



Regional Transport Development and Urban Economic Isolation; Analysis of Paradoxical Consequences in *Qazvin-Rasht* Highway Construction: *Loshan* City, Iran

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ABSTRACT: Contrary to the past approaches, as the transportation speed and the number of vehicles have increased, nowadays, the major roads do not go through the cities and are laid out on the brink with a particular distance instead and linked with the city's network through a set of connecting roads instead. Construction of these connecting roads can have diverse effects on economic, social and cultural states of cities. The residents of Loshan have encountered numerous problems since the city was downgraded after the construction of Qazvin-Rasht highway in 2009 which has vastly decreased the flow of passing regional traffic through the city. Durability, survival, continuation, development, stable income and in general, the city's economy were dependent on the passengers who were crossing the city. As a result, many of existing traveler-service related employment opportunities are threatened and this sector has practically lost its economic viability. In this paper, the effects of the construction of Qazvin-Rasht highway on residents of Loshan have been assessed. In doing so, we have referred to the results of field studies and traffic data of Iran's Road Maintenance and Transportation Organization. In the end, by having accepted the necessity of constructing the highway outside the city, a few suggestions about compensating the anti-development effects of the highway and restoring the city's former livelihood have been put forward.

Keywords: Transportation System, Regional Development, Economic Livelihood, City of Loshan, Vehicle Traffic.

INTRODUCTION

In the last decades, administrators and policy makers have prominently focused on the structural aspects of actions, therefore have disregarded the context of implementation and consequences of projects and infrastructural programs in the country. Another problem is that these projects and programs lack the necessary holistic approach which considers sustainability as a prerequisite for every action. The management of these projects fails to pay attention to other definitive factors such as environmental impacts, interest groups and cultural and economic states of the context of

implementation. Roads in general and highways in particular, are significant indicators of development and the most important bed for union of ideas and cultures as well as the connection of nations and ethnicities.

The *Qazvin-Rasht* highway project does not take a holistic approach and fails to account for different aspects and consequences of the project and therefore is subject to flawed planning and uncoordinated management. After the construction of this highway, vehicles heading to northern parts of the country pass through the outskirts of the city of *Loshan* that cause many challenges to arise in various aspects of the residents' lives; such as reducing the financial capability of many of the residents, diminishing the city's livelihood, eliminating many job opportunities in traveler-related services and migration.

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PROBLEM STATEMENT: THE FORGOTTEN DIMENSIONS OF DEVELOPMENT OF REGIONAL ROAD NETWORKS

A research about assessment of road and rail-road projects of the country, conducted by the Deputy of Education, Research and Technology of Ministry of Road and Transportation in 2005, has emphasized the necessity of construction and development of roads: “corresponding to the increase of the demand for transportation of people and agricultural, industrial and raw material products, the demand for roads is increased and makes the development of infrastructural roads inevitable. That is why the construction and development of different types of roads have been some of the main components of development plans in the majority of countries” (Transportation Research Institute, 2005). On the other hand, Federal Highway Administration (1996) in United States considers the assessment of economic, social and environmental impacts of road construction and development projects compulsory and states that only projects will be implemented that can minimize the negative effects of construction, repair and maintenance and are also able to help improve the social and economic development. “Investing in transportation will have major impacts on social and economic states of communities, although the destructive consequences have been often overlooked. Evaluating these impacts will provide morality considerations during the process and alert the interest groups, planners and decision makers about the possible outcomes of projects” (U.S. Department of Transportation, 1996).

The road development's main problem in Iran is that it does not consider the probable impacts of road construction on economy, society, culture, environment and livelihood of people affected by the roads. In fact, road development programs have only targeted the accessibility and transportation of people and goods and in the most parts has overlooked the fact that the roads are highly determining factors in the direction of the development takes in a community. Poor planning and management of national projects has made the issues and problems to come to light after the projects are implemented, hence seriously endangering the life and livelihood of communities and cities. Therefore, the social and economic assessment of road developments, particularly highways, can help prevent the negative impacts of projects.

This paper aims to put emphasis on the importance of social and economic impact assessments in national

projects, improving the role of *Loshan* in *Qazvin-Rasht* corridor, presenting suggestions and solutions for revitalizing the economic livelihood of *Loshan* and also helping the residents in drawing the decision makers' attention to the city's current stagnation. To achieve this, relevant data has been obtained from Iran's Road Maintenance and Transportation Organization and a survey has been carried out about *Loshan's* residents' views on the consequences of development of *Qazvin-Rasht* highway.

OBJECTIVES AND METHODOLOGY

One of the requirements of national integrated development is highway network development. But this highway network expansion has some consequences that are sometimes in contradiction with integrated developments of regions. The main purpose of this paper is to know how highway network development by the aim of large-scale development in national level, can have harmful and paradoxical effects on the process of regions growth and development.

Theoretical Framework: Assessment of Road Development Impacts on Human Dwellings

Attempting to assess the impacts of road development on settlement development are fairly recent but everyone is unanimous on the crucial role of transportation and road construction in achieving development. Existing theories on the relation between road and settlement development generally suggest three types of impacts: positive, negative and neutral. Based on these theories, the new activities that are directly the result of constructed transportation facilities are considered as the “positive impact”. If these new facilities eliminate economic or productive activities and effectively abate the economic growth, as *Hawjan* states, they will be the “negative impacts” of the development of roads. Similarly if they do not lead to productive activities or economic growth, the facilities are thought to be “neutral” in the development of settlement (Howe & Richards, 1993). *Papoli Yazdi* (2002) in the “Rural Development Theories” book mentions the economic impacts of road development: “cost-benefit analysis, as the most determining criteria in road expansion, clearly states that in construction and development of the roads, the benefits should outnumber the costs” (Papoli yazdi & Ebrahimi, 2002). Therefore in order to optimize the projects, it is crucial to perform settlement impact assessment studies prior to the implementation.



Economic Impact

Economic impact assessment which evaluates the gains and loss associated with the project is an inseparable part of economic development plans. This assessment shows the capital yield of the project, social implications and the project's indirect effects on population growth rate, employment and investment alongside the new capital projects' consequences for the quality of the population's everyday life. Research conducted by the Ministry of Road and Transportation (2005) identifies that the main purpose of economic impact assessments is to discern the policies and decisions which help to realize the goals of the project well, stating: "economic assessment should follow a rational process which ensures the attainment of standards, help to recognize the secondary impacts, develop a control mechanism which coordinates the decision makers and takes various outcomes of investment into consideration" (Transportation Research Institute, 2005). Therefore, economic assessment should be based on principals that are able to increase the resource usage efficiency and ensure that programs are compatible with decision makers' goals and also indicate to the population and decision makers that decisions have sufficient technological basis.

Social Impact

In recent years and in light of the failure of structural oriented approach, a gradual paradigm-shift has come about and non-structural evaluations such as social impact assessment have become part of the project management agenda. The main purpose of social assessments is to ensure that developing actions would lead to improvement of social capital, would decrease the adverse social consequences of projects and would eventually ease the challenges of interest groups. In general "Social Impact Assessment includes the processes of analyzing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment" (Vancly, 2010). On the other hand Transportation Research Institute of Ministry of Road and Transportation defines social impact assessment as a part of the process of development and democracy and points out that it would lead to more people participating in the decision making and a more transparent process. "Social impact assessment can be thought of as a type of risk assessment in which probable outcomes of development are identified to ensure that the benefits of

the project exceed the costs. In addition, we can make a better use of local knowledge through a participatory process" (Transportation Research Institute, 2005). Other relevant researches indicate that "in evaluating important national projects and particularly in social assessments, social impacts of the project on every social stratum and specifically the more vulnerable groups are determined. It also presents a picture of the existing conditions of infrastructure, welfare status and primary economic activities in the scope of plan" (Afghanistan ministry of Energy & Water, 2009). A convenient way of conceptualizing social impacts is to discern whether a project causes changes to one or more of the following or not: people's way of life, their culture, their community, their political systems, their environment, their health and wellbeing, their personal and property rights, their fears and aspirations. (Bridget, 2010) So by identifying the key interest groups, social assessment provides for a suitable framework for their participation in selection, design and implementation of a project in order to ensure that goals and motivations causing the changes are acceptable for people that are affected by them, and to present solutions for omitting or decreasing the possible adverse outcomes. It would also develop the capacity to make participation, problem solving, service provision and implementation possible in the interest of reducing issues.

Hasty decisions and short time spent on studies during the process of developing road construction plans are some of the main issues in implementing the projects. In developed countries, the studies take up a lot of time often extending to three years, before being implemented. Through alliance formation and institutional cooperation, the implementation phase can be planned in a way that prevents repetitive work and extra costs. Therefore neglected aspects and consequences of projects ought to be taken into account through economic and social assessments, in order to make sure the high expenditure will result in growth and development and improvement of economic, welfare, social and cultural states instead of stagnation or recession in communities.

Research Method

In order to understand and evaluate dual-effects of *Qazvin- Rasht* highway construction on the region, the process of observing, assessing and analyzing the results have been done through the library studies and field survey.

In field studies and documents review of research, by referring to Iran Road Maintenance and Transportation Organization, the data about roadway traffic, passing through the region, was collected, and derived and



divided in two heavy and light vehicle groups. Finally this data were evaluated and analyzed in two period of time, before and after of highway construction. In order to complete the assessment and evaluation regional effects of the highway construction, field survey method and interviews with stakeholders and influential factors were used. This step was completed by distributing 100 questionnaires among *Loshan* city residents, includes open and closed questions. The study samples were chosen from the service providers and shop and market vendors of *Loshan* city (Group who provide services for travelers passing through the city). Statistical hypothesis testing were used to understand whether this establishment has negative impacts on our case study or not. To discern parametric or non-parametric testing, at first we should evaluate and test the samples normality. So P-P Plot normal testing lunched in SPSS software. In this test, H0 hypothesis includes normality of samples and H1 hypothesis includes non-normality of samples. In as much as P-Value in P-P Plot test is equal to 0.06 and is more than 0.05, so H1 hypothesis is rejected and normality of samples are confirmed. T-Student test is used to determine the hypothesis meaningful threshold of research. Student two-sided test with H0: $\gamma=\gamma H0$ and H1: $\gamma\neq\gamma H0$, as research hypothesis, were performed in SPSS software. Numbers obtained with high meaningful thresholds (more than 95%) rejected the H0 assumption (Highway construction less impact on the economy and people's livelihood in *loshan*) and confirmed H1 assumption (Highway construction high negative impact on livelihoods and economy of *loshan* city). Research was completed with field observations and photography of abandoned and semi-active centers of commercial activities in axis of the old road through *loshan* city. The study process, attempted to answer the research question by logical pattern of observation, analysis and results, by collecting quantities of data and conducting field survey by interviews, questionnaires and quantitative analysis of them.

ANALYSIS

Residential Systems and Highway -Network Development in Iran With Reference to Qazvin-Rasht Corridor

The construction of highways is a means toward accessing favorable conditions, achieving global standards and gaining satisfactory and safe roads. Some of the most important reasons for highway construction and development in Iran are as follows: improving people's

safety and health, speed increase in transportation of goods and passengers, cutting back on fuel and energy consumption by vehicles, reducing vehicle depreciation, easier driving and passenger wellbeing, economic and cultural development through induced productivity and generated job opportunities, optimizing resource and reserve consumption, creating investment opportunities as well as economic turnover and providing a suitable context for making use of potential capabilities in all economic sectors and expanding new industries such as tourism and eco-tourism. Whereas the existing network comes short of meeting these expectations, the goals clearly demonstrate the necessity of highway construction in pursuance of national development. In this regard, the necessity of the construction of Qazvin-Rasht highway can be contemplated, because this project has gone through all the stages of planning, managing and funding; however there are evidences of stagnation and elimination of activities and livelihood of some settlements along this corridor, which is the main concern in this paper. The initial hypothesis of this research is that there probably has not been thorough research on the various consequences of the implementation of this project on spatial structure of the settlements in the region, specially the city of *Loshan*.

Assessing the Socioeconomic Impacts of the Construction of Highway on Loshan's Life

In social impact assessment of a national project, the purpose is to determine whether this project will put the livelihood of residents of the region in jeopardy or whether there have been any thoughts on solutions for this predicament. The construction of Qazvin-Rasht highway took place to enhance the functionality of *Tehran-Rasht-Anzali* corridor which is one of the most important connecting corridors in Iran. Also they form part of the international North-South connecting corridor which is the shortest, least expensive and most suitable freight route between Asia and Europe. Qazvin-Rasht highway plays an important role in road transport in the highway network of the country. This highway is 127 kilometers long and is located in two provinces' jurisdictional areas: 70 kilometers in Qazvin province and 57 kilometers in *Gilan* province. It branches out of Qazvin-Zanjan highway in the 18th kilometer after the Qazvin toll gate and finishes in approximately 30 kilometers to Rasht (*Emamzadeh Hashem*) with the capacity of 53 thousand passenger-car units a day (Construction & Development of Transportation Infrastructure Co., 2009). This highway passes through outskirts of the city of *Loshan* (Fig. 2) which is one of the central cities in *Roudbar* County,



Gilan Province. Based on national census of 1385, the city has 14606 residents. *Loshan* has two concrete plants and a coal mine on the peripheries but many of the residents rely on job opportunities brought about by the traffic passing through the city en route to north of the country and back. The city is located on the northern parts of the country, 100 kilometer away from Rasht, the center of *Gilan Province*. Fig. 2 and 3 illustrate the location of *Loshan*, the Highway and the former road connecting *Qazvin* and *Rasht*.

Travelers heading to Northern parts of the country and coming from the direction of *Qazvin*, used to pass through

the city of *Loshan*, as the first settlement in a rather long distance. A fact that has changed since the construction of highway finished in 2009. Based on existing evidences and residents' affirmation, many of passing travelers used to stop in this city to take a break for a short time and meanwhile use the services provided by the residents, in turn helping them make a living. Up to 2009, the main economic sector of *Loshan* is retail that the travelers' expenditures on goods are the most part of it. Actually it can be said that selling food to the passengers has been the main source of income in the city.



Fig. 1. Location of Qazvin-Rasht Highway in Iran

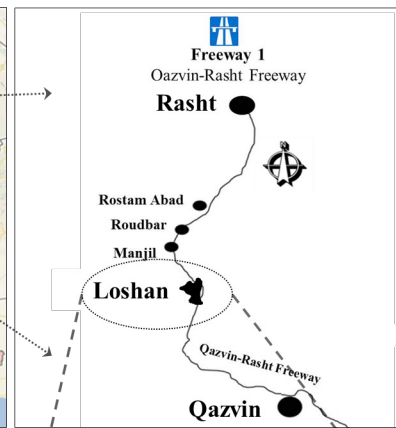


Fig. 2. Location of Loshan

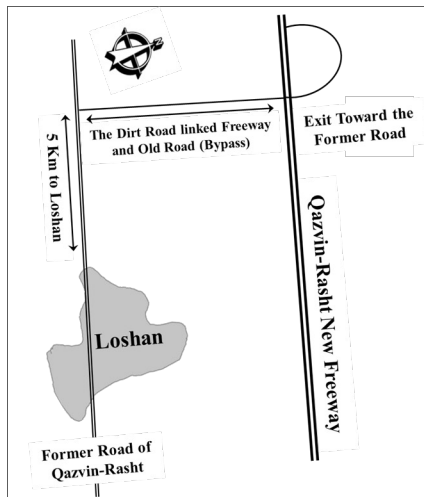


Fig. 3. Google Satellite Map of Region And Location of Old and New Paths (writers' modification, April, 2013)

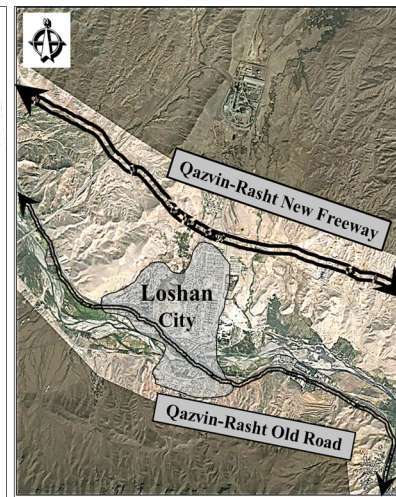


Fig. 4. Schematic Plan of Regional Transportation Network after Highway Construction



A road that passes through a city can create development, growth and sustainability in it. A road can also induce a certain economic and social identity in a way that makes the residents highly reliant on that road. The economic aspect would provide for the daily revenue of residents via creating job opportunities in the traveler-related service areas and the social aspect will result in a more profound livelihood and supplements the spirit of work and effort in the city. The road can also affect the residents' behavior and attitude and can increase the social communications. All the mentioned effects are determining factors in creating a desirable and high quality life in a settlement, which in Loshan's case used to be contributed by the former road connecting Qazvin and Rasht. Having the traffic pass through the city, the residents, specially retail owners, invested a lot in retails related to the travelers.

The results of the interviews with the retail owners¹ indicate that the most of them have taken loans from banks for the purpose of their retail business and that they haven't had any plans in the wholesale sector. This has resulted in the building of hotels, inns, restaurants, retail

units, newspaper stands and etc, prior to the construction of the highway. Since Qazvin-Rasht highway has started working, the former road has been more or less abandoned, challenging the economic state of the city. The highway is located on the east periphery of the city and except for an exit sideways doesn't have any connection with the city of Loshan. Passengers who intend to visit Loshan should take the exit toward the former Qazvin-Rasht road via a dirt road and then continue for another 5 kilometer in the former road to get to the city (Fig. 4).

By Considering the complexity and hardship, fewer passengers choose to go through the city. Heavy vehicles consist most of the passing traffic of the city. Although according to the Traffic Plans prepared for the city, a beltway on the west side is going to be constructed specifically for the heavy vehicles. The construction of this road will demolish the small hope for the survival of the economy of the city, and having no other particular basic economy; the city will not have the capability to maintain its population and is headed for an inevitable stagnation.



Fig. 5. Dirt Road Connecting Highway to the Former Qazvin-Rasht Road



Fig. 6. Loshan's Highway Exit

DISCUSSION

City of Loshan and National Highway Network; Development or Isolation?

To clarify the impacts of Qazvin-Rasht highway on Loshan, it is enough to determine how much the volume of passing traffic has changed after the construction of the highway. Traffic statistics provided by the Road

Transportation Organization of the country for the highway and old road have been analyzed. Table 1 and 2 show the statistics for the number of vehicles passed, hourly traffic volume and the ratio of light vehicles to heavy vehicles, in the old road and the built highway in 2009 (the year the highway started working) and 2011.

The data clearly indicate that after the construction of highway, there has been a significant loss in the number of vehicles using the old road. Currently the hourly traffic



volume of the highway is almost equal to the hourly traffic volume that the old road used to have in 2009 i.e. before the construction of the highway.

In 2009 and before the highway construction, all the traffic heading north and back, went through the old corridor, and light vehicles comprised the most parts in both directions. In this time, the city is blooming economically and livelihood, high spirit, identity and

desire to live and work is evident in the residents. High number of job opportunities in hotels, inns, restaurants and commercial, service and communication retailers up to 2009 had made for a good life quality in the city. But after this year the situation has been changed.

Fig. 7. illustrates the decrease of the hourly traffic volume in the old road in both directions, after the construction of the highway.

Table 1. Hourly Traffic Volume and Ratio of Heavy Vehicles to Light Vehicles, In Qazvin-Rasht Corridor (six month in 2009)

Corridor Name	Vehicle Number	Average Hourly Traffic Volume	Heavy Vehicle (%)	Light Vehicle (%)
*Qazvin-Roudbar (old road)	1621756	370 #	26.18	73.81
Roudbar-Qazvin (old road)	1911697	437 #	24.06	75.94

* Loshan is located between Ghavin and Roudbar (Fig. 2), therefore this data can be used as Loshan's traffic. (Iran Road Maintenance and Transportation Organization (2011) and based on Writers' analysis, 2012)

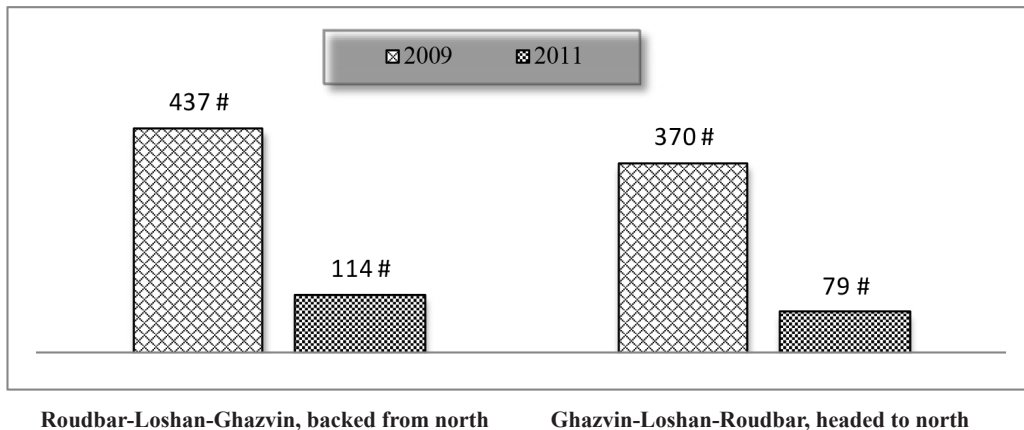


Fig. 7. Average hourly traffic volume comparison before and after the construction of highway, old road (Iran Road Maintenance and Transportation Organization (2011) based on Writers' analysis, 2012)

Comparing the ratio of light vehicles to heavy vehicles before and after the construction of the highway reveals the passengers' tendency (whom travel with light

vehicles) to use the highway and abandon the old corridor connecting Qazvin and Rasht (Fig. 8, 9).



Table 2. Average Hourly Traffic Volume and Ratio of Heavy to Light Vehicles in Qazvin-Rasht Corridor, 2011

Corridor Name	vehicle number	average hourly traffic volume	Heavy vehicle (%)	Light vehicle (%)
Qazvin-Loshan (old road)	692688	79 #	48.96	51.03
Loshan-Qazvin (old road)	1000474	114 #	50.41	49.58
Qazvin-Rasht (New Highway)	3324032	380	4.84	95.15
Rasht- Qazvin (New Highway)	3098790	354	4.37	95.62

(Iran Road Maintenance and Transportation Organization (2011) based on Writers' analysis, 2012)

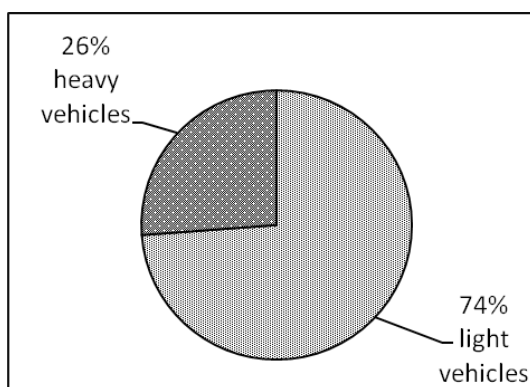


Fig. 8. Ratio of the Types of Vehicles, Ghazvin-Roudbar (Old Road), before Highway Construction, 2009

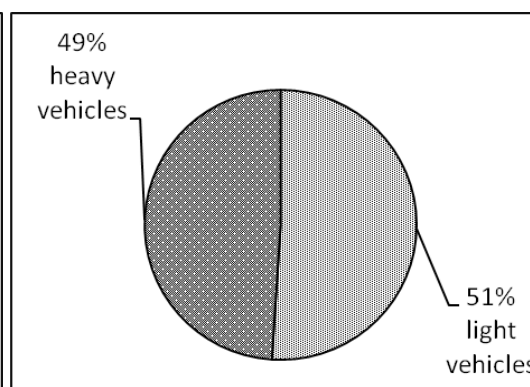


Fig. 9. Ratio of the Types of Vehicles, Ghazvin-Rasht (Old Road), after Highway Construction, 2011

(Iran Road Maintenance and Transportation Organization (2011) based on Writer's analysis, 2012)

These statistics show that traffic volume of light vehicles in old road has decreased from 73.8 percent in 2009 to 51 percent in 2012 (Table 1 and 2). The 51 percent of light vehicles that currently exist in this path are mostly due to inter-regional trips between settlements and also a few travelers that are interested in the natural qualities of the road.

But after the construction of highway, most of the vehicles choose the highway (Fig. 10) because of various reasons (such as: safety, security, reduction in travel time, reduction in travel costs and etc)

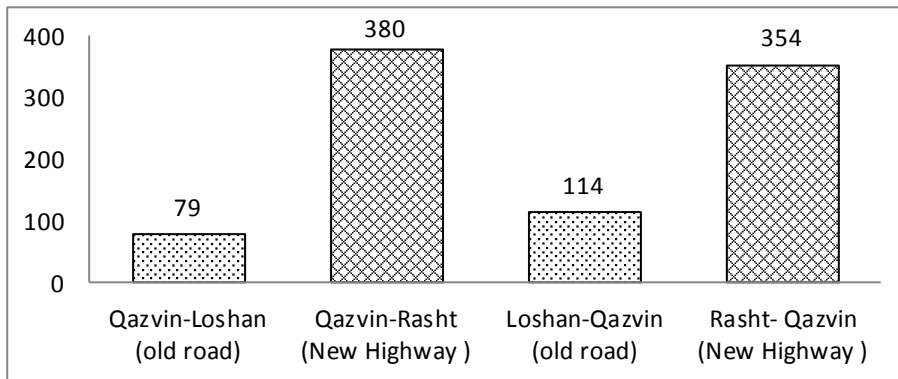


Fig. 10. Average Hourly Traffic Volume (Comparison between the Highway and Old Road in 2011) (Iran Road Maintenance and Transportation Organization (2011), based on Writers' analysis, 2012)

Also the ratio of light vehicles to heavy vehicles in the highway in 2011 (Fig. 11) shows the low number of heavy vehicles in this road. Compared to the 95 percent portion of light vehicles in the highway, it can be said that there is high tendency in passengers using personal vehicles to choose the highway.

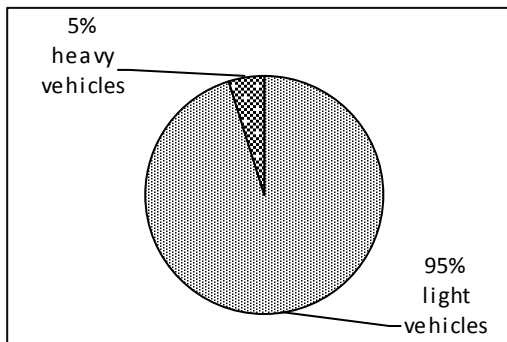


Fig. 11. Percentage of Traffic Volume in Ghazvin-Rasht Highway, 2011 (Iran Road Maintenance and Transportation Organization (2011), based on Writers' analysis, 2012)

In addition, Loshan residents' statements² explain that in a few years and by the construction of a new beltway specifically for the heavy vehicles in the south side of Loshan city, there won't even be any passing heavy vehicles left. Since the most of the non-basic jobs existed because of the traffic going through the city, the reduction in this traffic in the old road and consequently the city has resulted in undesirable conditions and challenges for the

city, in contrast to the suitable quality of life before the construction of highway.



Fig. 12, 13. Marginalized, Abandoned, Semi-Active Stores in Loshan City.



According to the field studies and interviews conducted, many of the residents have lost their desire to live in Loshan and have decided to migrate to the surrounding cities. While demographic groups who are unable to migrate, have decided to switch to seasonal jobs such as becoming a worker. Lack of attention to consequences and social and economic impacts of the highway's construction project for the cities in the area of influence, has made the city of Loshan, which has been formed by agglomeration of residents through the history, lose its economic livelihood and has changed the aspiring city of the past to a withered shell of a city in a short time.

People in the Periphery or the Core of Regional Development?

Paying attention to social development and population participation in planning and decision making are some of the principals of sustainable development. By considering the hypothesis of this paper which states that the construction of Qazvin-Rasht highway has negatively affected the livelihood and economy of the residents of Loshan, it is necessary to assess the residents' opinions about the impacts of the highway. Therefore, a questionnaire was distributed between Loshan's residents, particularly retail owners.³ The questions were devised to cover different aspects of the life quality in the city such as economy, culture, communication, pollution, environment and social issues. Table 3 demonstrates the summary of findings.

Table 3. Summary of Loshan Residents' Opinions about the Construction of Qazvin-Rasht Highway and Its Consequences

Questions	Strongly agree	agree	neutral	disagree	Strongly disagree
Satisfaction from the construction of highway	1/2	1/6	9/8	16/04	66/6
Inclination to move the business to the highway brink	36/2	17/5	8/7	16/25	20/9
Level of highway impacts on economy	66/2	11/2	8/7	5	8/7
Impressionability of household income from the highway	38/2	17/2	9/8	9/8	24/6
Income reliance on passing traffic	42/8	25/9	12/9	7/7	10/3
Highway impact on calmness and comfort	12/1	6	36/5	26/8	18/2
Reduction of environmental pollution in comparison with before the highway's construction	12/3	9/8	27/1	27/1	23/4
Impressionability of culture and communication from the passing traffic	42/4	19	14/2	10/7	9/52
Connectivity improvement of the two sides of the old road	23/4	12/3	32	16	16

Note: 1. Dark parcels have had the most frequency.
 2. Figures represent percentage of respondents.

66.6 percents of respondents were completely unsatisfied with the construction of Qazvin-Rasht highway and believed that it has greatly impacted their life. In answer to the question: "given the possibility of making commercial units on the brink of the highway, would you choose to move your business there?" 36.2

percents declared their consent and stated that with the construction of the highway, there is no other option left. People who were not willing to move their business said that they would not want to leave the place they live in order to make money. 66.2 percents of respondent believed that the construction of the highway has greatly



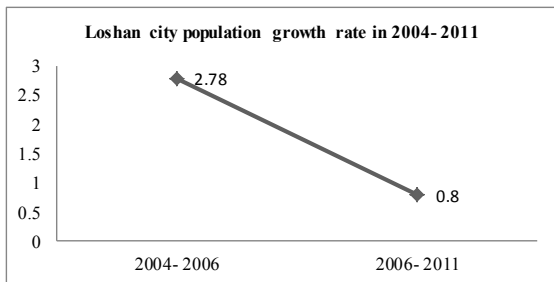
impacted their lives. This result is in accordance with this paper’s hypothesis. 42 % of respondents think that the city is highly reliant on the volume of passing traffic. Many believe that the passing traffic influences the culture of the city as well, because people going through the city can have different cultural backgrounds. About other asked questions, it can be said that the respondents’ answers mostly indicate that the construction of highway has negatively impacted their lives.

Loshan population growth in 2004 to 2011 shows that despite the increasing number of population in this time period, the population growth rate has decreased. This process shows that Loshan population has grown less in comparison with before the construction of highway. Two main reasons for reduction of population growth rate in a city are negative migration and increase in mortality. Today regarding to development of public health and medical science, the rate of mortality has strongly decreased. So it seems migration is the only reason that has negative effect on population growth rate of Loshan city. It seems Loshan’ residents have been faced with a crisis of declining jobs opportunities and urban economic isolation as urban economic problems resulting from changes caused by paradoxical consequences of Qazvin-Rasht highway construction as a temporary event. This is the main reason of population growth rate reduction in Loshan city.

Table 4. Loshan Population and It’s Growth Rate in 2004-2011

Year	population	growth rate
2004	13816	-
2006	14596	2.78
2011	15193	0.8

(Statistical Organization of Iran, 2013)



Conclusion: How to Compensate the Anti-Development Effects of Highway on Loshan

The construction of a highway network is fundamental to any urban or regional development. But the main issue is to construct a road that takes all economic, social and environmental aspects of the context into account, in order to make sustainable development possible. The process of inducing regional development through road construction is not comprehensive in Iran as it perceives connecting two places as the only goal in constructing a road and fails to consider that it usually affects the economic, social and environmental states of the settlements or ecosystems of the planning area.

This paper illustrated the consequences of application of such a deficient process in the case of Qazvin-Rasht highway, in which the shift in the route travelers take (from the old road to the newly constructed highway) has had impacts on the life of Loshan and its residents, deteriorating the economic livelihood that was reliant on the passing traffic and collectively leaving the city in a difficult and critical state. This crisis has led to unemployment of many residents and widespreades bankruptcy in service sector of the city such as hotels, inns and restaurants as well as retail shops (e.g. fruit shops, newspaper stands and etc). Currently, nearly three years after the construction of the highway, many residents are starting to migrate due to the city’s inability to keep its population.

We show that Loshan population growth rate in recent years have been lower than previous periods. This can be due to reduced employment opportunities in the city. Activities and services formed along the old road that passed through the city have been closed and isolated. This problem can intensify the migration from Loshan city for people seeking job, in future.

Some of the anti-development consequences of the highway on Loshan are as follows: economic insecurity and endangered local economy, migration to provincial capitals of Rasht and Qazvin and the country’s capital and finally reduction in population growth rate, reducing city’s livability and liveliness formerly caused by the passing travelers, growth in social abnormalities caused by undesirable economic condition. By considering these consequences, compensating plans and mechanisms are necessary and inevitable in order to revitalize the city.

Other countries’ experiences can be helpful in achieving this goal. Assigning high tolls to the highway can make up for the construction and maintenance costs of the highway. Furthermore it would encourage the travelers to use the old road in which toll is free, hence directing a portion of the traffic to the city. This issue is



in reference to reform in the toll system which has not been explored in detail and therefore currently highway toll system of the country is not an influential determinant in choosing road by travelers. This subject calls for a separate research that can be done by the regional transportation development scholars.

By using spatial planning approach in the region scale, other potentials of Loshan city can be known and used to create job opportunities in fields of agricultural and conversion industries. In the framework of this project, landscaping and Edge designing and land use planning in the old road, due to the exciting natural potential, can attract travelers to cross through this axis and provide the context of redevelopment of the region again.

In order to reduce the impacts of the current crisis and to avert future challenges of the Loshan's residents, some actions such as building markets, cultural and service complexes alongside the highway, geometrical corrections in city's exit on the highway in order to direct a portion of the traffic to the city and also creating recreational amenities can prove effective so as to motivate the passing travelers to stop in the city.

These events may usually happen as development's side effect. It should be considered for lesson learning that can be used in other regional planning projects.

Highways construction as the catalyst for integrated development is crucial to achieve national goals and sustainable national development. But this question remains that what actions can be done to coordinate these goals with the challenges and consequences which are caused by highways in a way that, aside from institutional benefits, warrants the coordination and consensus of the main development actors in the scope of the plan?



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ENDNOTES

1- Writer's interview with Loshan's retail owners, Ghazvin-Rasht corridor, May 2012

2- Field studies in the city of Loshan, interview with the residents, May 2012.

3- The sample size of the questionnaire was 100. The



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questionnaire contained 10 closed questions and one open question in reference to the general viewpoint of the interviewee on the consequences of the construction of highway on the life of residents. 87 questionnaires were returned.