



## Considering The Effects of Railway on Urban Development (Case Study: Sari)

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**Abstract:** City as an innovation of man noticed by civilization since early. The way of consisting locating elements important divisions of City & their connection to each other is effected by many factors such as economical- social managing – militarism factors & also features & needs & their relation to other factors. It is anticipated that by entrance to third millennium, almost half of the world population being inhabitant in civic area. While civic development a space concept of changes in land using & aggregations surface, for meeting the need of citizen in the field of house, transportation, free times & food & so on, but the important position of railway transportation is determined in relocation, in relocation, distribution & exchanges related to different activities which leads to increasing traffic in city & physical development of city, because the effects of railway cause consisting development, field & organizing various activities in cities. We can say; complexity of each factors (economic, social, political, geographical, sociological) by self was city procreator, as its spatial crystallization. Certainly, organizing city & the way of its development & evolution needs identifying city issue & civic problems & then planning for it this research is an analytic & descriptive approach. Gathering field information is done by using questionnaire & spss software & for priority of program, TOPSIS model was used by calculating recent behaviour average & contrasting it with middle of saying surface which is estimated 108, by guessing railway effective role on Sari development inconsistency, we can reject limit lower down middle, also by using TOPSIS method for arranging Sari locations according to calculating weights, Dokhaniah & Servinebagh were the most offerable place respectively & Bakh 8 & Peivandy were the least affectable place respectively.

**Key words:** City, civic development, railway. Sari.

### INTRODUCTION

Urbanism history in the world goes back to the end of 7000 to 10,000 BC and to the beginning of agricultural age. Centers of civilization was created in the world's fertile valleys and is a symbol of hydraulic civilization, and indicate this age, but the process of urbanization during this period of industrial revolution (1750 was slow) And is formed within the framework of traditional production approaches based on human labor, animal, wind and wheel. As a result, growth and development of cities and urbanization was slow, but urbanization after industrial revolution took steep slope [1]. based on social, economic and political evolution of recent century in Iran, the country's urban population continuously has increasing trend in recent years. To the extent that the percentage of urban dwellers reached from about 31 percent in 1956 to 70% in 2006. Obviously this demographic changes and actions have a determinative effect on the urban dimension. [2]. The reality is that the current trend cannot develop human societies to reach their real goals and dreams. The current conception of

development and methods used to achieve it is incomplete and sometimes contradictory. . For example, the apparent gap between rich and poor countries and even between groups within a single country, not only isn't weak but is deeper [3]. Cities enjoy Complex transportation systems that strengthen cities. [4]. while in rail transport large amounts of cargo and passengers, transport of goods with high volume and non-family trips is carried out honest [5] .it should be noted that transportation for two reasons is the center of interest for geographers; First, the infrastructure, terminals, equipment and transportation network occupied remarkable places in the geographical space and were the basic principles of complex space systems. Second, since geographers are explaining the spatial relationships, because these networks enable the spatial interaction. One ideal transportation model is a momentary model and has unlimited capacity and always is accessible that by geographical view be the target of transportation to overcome space. .space that with a variety of natural and human constraints such as distance, time, and topography and management division is formed [6]. Statistics indicate approximately 8% share of transport (rail, road, air, etc.) in the country's gross domestic product [7]. Because access to sustainability in transportation (rail) transport sector requires an understanding of the interactions between environmental, social and economic sectors. Because finally they determine the orientation and push towards the targets [8].

### **History and necessity of research:**

Most of us are less likely to think that today problems in our lives, anything and under each strand is rooted in ignorance or weak decisions, which we did in the past. Yesterday, when we were thinking and planning for our today lives, we were involved in solving the available problems and pleasures to access momentary success that there wasn't opportunity to pay attention to changes that were going on, And we were unaware that the world is rapidly changing, we suddenly saw that the future that we assume it distant is available today [9]. Urban transport, especially rail transport in urban areas is essential for urban development. Developed countries of the world through the development of urban rail transport have been able to attract urban investments and provided growth base in the development first and second decades in their countries. [10].

- aqdas vatankhah and fereidoon qarib in the year of 2009 [11] considered land use effects and urban development in fast public transportation and the fast role of public transportation in developing functioning and increasing land price.

- Keramatallah ziari, Manoochehri Miandoab Ayub, Saber Mohammad pour and ahad Ebrahim Pour . In 2012 [6] investigated and evaluated public transportation system (brt) in Tabriz using strategic factor analysis approach (swot). And analyzed the strengths and weaknesses of the public transport system in the city of Tabriz.

-- Mohsen Sadeghi, B. Ghafari Farsani. In 2012 [5]. To investigate inconsistencies of iran rail transport regulations with the principles of the World Trade Organization (WOT) and to identify processes affecting rail transport and its consequences in country.

- Amir Abbas Rasafi, Shima Zarabad Pour, in 2009 [8], considered the sustainable development of transport in Iran using multi objective analysis.

- Seyed Mohammad Ali kefaee, Hussein saburi karkhane. In 2012 [7], considered inflation effects of road transport fuel increased price and challenged inflation role and place on road transportation in their research.

- alireza tavakkoli.mostafa Shamshirband.seyed Ali Hossèin pour in 2009 to determine the effects of urban open spaces in the urban development process with emphasis on crisis management, case study in Tehran Metropolis And studied the effects and consequences on Tehran through crisis management with regard to urban issues.

Vienna in 1999 [10] studied the flows and sustainable development processes and sustainable development of transportation systems in Australia.

- James in 1995 [4], examined the role and impact of computer systems and the role of GIS in urban development and urban hazards.

- Alan Coulthart, Nguyen Quang and Henry Sharpe in 2006 [12] studied urban transport development strategies and their impacts in these areas.

### Theoretical foundations:

#### Sustainable urban development

It is predicted that by the turn of the millennium nearly half the world's population will live in urban areas. means places where consume most resources and produce more waste and pollution .the existing paradigm of urban development and human activities has led to the disruption of environmental regulation And threatened the survival of human race and the sustainability of life on earth . since 1970, about these issue that the current paradigm of development in one hand and the behavior and performance of human in cities from another hand caused acidic rains and environmental changes and ecological crisis, to this aim, rio conference in 1992 by issuing resolutions concluded that such developmental paradigm will not be sustained in long-term and without basic changes And major changes and current rotation should be done to achieve sustainable development. The role of cities in terms of sustainability is very important.

. It is recommended that cities should be used as the main-focus points for solving global problems and to achieve sustainable development [13]. According To sustainable development and in particular, sustainable urban development (sustainable development is defined providing the present needs without compromising the needs of future generations ) processes we can observe its impact in urban areas [14]

**Table 1.** Views and perspective effective on urban planning [15]

Affective factors	Main axis
Athens Charter	attention to the quality of urban environment, social values, neighborhoods and relationship with nature
Garden cities	attention to the quality of the urban environment, and the need for preservation of natural and aesthetic value near the town and village
neighborhood	unit attention to the provision of services in the residential areas and distribution service units and useful tool for physical planning
New cities	targeting the quality of the performance qualification
Postmodernism	attention to local values and quality of life in urban spaces
new urbanism	attention to urban facilities Urbanism Access Centre, community vitality and functional, local governance system
Sustainable development	reducing consumption of natural resources, compatibility with nature, preserving justice, and reducing pollution and compression of urban fabrics

Reference: authors

**Table 2:** factors affecting on urban physical development

social cultural	People's social and cultural trends - social segregation
economic	price of land - industries and workshops
Natural geography	agricultural lands and gardens - subsurface water - a steep slope and the surrounding mountains - wind direction
Political	town construction plans, - transfer land to the people - Setting city limits
Physical space	rail lines - roads between cities - belts and bypasses

Reference: authors

**Table 3:** effect of transportation on sustainable urban development

Effects of transportation on sustainable urban development
1. duration and intensity of population is increasing, an average speed in cities reduced to 5 percent per each decade
2. Air pollution in accordance with national standards and standards of the World Health Organization air quality in many cities has exceeded the threshold.
3. Noise caused by traffic affects the life of the city and about 15 percent of people in developed countries are exposed to high levels of noise pollution
4. road Safety is a worthy of attention issue in cities and residential places.
5. With the construction of new transportation routes and facilities and the consequent destruction of historic buildings and the reduction of open spaces in urban the quality of urban visions declined.
6. Using space facile public traffic and motor displacement
7. - Global warming is a consequence of the use of fossil fuels, Today 25% of co2 emissions in the atmosphere results from transportation.

Reference: authors

### Goals regarding sustainable development in urban transportation

- ☐ prevent pollution and environmental degradation in different regions
- ☐ improve public transport and reduce private cars traffic
- ☐ Traffic management, better planning, urban sprawl and management on how to manage the movement of vehicles
- ☐ promoting walking and cycling and of course, parking management and vehicle stops
- ☐ Enforcement to achieve sustainable development strategy is combined with land use planning and transportation needs

### Sustainable transportation and its specific objectives:

\*a system that creating and accumulation of waste products in one area is having noticed to the attraction power of that area and be enhanced with consuming reproducible and recyclable components and minimum use of land

- A system that step by providing justly access to people and their goods to reach to health and harmless quality of life in each generation.
- System that has been operating with maximum efficiency and its` financial costs be provided.

### **Future of Urban Transportation Management**

Managing in transportation in cities always was a never-ending challenge for urban managers in our country. Confusion and rapid and continuous changes in the basic component of transportation in addition to issues such as: changing government policies, A multiplicity of factors affecting the transportation process, the fundamental role of transport in the development process, transport influential role in people's lives and so led this fact that urban transportation management be one of the important and complex areas of management areas. And will always require special attention. On the other hand, many of these issues and factors affecting transport, which are always in front of decision makers and planners in this field , in addition to the multi-dimensional nature , means that most of simplifications are not accepted such that in a given decision just cost or interest is important which should be maximize or minimize. The process of replacing them hasn't a specific and linear model. That is, only a quantitative studies and statistics or point forecasts didn't work to discuss and plan based on them and it is necessary to use more developed methods and means than usual methods. Tools that can help managers and planners to obtain maximum amount of information about each of the factors influencing raised trends or issues and well recognize available or appearing trends in different programs and issues that are in minimum importance. . However, these methods or tools should also have the ability to meet the highest demands should enable existing managers and planners to develop Programs that are comprehensive, flexible, according to Iranian culture and traditions of the modern world and having the global capacity. . Futurology is one of those tools that can optimize the interaction of living organisms with overnight shipping to present an appropriate answer to the needs of urban transport management in the country [9].

The study area:

City of Sari is located in the range 52 degrees longitude and 56 minutes 'to 53 degrees and east 59 minutes and 35 degrees latitude and 58 minutes to 36 degrees and north 50 minutes . This city leads to juibar, qaemshahr and savadkuh from the West, from the East to the city of Neka, from the north to the Caspian Sea and from the South also leads the Alborz mountain range and Semnan province. The area of this city is about 3/3685 square kilometers .that consists of 5 sections, 15 districts, 4 cities and 441 villages with population. Good natural conditions in this city caused population growth. Most of the population and human settlements concentrated in the plains of the city and generally population of this city in housing and population census was 495,360 people. Of this number, 248,013 are males and 247,347 females. . A total of 132,995 households had been formed. According to the total population, 273,972 people live in the city and 221 388 people live in the village. Based on The first Census of Housing (1956) Sari had 26278 people population. The figure in the 2006 census was 273,972 people, this trend indicates that the city's population in the first census distance to the target year (2006), became about 5/10 fold. During the years 1986- 1976 by expanding physical fabric of city structure due to merger with two free villages of azadgoleh and Alukandeh changes were occurred in demographic trends in 1986. So that the population in this year reached to 141,020 people with annual growth of 14.7 percent. In the urban hierarchy of Mazandaran province Sari as the provincial capital of Mazandaran has the highest order compared to other cities. In the second five-year plan of economic - social and cultural development Sari was considered as the first city in the aforementioned urban services. city`s economic pivot is services and industries and it`s service level is national and has provincial performance. the cause of Sari`s first place in province is its performance. . Sari position as the political - administrative center of province changed it a major administrative and service center. This performance is seen in all educational, administrative, cultural areas. Providing superior services in this city has caused the migration to the city and



city expansion.



**Map 1.** Sari position I mazandaran province

## Research findings

### The first hypothesis

H0 = there is significant difference between railways and urban development from the economic dimension

H1 = there is significant relationship between railways and urban development from economic dimension view.

According to the results and the value of Alfa 05/0, h0 is rejected and h1 is accepted. According to spheres such as; changes in distressed areas and old buildings of city, widening streets and passages of city, extending new and modern buildings in the city, spreading unprincipled and unplanned construction, access to public transportation (taxis and buses), the effect on increase in urban land prices, improve urban furniture (July electric lights, walking sidewalks, benches, etc.), optimal distribution of facilities and welfare services in the city, changing Quality of life (nutrition, kind of eat, kind of cover and housing), changes in real estate prices, improving the city landscape, spreading leisure facilities across the city, the impact on the reduction of urban unemployment, creating jobs and earning more money for St.90 citizens, , Saving time and cost of citizens, diversification of economic activities in the city, expanding retrofit of residential units in the city, According to Table 4, it can be accepted that based on society opinions sample mortgagor effects on urban development from the economic dimension is higher than the estimated average.

**Table 4:** Significance value in economic view

indicator		T statistic	Available status average	Average limit	Significance level
Effect of railway and urban development	economic	15.42	64.17	34	0.00

Reference: authors

### The second hypothesis

H0 = there is a significant difference between railways and urban development from social dimension

H1 = there is significant relationship between railways and urban development from social dimension.

According to the results and 0.5.0 alpha value, h0 hypothesis is rejected and h1 hypothesis is accepted and according to spheres such as; easy access to public services (bakeries, fruit shops, etc.), access to public transport systems. (taxis and buses), ), Not having a officials specific plan in development of rail transport, population growth and increasing population density in the city, expanding sense of security and relaxation and well-being in the city, improving urban furniture (July electric lights, sidewalks, benches and etc.), good governance and increasing the power of municipalities to manage the city, the expansion of citizen participation in the development of the city, Optimal distribution facilities and welfare services in the city, unrestrained spread of promiscuity in the city, the impact of people`s immigration on their settlement, quality of life (nutrition, kind of eat, kind of cover and housing), the impact on residents' level of education and knowledge in city, improving the city landscape, preserving local values and remaining traditions, expanding facilities for leisure in the city, distribution and proper distribution of population in urban neighborhoods, effect on communication and interaction between citizens, the effect on reducing urban traffic level, increasing infrastructures by officials for developing urban future, the impact on urban culture(customs and attitudes, etc.), urban expansion and the impact on tourism, construction and effect on urban buildings and forgotten monuments, expanding health care centers, motivating local communities to support and participate in the local development, municipal officials identification from sensitive and vulnerable areas of the city, according to the table (5) we can accept that based on a sample mortgagor effects on the urban development from social dimension is evaluated higher than average.

**Table 5:** Significance level from social dimension

indicator		T statistics	Available status average	Average limit	Significance level
Railway effects and urban development	social	22.98	78.25	52	00.00

Reference: authors

The third hypothesis

H0 = there is a significant difference between railways and urban development from environmental dimension.

H1 = there is a significant relationship between the railways and urban development from environmental dimension .According to the results, and 05/0 alpha value , hypothesis h0 is accepted and h1 is rejected and according to spheres such as: Expansion and creation of green spaces in neighborhoods of the city, destruction of fertile lands, noise pollution in the city, destruction of vegetation, reduced long distances and intersections and roads in the city, improving the city landscape , Improvement of urban waste water disposal systems, the change in scenery and buildings across the city, reduce marginalization in the city, spreading environmental problems (trashies, etc.), increasing surface water runoff in the city and so on, based on the table (6) it can be accepted that based on society's viewpoints the mortgagor effects on urban development is evaluated in environmental view more than the average level.

**Table 6 :** Meaningfulness level from environmental dimension

indicator		T statistic	Available status average	Average limit	Significance level
Effects of railway and urban development	developmental	3.135	36.08	22	0.003

Reference: authors

**The main hypothesis:**

According to the results and alpha value 05/0, h0 is rejected and h1 is accepted. in order to investigate railway effect on urban development from items such as: ; Development of distressed areas and buildings, widening streets and public passages through the city, expansion of new and modern buildings in the city, spread unprincipled and unplanned construction, access to public transportation (taxis and buses). The effect of land cost increase in urban lands, improve urban furniture (July electric lights, sidewalks, benches, etc.), optimal distribution facilities and welfare services in the city, quality of life (nutrition, kind of eat and kind of cover and housing), price changes and urban real estate, improve the city landscape, spread leisure facilities across the city, the impact on the reduction of urban unemployment, Creating jobs and earning more money for citizens, saving time and cost of citizens, diversification of economic activities in the city, expanding retrofit of residential units in the city, easy access to public services (bakeries, fruit shops, etc.), access to systems of public transport (taxis and buses), lack of identified planning in the development of rail transportation by authorities.



Population growth and increasing population density in the city, expanding sense of security and relaxation and well-being in the city, improve urban furniture (July electric lights, sidewalks, benches, etc.), good governance and increasing the capacity of municipalities to manage city, expanding sense of citizen participation in city development, optimal distribution of facilities and welfare services in the city, unrestrained spread of the rains in the city, the impact of immigration on their settlement, quality of life (nutrition, kind of eat and kind of coverage and housing), the impact on residents' level of education and knowledge. , Improving appearance of city, preserving local values and traditions remain, expanding facilities for leisure in the city, distribution and proper distribution of population in urban areas, effect on the type of communication and interaction between citizens, the effect of reducing traffic levels in the city, spreading infrastructures by officials build by city officials for city future development, impact on urban culture (customs and attitudes, etc.), spread and impact on urban tourism, urban regeneration and the impact on urban forgotten buildings and monuments , expanding health care centers, creating incentives for local communities to support and participate in local development, municipal officials identification to sensitive areas and vulnerable areas , City development and the creation of green spaces in neighborhoods of the city, destruction of fertile lands, noise pollution in the city, destruction of vegetation, reduced long distances and intersections and roads in the city, improving the city's appearance, improving urban waste water disposal systems, change in scenery and buildings in the city, reducing slum in the city, spreading environmental problems (trashies, etc.), increasing surface water and runoff in the city was used. By calculating available condition that is estimated equal to 69.105 and its comparison to items average level that is estimated to be equal to 108 and by Assuming railway (railroad) line, significant impact on the lack of Sari spatial development lower than the average can be excluded. it means that by lowness of calculated significance level that shows a value lower than .05, it can be accepted that rail lines( railways) didn't have effective role on lack of sample society's spatial development.

**Table 7:** significance level of railway effect on urban development

indicator		Statistic t	Available statue average	Average limit	Significance level
Effects of railway and urban development	whole	93.41	105,69	108	0.000

Reference: authors

Spearman correlation test:

In order to examine the relationship between research hypotheses, researchers tried to see whether the railroad had any effect on Sari spatial development or not. According to Spearman coefficient for sample population, obtained p. value of spatial development related to economic, social and environmental value that was less than the alpha level .05, indicates this issue that railway has effect on Sari spatial development that this relationship between variables is a kind of direct relationship that can be seen in table (8).

**Table 8:** Pearson test

			economic	Social	developmental
	economic	relationship	1.00	**.439	**0.365
Pearson coefficient		significance	0	0.00	0.00
		numbers	194	194	194
	social	relationship	**.439	1.00	**0.252
		significance	0.00	0.00	0.00

		numbers	194	194	194
	developmental	relationship	** .365	** .0252	1.00
		significance	0.00	0.00	0.00
		numbers	194	194	194

\*\*significance level

Regression:

Correlation analysis usually is done in conjunction with another technique called regression. If the obtained observations from two variables have a linear relationship and a straight line could pass through the points to show their general trends. First, the intensity of the relationship can be estimated from the distance and nearness of places in relation to its estimation. Second, line position give information about the type of relationship between variables which based on it, determine amount of changes in variables that is expected by another variable effectiveness. The process of decision making in this issue that which line is the best line for summarization of a special set of points is called regression analysis. According to table (9) and the coefficients value of b and significance level p it can be said that based on the alpha value 05/0 Sari railway had an effect on spatial development.

**table 9:** Regression

			Standard coefficients	Unstandardized regression	Regression
sig	t	beta	B		
0.00	2.3478	0.349	1.000	Economic	regression
0.00	7.1206	0.411	1.000	Social	
0.00	6.7811	0.237	1.000	Developmental	

References: authors

Primary data matrixes:

**Table 10:** Primary data matrix

areas	economic	Social	Developmental
Rahband,sangtarashan	21.00	35.47	34.34
dokhanyat	23.89	34.10	33.00
servinebagh	22.11	39.30	38.13
bakhshhasht	21.34	358.55	36.28
Peivandi	26.51	37.08	39.16
mirzamani	24.32	35.19	38.66

References: authors

**Weight measuring the indicators:**

**Table 11:** Weight measuring indicators

order	developmental	Social	economic	Whole
1	5	9	7	1
2	.32	.24	.42	2

Reference: authors

Ci values or prioritize:

**Table 12:** ci values or prioritize

Areas	Ci coefficient	Order
Rahband, sangtarashan	.58976	3
Dokhanyiat	.64319	1
Servinebagh	.600128	2
Bakhshehasht	.47441	5
Peivandi	.35765	6
Mirzamani	.51234	4

Reference: authors

The results show that by utilizing the TOPSIS approach in order to rank Sari places fitted with effectiveness of economic, social and developmental indicators and based on calculated weights in each indicator, As Table (12) shows the areas of dokhanyat and servinehbagh have the most effectiveness and bakhshhasht and peivandi have the least effectiveness.

### Conclusion

Formation and location of elements and districts of the city and their relationship with each other is influenced by various factors such as natural factors, economic factors - social, administrative - military factors and also features and spatial needs and their relationship with all activities, it was anticipated that by entering the third millennium almost half of the world population will be resident in urban areas. This means places which consume the most resources and produce more waste and pollution. Urban development continues its way as a spatial concept, changes in land use and densities, to meet the needs of urban residents in housing, transportation, leisure and food, etc..

And since the transportation system existed to meet the needs of human must move with precision performance to meet these needs. Since in the development of transportation shouldn't be discrimination between human beings and generations and social, economic and environmental effort should be done to create justice. Today, transportation specially railway transportation except from its continues effects, transformed to an important urban residents anxieties and the most complex management issues and living in cities is far from our thought. In recent age, rail transportation as an effective component includes all urban life angles. Having noticed to obtained results from research of first hypothesis,  $H_0$  is rejected and  $H_1$  is accepted. based on table 4, it can be accepted that based on sample population views, the effects of railway on urban development is more than the average limit in terms of economic dimension. in the second hypothesis, based on table 5, it can be accepted that based on sample population views, effects of railway on urban development is higher than the average limit in terms of social dimension. Also, in confirming research third hypothesis having noticed to obtained results,  $H_0$  is rejected and  $H_1$  is accepted, that based on table 6 it can be accepted that based on sample population views the effects of railway on urban development is higher than the average limit in environmental dimension. But in confirming research main hypothesis by calculating available condition that is estimated 69.105 and by comparing it to average items which are estimated 108, by assuming railway lines the effectiveness of railway on Sari spatial development, lower limit than the average can be excluded. This means that by lowness of the calculated significance level that is lower than alpha value 0.05 it can be accepted that railway lines didn't have efficient role in sample population spatial lack of development. having noticed to spearman coefficient and p value of spatial development in relation to economic, social, and environmental dimensions that their value is lower than 0.05, indicates this issue that railway had effect on Sari spatial development that this relationship between variables is a direct relationship. Based on regression analysis) According to table (9) and the beta coefficients and the significance level we it can be understood that based on the alpha value 05/0 Sari railway had an effect on spatial development. using topsis method in order to order Sari areas in relation to effectiveness from economic social and environmental indicators and based on calculated weights in each indicator and as table 12 shows, dokhanyat and servinehbagh have the most influence and bakhsh hasht and peivandi have the least influence.

### Suggestion

#### General suggestions

1. Developing a strategic plan for sustainable development and in particular urban space
2. Planning, development and urban management based on the principles of sustainable development.
3. Planning and development of urban transport systems based on world standards
- 4-preservation, and promotion of rail transport fleets
5. Providing information about the effects of railways in urban spatial development
6. Providing the opportunities and facilities for socio-economic development and urban rail transport system
7. Reforming and development of the region's environment
8. Enhancing public participation in urban development and sustainable development
- 9-developed organization and management of development activities related to railway and urban transport lines
10. Performing Land use planning projects on a regional scale that are validated and have legal value
- Coordination between the planning systems in the city
12. Determining the public policy of urban development
13. Offering general suggestions about monitoring urban development due to the effects of railway;
14. Policy making on urban areas, especially the areas around rail network
15. Issuing urban transport policy.

#### Special suggestion

- \* It is recommended that with micro and macro systems in urban management transport, a future center also be established. With this center we can expect regional and national developments in the field of rail transport industry on urban development.
  - \* Modeling of urban development, public transport effect, especially the railway in different ways in order to gain a better understanding of the problems of urban citizens and the future development of the city
  - \* Restoration of public facilities, walls and malls on the edge of the railroad, to beautify urban space
  - \*- urban designing in mixed-use neighborhoods and the city's land mass rapid transit including the creation of neighborhood units demand, the development of urban neighborhoods, smart growth and so on.
  - \* Application of appropriate management strategies to reduce the adverse effects on the environment.
  - \* Strengthening and creating green spaces on the sidelines of the railway to beautify the marginal space with a sustainable development approach.
  - \* Upgrading buildings at Sari railway station in terms of external view beauty and visual environment comfort.
- Efforts to create commercial spaces in undeveloped rail areas to improve social and economic potential of the area

- \* Building shopping centers in Sari railway station to create an environment to attract labor force and preventing youth unemployment in order to improve economic and social area
- \* Creating specific recreational spaces (such as amusement parks) in the underdeveloped rail periphery for attracting the attention of public and authorities to increase the effectiveness of local regions.
- \* Creating legal barriers to prevent waste, debris and construction materials, and any operation that cause disorganization of railway border
- \* Creating air bridges for the passage of vehicles through the dungeons railways for enhancing safety and reducing traffic accidents utilization area and down when passing train
- \* Avoid meeting different people including beggars, motorcyclists hand sales to raise the security factor area

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