Unbalanced Growth

Scholars like Hirschman and Rostow, forwarded another theory known as unbalanced growth. They asserted that developing countries should stress on strategic sectors of the economy rather than working on all the sectors simultaneously. Once the strategic sector (including roads) is developed, other sectors would themselves mature through "Linkage effect". Development of strategic sectors also helps establish new investment opportunities and economic development (Hirschman, 1958). Figure 1 shows that GDP growth is the ultimate benefit of modern economic development. This development is the result of transportation infrastructure, which comes either through private sector or public funding. In either way the construction results increase in economic, political, social and institutional activities in the country in the form of trade, enhanced productivity and quality of life.

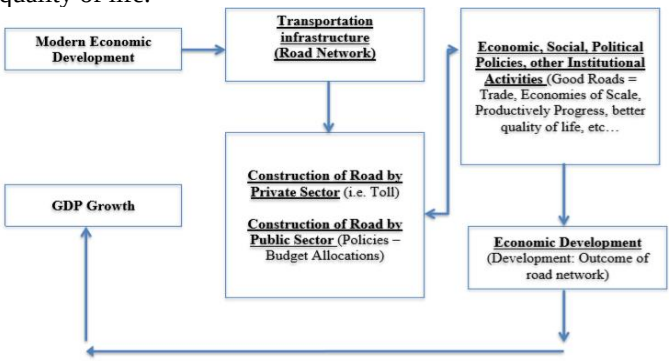

Figure 1: Linkage of infrastructure development with national development

But the impact of infrastructure development may not always be positive. However, positive impacts can outweigh the negative ones if managed appropriately. For example, better transportation, such as motorways, bring investment opportunities that translate into socioeconomic benefits for the locals. Educational prospects increase as people can send their children to cities where quality education is available cheaply. After returning to their native homeland, this educated lot can work wonders for the society. However, due to investment and increased socioeconomic activities, people migrate to the nearby areas. This causes overpopulation and haphazard growth of the region. These issues may be taken care off in both pre and post construction phases of motorways.

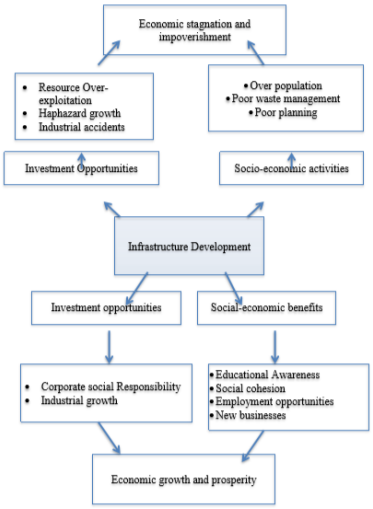

Figure 2: Adopted from Wanjiku, (2014).

Figure 2 elaborates that how the same project brings both economic growth and prosperity or economic stagnation and impoverishment depending on how it is managed. In either case infrastructure development results into investment opportunities and socio-economic activities in the area. However, in one case it causes resource over-exploitation and industrial accidents due to investment opportunities while in the other case it results into over population, poor waste management and planning. On the other hand, in the growth and prosperity side, corporate social responsibility and industrial growth are the fruits of investment opportunities while educational awareness, social cohesion, employment opportunities and new business opportunities become the fate of the area. Unlike Figure 1, Figure 2 balances out both positives and negatives of infrastructure development. Hence, it is crucial for the policy planers to address the negative impacts that may possibly results either from ignorance or willful negligence.

Theories on Involuntary Displacement

Involuntary displacement is one of the main unwanted effects of infrastructure projects. Regardless of efforts by the government in the form of providing market compensation and assistance in resettlement to the displacees, involuntary displacement invariably causes poverty. Social scientists define involuntary displacement in several ways. For instance, the model of Scudder and Colson (1982) focuses on four stages: Recruitment, Transition, Potential Development and Resettlement. In contrast, Cernea's (1990) model of Impoverishment, Risks and Reconstruction (IIR) focuses on impoverishment risks that emerge due to forced resettlement. It also incorporates the processes that are compulsory for reconstructing livelihoods of the affectees. This model stresses that if the government does not deal with forced displacement properly; it would result in landlessness, joblessness, homelessness, marginalization, food insecurity, loss of common property resources, and increased morbidity and mortality. However, it is stresses that for mitigating these unintended consequences Social Impact Assessment (SIA)

needs to be undertaken. According to Vanclay (2015), (SIA) was developed as a regulatory tool in the 1970s. SIA is "the processes of analyzing, monitoring and managing the intended and unintended social consequences, both pros and cons, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions". SIA aims to achieve maximum benefits and minimize harmful impacts on the people. People's way of life, their culture, values, political system, environment, personal and communal property rights, and fears and aspirations of the incoming project are some of the social areas, which can be affected if left unattended to.

Locale

The locale of the research was Pano Aqil tehsil, district Sukkur Sindh. Approximately 27-28 km section of Multan-Sukkur section of motorway passes through this tehsil and it covers 698-07 acres of land. The research area is in remote parts of Sindh. Accessing it and taking interviews was itself good experience for the researcher.

Pano Aqil has fertile soil where people mostly engage in agriculture. Cotton, wheat and sugar cane are major cash crops. Ladyfinger, cabbage, carrots and onion are main vegetables that are cultivated in the area. Major fruits such as strawberries, dates, mangoes, guavas and lemon are produced abundantly.

For the subject research villages of Makoro, Izat Khan Korai, Saleh Sangi and Sahib Khan Korai located along the motorway were visited for data collection. All these villages are located adjacent to the motorway however their distance from Pano Aqil City is around 15 to 20 Km. Condition of access roads was already deplorable which was further aggravated by heavy machinery being plied on these thoroughfares. Garbage collection system is not available in any of the visited villages. One can clearly see heaps of dumped garbage in front of houses and animal excreta is dispersed on the roads and streets. Cost of land is quite high which has further increased in the wake of motorway construction. Government run hospitals and schools are available in almost each village, but they are mostly in pathetic conditions.

Majority of the people owns small landholdings, which ranges from 2 acres to 8 acres. Canals and tube wells are the main sources of irrigation. Farmers do not have any means to add value to their products, as it must be transported to other major cities where industries are located.

RESEARCH DESIGN AND METHODOLOGY

This is a descriptive research that has used qualitative methods of data collection and analysis. The characteristics of qualitative research include carrying out research in its natural setting, explaining subject matter, elucidating an in-depth phenomenon and dealing with the process that how data is collected and analyzed (Bogdan and Biklen (2011); Patton, (2014)). For this study, the units of data collection (UDCs) included displaces, non-displaces, key-informants, local administrators and government functionaries, businessmen, traders and project engineers and site workers. Project displaces and non-displaces were the obvious choices for data collection. This research would not have been completed without incorporating their point of views on the project. The reason is that they are the major stakeholders of the project. It is the local people who are either the beneficiaries or affected for losing their wherewithal. Similarly, traders and businessmen were also the targeted beneficiaries of the project, hence, their incorporation in the study was also important. Inclusion of key-informants and local notables was necessary since majority of the displaces and non-displaces of the project site were either illiterate or they were not fully aware of the possible advantages to be accrued from the project. Therefore, the study included key-informants who were in a better position to enumerate the real returns of the project but also narrate the pre and post construction scenario of the area. Similarly, project engineers and site workers were interviewed for their employment prospects, their origin and any likely drawbacks the project has on their health.

Semi-structured, in-depth interviews and Focus Group Discussions (FGDs) were used for data collection. Respondents were selected through both probability and non-probability sampling techniques. Simple random sampling was used for displacees, non-displacees and project workers and site engineers. Snowball sampling was used for finding key-informants and notables. Traders, businessmen and local administrators were chosen through a purposive sampling technique. Most of them readily provided their valuable input for this study, which is quite rare in such projects. As Trochim and Donnelly (2006) state that purposive sampling would be an appropriate sampling tool when proportionality of population is not clear. FGDs were arranged by mixing displacees and non-displacees in the same proportion.

A total of number of 20 interviews were undertaken. As Bertaux (1981) confirms that sample size of 15 is enough for sampling. Some researchers believe that when study reaches at diminishing returns, and when conducting more interviews would produce little further information that would be an ideal sample. So, in this case sampling size was chosen from various villages along the motorway and Pano Aqil Tehsil Headquarters from where adequate respondents were interviewed for data collection. Following table shows the details of individuals from each category interviewed.

Table 1: Categorisation of UDCs

Sr No.	Category	Number of interviews	Percentage
	Displacees	5	25
	Non-Displacees	4	20
	Notables	2	10
	Businessmen	5	25
	Motorway workers including Chinese	4	20
	Total	20	100
	FGDs	2	

Interview guide was designed with open-ended questions. They were asked from all the displacees, non-displacees, key informants and professionals. In-depth interviews from all the

participants were conducted in a way that flow and sequence of questions and answers remained unaffected. The respondents were facilitated for their responses so that organic conversation was least effected whereas researcher's positionality did not have any influence in the process. This minimized biasness in data collection and ultimately its analysis and elucidation of research findings. This mode of interviews eased the respondents to share their opinion on topics like receiving compensation, rehabilitation and changes in economic activities and potential benefits during construction and operational phases of motorway. Indeed Turner, (2010) has rightly pointed out that interviews are necessary for getting detailed insights about participant's perspectives, opinion and understanding of the subject being interviewed. He emphasized on removing researcher's positionality during the process and facilitating the respondents in their responses. Framework analysis was used as the tool for data analysis. Since this technique is particularly suitable for answering definite research questions in limited time period so that policy recommendations can be drawn from the collected data. All ethical considerations, such as use of pseudonyms, respecting and adhering to their cultural traditions and norms, and venerating their religious values while engaging in interviews and focus group discussions was religiously followed and taken well care of.

RESULTS AND DISCUSSION

This section discusses the major themes emerges from the data collected. Following five major themes emerged from data analysis. Each theme is subdivided into several subthemes and indicators. The themes are separately explained under their respective heads with additional points as enunciated by the respondents.

Loss of Assets: Compensation and Consultation Process for Compensation

The first theme emerged from the primary data was loss of assets, provision of compensation and process of consultation for compensation. The researcher also inquired from the locals that how they are satisfied after the loss of their wherewithal i.e. homes, lands and communal properties like mosques, playground etc. Such losses are common in all infrastructure projects. In the instant case people lost agricultural land, houses, and communal properties such as mosques, wells and trees. Moreover, some notables also claimed that motorway had also damaged the electricity supply system such as transformers and electric poles. These losses might have serious economic consequences for the affectees, had they been not dealt with carefully.

Barring few individuals, who were directly affected by the displacement, majority of them agreed that they and their relatives were fully compensated for their losses. Although initially they faced some issues during demarcation of their lands and getting allotment letters, yet subsequently they were fully satisfied when they received their rightful compensation. Revenue authorities determined cost of land at Rs. 18 lacs per acres, which was above the market price at the time of acquisition. Destroyed houses were also compensated in range of three to five lacs depending on quality of construction. Value of trees was determined from 8 to 15 thousand depending on their specie. However, communal properties are yet to be compensated as some of the villagers are striving to get their mosques rebuilt or compensation paid so that they can build new ones and resume their religious obligations.

As per international practices infrastructure projects involving displacement are carried out after consulting people and taking them on-board for determining value of their assets and assisting them in relocation. In this instance, none of the respondents stated that he was either consulted in compensation or relocation. As per the narrative surveyors arrived with security entourage, filmed the area and left without discussing with any individual. It shows lack of coordination with the locals regarding redressal of their legitimate grievances arising out of displacement, provision of compensation and assistance on relocation.

Regarding utilization of money, the researcher observed wide diversity. Some purchased agricultural land, other bought plots in Pano Aqil City, while a few engaged in trade and businesses. Those who lost their homes preferred to construct new ones for their living. All these actions generated new economic activity in the area thus raising cost of land, labor and raw material for construction.

Some of the respondents reported that when motorway construction began per acre cost of land rose sharply thus pushing the prices beyond the reach of people so that they could purchase a piece of land for their rehabilitation. Moreover, cost of raw material for construction of houses and labor charges also increased significantly. These factors curtailed people's ability to construct new houses. Thus, in spite of constructing big houses as is common in villages, people reconciled with small houses of ordinary quality within their means.

Drawbacks of Motorway

People believed that land is a source of their livelihood. They insist that land is priceless, and its real value cannot be determined. It is like a fruit tree, which keeps on bearing fruits every year. But because now they have been deprived of their ancestral lands upon which they have been relying for generations, so they have become poor. They insist that they cannot get same area of land from the compensation. The reason is that people either do not sale their lands or sale at higher price than what was prevalent before the commencement of work. One of the displaces believed that the money they received in lieu of their lands wouldn't stay in their hands. Cash amount would soon dissipate on non-productive sources. Thus, they will ultimately be poor because they may not have anything to rely on for their survival.

Locals believe that height of motorway is also an issue. They are afraid that if any vehicle overturned from a height of 18 feet, it would fall on their homes, which may cause physical or economic loss. Motorway would also become a source of nuisance for the people living nearby. Moreover, it has divided their lands, hence, reducing their value. Although underpasses are provided at every ten kilometers, yet unevenly

distributed people would face difficulties in crossing the road, as they must travel to the nearest underpass which in some cases is as far as 5 km away.

Ordinary Issues for Locals

Infrastructure projects come with temporary problems for the locals. People at the locale have been facing issues such as loss of water channels for their agricultural lands, disconnection of electricity to their villages, air and noise pollution and division of people living on either side of motorway. A major accident also happened in which a man lost his life in collision between a dumper and motorbike. It could not be known if the bereaved family was compensated or not. Such incidents often go unreported due to little access to journalists.

Nevertheless, management is taking care of the locals by providing bridges and tunnels after every 10 km. Existing crossings are being kept intact and water channels are restored so that crops do no suffer. Water splashing on construction site is a regular phenomenon for controlling air pollution. Despite utmost efforts to keep people satisfied and trouble free, some of non-displacees were unhappy over non-provision of underpasses near their villages. They were also worried about drying of their lands due to disruption of water channels. However, motorway engineers were confident that these problems would soon be addressed, and people will be given compensation for their losses.

Local people view the motorway differently. Displacees and the poor people have different views of motorway than those with exposure and future foresight. For instance, the former group reported some of the minor disadvantages such as frequent accidents, breaking of the village roads due to construction activity, air pollution and damages to the standing crops near the construction site due to dust and closure of canals. However, the latter group while agreeing to these ordinary drawbacks could see a flip side of motorway. They foresee a revolutionary change in the lives of the locals. For them motorway is a harbinger of prosperity and development. Once completed, it would bring a positive change in the lives of the locals. According to them, motorway will expose the hitherto underdeveloped part of the country to the developed world. The connection would be mutually beneficial as there will be more trade and people to people interaction thus transfer of traditions, technology along with import of local products and imports of modern necessities at reduced rates.

Advantages of Motorway

Major advantages are subdivided into social, economic and miscellaneous. People counted many economic and other benefits, but they could not understand the concept of social benefits. Nevertheless, the researcher kept probing the respondents to deduce information about social benefits in order to address the research objectives.

People confirmed that the social fabric of the society remained undisturbed. For example, majority of the displacees were living along with the same neighbors as they were living before their displacement. Their relationships were not disturbed as all relatives migrated and settled at the same place while the abodes and graveyards of their ancestors were closer to their new homes. Their houses are within the range of 1 km from their destroyed dwellings. However, some of them have moved out to nearby towns such as Pano Aqil and Ghotki where they are living a happier life by engaging in trades and businesses.

Other social benefits of motorway include improvement in village infrastructure such as construction of a new school, improvement in electricity supply system and planned village road improvement programs. People are hopeful that they can easily travel to other big cities for health and education. They will be exposed to the outside world, thus increase in communication.

The respondents reported many economic benefits. The reason being that people have been undergoing through a remarkable social change. Barring few and far between, majority of the locals have been pulled out of poverty even before the actual operation of the thoroughfare. Among the economic benefits, rise in property prices was reported as the prominent one. Not only real estate prices have skyrocketed by up to 50 percent but cost of agricultural lands has also increased enormously. Indigenous raw material such as earth and stones are used for motorway construction for which people are getting separate returns. Locals are also selling milk, vegetables and other eatables to the temporary settlers in the camps, which is a new economic activity for them. In the past machinery of the locals such as tractors trolleys, dozers and other instruments stood useless during the off-season. But now they are being hired for construction of motorway. Labor wages have also received a tremendous boost due to ongoing construction. Locals expect that although motorway would soon be completed which will end the temporary jobs, yet they were optimistic that it would need regular repair and maintenance for which locals would keep getting more employment opportunities. In short various economic activities have injected a lot of liquidity in the local area from which large number of people are getting advantage of.

Furthermore, ladyfinger, onion, straw berries, dates, mangoes and guavas are major fruits and vegetables that are grown in the area. With the onset of motorway prices of these fruits and vegetables would receive a major boost. Since in the past they could not be exported to far off cities due to dilapidated road infrastructure and non-availability of traders. As a result, the farmers would sell them at reduced rates and let them rot in the field. However, they will now be transported to other cities thus bringing income for the locals. Their demand will increase, and prices remain stable.

Likewise, cash crops such as cotton, sugarcane and wheat production have also increased significantly due to improvement in soil fertility. Informed citizens claimed that the area was a rice cultivation belt. As rice cultivation needs more water, therefore it causes waterlogging and salinity. Due to construction of motorway the local administration has banned rice cultivation in the entire district Sukkur and its adjacent district Ghotki. It has caused a positive impact on soil

fertility by reducing water logging and salinity thus raising productivity of all crops.

Local agricultural dealers were extremely elated with the construction of motorway. They reported that they have been doing a roaring business once the construction began. Although some of them were not happy with the rising salary of daily wage earners whom they engage at their agencies yet people with sane mind were contented with the fact that this has increased the income of daily wagers. They believed that upon operation of the motorway they would save time, cost and other expenses for import of fertilizers, pesticides and other agricultural products while at the same time export their purchased products to the big mandis at reduced transportation costs and time. Transport owners shared this fact that they would be getting more business without much damage to their vehicles, which has been the phenomenon when their heavy vehicles plied on National Highway.

Among the miscellaneous advantages, timesaving, access to major cities, skill transfer and general awareness were counted as prominent ones. Time is the most precious commodity both economically and socially. In terms of economics, motorways save 64% of the time (Beesley, 1965), whereas socially motorways make national metropolis accessible to the people for education, health and tourism for the people living in countryside. Although worth of time is different for different individuals depending upon their professions and existing economic conditions, yet most of the people reported that there would be significant saving of time in quantitative terms. Some have reported that through motorway time to reach Karachi from Pano Aqil will be 4 hours whereas via National Highway it takes at least 9 hours. It shows a saving of 55% of time. Similarly, one can reach Lahore through National Highway from Pano Aqil in 14 hours with one night's rest. However, via motorway one will reach in 7 hours without spending a night anywhere. This data is calculated for a personal car. It takes double the time for heavy vehicles, which carry raw material and agricultural products to industrial conglomerates in major cities.

In terms of Kilometers, distance between Multan and Pano Aqil through existing National highway is 431 Km. The same distance via motorway is 360 km, a reduction of 71 (16%). National highway distance between Pano Aqil and Hyderabad is 375 km while via motorway (Hyderabad-Sukkur) is 326 Km, which will also be a reduction of 49 Km (15%). These estimates are based on available literature because interviewed people did not report exact figures as how and in what percentage the distance will be reduced and how time will be saved.

Traders recommended that an industrial zone should be established in Pano Aqil city for processing local raw material and adding value to the indigenous agricultural products. They believed that industrial zone would generate job opportunities for the natives.

Employment Opportunities

Underemployment and migration theme, respondents were asked about availability and kinds of job opportunities at the project site. They were also asked whether they were willing to join these jobs or otherwise. It was also confirmed if Motorway Construction Company is hiring the locals or outsiders. Almost all the respondents agreed that job opportunities are widely available. Although working hours are tough yet high salaries are attracting people to join both skilled and un-skilled jobs in the construction of motorway. They agreed that they were happily joining the jobs. Regarding hiring the locals or outsiders, they reported that since for high skilled job, people have been hired from other districts and even other provinces. However, for ordinary jobs like laborer, drivers, cleaners, watchman etc. the locals are preferred over the outsiders.

Employment opportunities include both highly skilled such as heavy machine operators, engineers, survey draftsman, plumbers, masons, pump operators, drivers and unskilled such as laborers, watchman, cleaners etc. are readily available at the site. The Construction Company prefers locals over the outsiders. Majority of unskilled and semi-skilled workers are locals. However, skilled workers belong to other districts of Sindh or even from other provinces. However, all contractors are from other provinces such as the Punjab and Khyber-Pakhtunkhwa. Non-local staff is living in temporarily established camps with the Chinese workers whereas locals commute daily from their homes and construction site.

Due to high demand of skilled and unskilled jobs, wages have risen sharply. Before construction, labor wages in the city were in the range of rupees 8 to 10 thousand. But now there is a 50 percent increase in salary, as motorway needs intensive labor. Salaries of skilled workforce, such as drivers, masons, technicians, have also witnessed a steep increase due to their high demand. Local businessmen of the city were ruing the scarcity of the labor, as they cannot pay what contractors pay to the laborer.

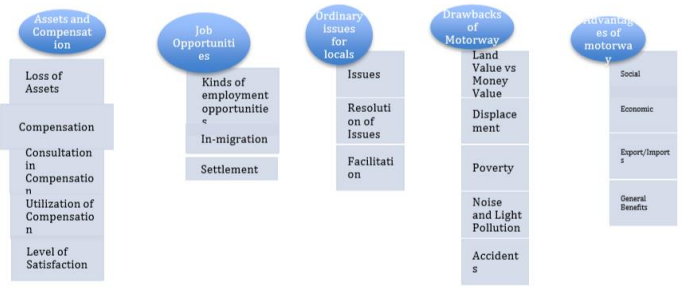

Figure 3: Themes and indicators

CONCLUSION

This paper assesses the socio-economic impact of Multan-Sukkur motorway on people living in Pano Aqil Tehsil and the kinds of economic activities Multan-Sukkur motorway would generate in Pano Aqil. Multan-Sukkur motorway has displaced the people from their lands and houses all along its way. Pano Aqil Tehsil does not remain unscathed from this mega-infrastructure project that was envisioned under the CPEC umbrella. About 27 km of the motorway route passes through this Tehsil. In this path it has encroached upon 698

acres of mostly fertile land. People, although adequately compensated for losses, were not consulted before construction. They were not helped in dislocation and rehabilitation either. Regardless of that almost majority of the respondents stated that they were satisfied with the compensation and subsequently with their relocation. Though largely satisfying and beneficial for the area, motorway has brought some issues for the inhabitants. The respondents frequently reported some minor complications like accidents, air and noise pollution and bifurcation of villages and people's connectivity. They were also worried about the future impacts of motorway when noise and light pollution would jeopardize the health of the people living nearby. These issues could have been dealt with easily, had the government paid a little heed to the genuine grievances of the people.

However, motorway benefits are prominent and plentiful. The conspicuous ones include increase in employment opportunities and mobility, a major boost in real estate prices, increase in construction activities, a significant increase in the demand for raw material and tradable commodities such as vegetables, fruits and cash crops.

Admittedly, this study covers a very small part of a long route, which obviously cannot generalize its findings on the entire route. The reason being each area has its own peculiarities such as people's occupation, their culture and mobility. Despite many challenges for the locals, the subject infrastructure project is going to bring a major social change in the underdeveloped areas in which it is being constructed. Set to open in 2019, it will not only reduce travelling distance from Multan to Sukkur by one-third, but it will also increase people's mobility and regional connectivity. Notwithstanding many shortcomings, this research will prove to be a major milestone for similar projects in future and would guide policymakers in taking informed decisions regarding designing and constructing similar infrastructure projects.

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