

Effects of Small Town's Centralization on Spatial Organization of Rural Settlement

(Case Study: Hesar Sorkh & Hesar Golestan – Torqabeh & Shandiz Cities)

Mohammad Mahdi Jahani¹ Mohammad Ali Ahmadian² Ali Homae Far³

Associate Professor, Department of Geography, Mashhad Branch, Islamic Azad University, Mashhad, Iran

Associate Professor, Department of Geography, Mashhad Branch, Islamic Azad University, Mashhad, Iran

PhD student Department of Geography & rural planning, Mashhad Branch, Islamic Azad University, Mashhad, Iran (corresponding author)

Abstract: Centralization in small town is led to functional changes due to increasing Inequality between rural settlement and cities. On the other hand, mentioned changes are different based on distance with urban center. Also, these cities effect germ and parasitic role on rural area according to their structure.

The methodology of this study is descriptive –analytic and collecting data is done by documents-library. The data are generally gathered from scientific centre libraries like universities, organizations, institutes and research centers such as management and planning organization and internet, official statistics and censuses, Urban Development Plans By Consulting Engineers, Field Study And So On. Studied Area Is Shandiz & Torqabeh Cities. Infact, Has Been Studied The Effect Mentioned Cities On Hesar Golestan & Hesar Sorkh Villages. In Order To , Was Used From Network Analyzed. On The Other Hand, Was Used From Questioner Tool. Finding Shows, The Relation Between Urban And Rural Area Is Parasitic Theory.

Keyword: Decentralized, Small Towns, Spatial Organization, Rural Settlement, Hesar Sorkh, Hesar Golestan

I. Introduction

Small towns and small town life are sometimes idealized in movies and the media and perhaps in our own memories as well. While actual small towns may not measure up to those imagined places, they do offer a real alternative to life in the big city. This alternative has grown more attractive as the quality of life in many urban areas has declined with congestion, crime, and the rising cost of living. Two other unfavorable aspects of urban life sometimes noted are the “placeless-ness” of many cities, and the reduced status of the individual within large, concentrated populations. “Placeless-ness” describes the phenomenon of clogged, often featureless, multi-lane highways leading past national chain stores and restaurants to reach look-alike residential developments. For these reasons, many people in the South—particularly those from predominantly rural family backgrounds—find small town or rural life increasingly appealing.

Debates on the nature of rural-urban relations hold a prominent position in development theory and planning. Discussions in the 1950s centered on whether towns played parasitic or generative roles in their relations with their rural hinterlands. As originally argued, generative forces of modernization associated with urbanization were hypothesized to outweigh possible parasitic impacts on rural areas (Singer 1964). The Lewis model of economic development widely adopted at the time also accepted the idea that economic growth and modernization required a transfer of surplus from an assumed moribund agricultural sector to urban-industry, thus justifying the appropriation of rural resources, labor and capital by cities in the name of longer term national economic development (Dahms & McComb, 1999). The general policy prescription derived from the Lewis and related models called for an acceleration of urban-industrial growth and the transition to an urban-based society. The concern raised in many Asian countries up to the 1970s was that levels of urbanization were very low and that the push of rural poverty was causing rural-urban migration to create an involute, distorted urban growth process based on the expansion of low-productivity urban services rather than on the dynamics of industrialization. Whether from a modernization or economic perspective, the prevailing view was that increasing the pace of a more “authentic” pattern of urban-industrial development was needed to compensate for inherent limitations in rural development. From the late 1950s, an opposing view emerged in a new field of regional planning that was built, in part, on core-periphery and spatial polarization models, which observed that in most developing countries the benefits of economic growth increasingly concentrate in one or a few core urban regions. The principal thesis of these models was that the benefits accruing to the core were at the expense of the rural periphery. Cities organized rural areas to serve urban interests, resulting in net capital outflow, brain drain and other resource transfers that lowered rather than raised the potential for rural areas to develop. Cities actively exploited rural areas, with rural poverty and rural-urban migration not emanating from the isolation of rural from urban areas, but rather from the tightening of rural and urban linkages (Stockdale, Findly, & Short, 2000). The further observation that rural areas were often transformed into overly-specialized single-crop or

natural resource economies to serve urban-based corporate interest fit into the parallel emergence of dependency (Giordani & Ruta, 2011).

In "Satiran" report of republic Islamic Iran, the indicator of selecting of small town is 5000 – 25000 people (Haris & Tanaka, 2002). The researchers haven't believed about small town boundary. So they have problem (Owusu, 2005:19).

II. Research Literature

2.1 Spatial organization factors

Organization is discipline between factors of set. The components of spatial organization are:

- Nods: villages, industrial area and etc
- Networks: roads, gas or power lines
- Zones: rivers, jungles, seas, desert

There is thus a need for a new paradigm of spatial development for policy formulation. Such a paradigm would have to overcome a number of major obstacles, including the dichotomization of planning into rural and urban planning bureaus that promote rivalry rather than collaboration and administrative divisions that separate cities from their hinterlands in planning and management at local levels. In addition, mechanistic models of spatial and development processes, most of which focus on urban nodes rather than rural regions, need to be put aside in favor of efforts to include local variations in rural-urban linkages in identifying components of a national spatial system.

By way of exploring how a new paradigm of rural regional development can be constructed from local level research on rural-urban contrast the growth pole concept with an alternative regional network (cluster) concept, the latter of which incorporates rural and village structures with rural-urban linkages and flows. shows, first, that whereas growth poles have been single-mindedly focused on urban-based manufacturing as the leading sector for regional development, a regional network approach recognizes the multispectral nature of local level development in rural region and acknowledges the role of regional resource endowments and already existing activities rather than limiting the prospects for local development to inducements to decentralize footloose industries from core regions. Building networks allows for a variety of sources of economic growth and does not assume that each will be urban based. Bulk-losing processing and agro-industry, for example, may be more efficiently located near the fields or along major transport routes, including waterways, rather than in cities or towns (Mike Douglass, 1998: 2).

2.2 Rondinelli theory

Decentralization embraces a variety of concepts, the feasibility of which must be carefully analyzed in any particular country before pursuing decentralization policies. Rondinelli and Nellis define decentralization from an administrative perspective as 'the transfer of responsibility for planning, management, and the raising and allocation of resources from the central government and its agencies to field units of government agencies, subordinate units or levels of government, semi-autonomous public authorities or corporations, area-wide, regional or functional authorities, or nongovernmental private or voluntary organizations'. Decentralization also can be defined as a situation in which public goods and services are provided primarily through the revealed preferences of individuals by market mechanisms. Public choice theorists contend that, under conditions of reasonably free choice, the provision of some public goods is more economically efficient when a large number of local institutions are involved than when only the central government is the provider (Ostrom et al., 1961; Buchanan and Tullock, 1962). A large number of providers offer **citizens** more options and choices. These options can be packaged as different 'market baskets' of goods and services that meet the needs of different groups of users. In more advanced economies people can select among local areas providing different combinations of services and facilities by moving to communities with the combination they desire (Tiebout, 1956; Olson, 1965; Ostrom and Ostrom, 1977).

2.3 Regional network approach

Mike Douglass has been studied the role of town in rural area. Figure 1 shows the relation between city and village. In view of the limitations of growth centers and urban functions in rural development approaches discussed above, rethinking the role of cities in rural regional development raises the question of how to bring rural and urban development potentials and complementarities together in the planning process. A point of departure for addressing this question is to recognize that the functions and roles played by cities in most rural areas are outcomes of interdependencies that have no one-way urban-to-rural causality. Rather, rural-urban relations need to be seen as being mutually reinforcing. These relationships are summarized in figure 1, which shows that for every role of a city, there is a necessary role to be played by its hinterland. As the table indicates, towns in rural regions act as higher-level market centers of agricultural and rural commodities for both regional and extra-regional sales and distribution. Since the town-centered marketing functions cannot exist without

significant levels of marketable surpluses being produced in rural areas, it follows that town and countryside are mutually dependent. To expand production rural producers need marketing networks provided by towns and the urban system; but without continued expansion of agriculture and agro-based processing activities, rural towns cannot be expected to grow. Similarly, intensification of agriculture will necessitate the appearance of shops in towns to supply increasingly sophisticated inputs and repair facilities that a single village cannot economically sustain. Continuing down the list of relationships in Table 1, a major source of growth of rural towns is increasing demand for non-agricultural commodities for rural household consumption. Research has identified this as the single most important factor for the growth of rural towns (Gibb, 1986; Somluckrat, 1990). As in the other relations, the ability of towns to act as consumer convenience centers rests on increasing rural prosperity and rising real incomes not just for a few farmers, but for the majority of rural households.

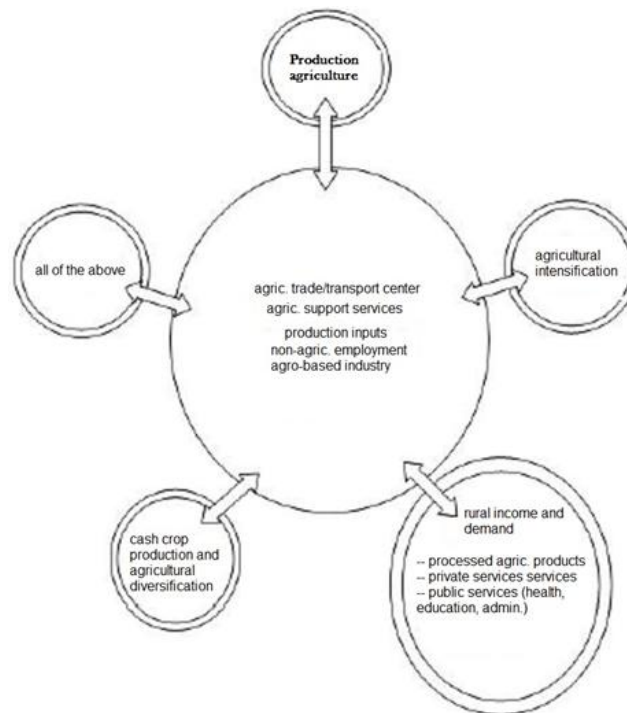


Figure 1 : relation between urban and rural area

Mike douglass studied feature regional network paradigm . they are :

The contrasts between the growth pole and regional cluster paradigms are schematically shown in table 1. The network concept is based on three principal considerations. First, variations in rural-urban linkages are great even among in the hinterland of the same principal town; a clustering villages and towns into a regional unit of development can therefore take advantage of the diversity as well as complementarities among various centers and between each center and its immediate hinterland within a given region. It does not rely on a single center to lead regional growth. Relations among centers are more horizontal, complementary and reciprocal.

Second, such clusters already exist, even if in a rudimentary form. Interaction among villages and towns, rather than being confined to dyadic relationships between village-town pairs, form localized networks with varying degrees of intensity across the region and beyond. Such clusters can be identified and demarcated in the initial instance by using existing flows of goods and people among settlements. In the case of Indonesia, for example, regional networks were identified by using data showing the frequency of bus, truck and automobile movements among settlements (Douglass 1984). The third consideration is that a cluster of well connected and highly interactive rural and urban settlements may be better able than a single growth pole to provide a level of agglomeration and economic diversity to act as an antipode to the growth of core metropolitan regions. Given the reduction of time distances among settlements made possible by modern transportation and communications systems, somewhat dispersed towns and villages can be linked together to form an effective range of daily interaction that would have been impossible in most rural regions only a decade or two ago. A more robust regional economy covering a wider spatial scale than a single town and its hinterland and offering a wider array of economic activities can also more readily weather the vagaries of external price shocks and shifts in demand and resources. Greater potential would also exist to capture upstream and downstream linkages and multiplier effects in the region.

Table 1 : Regional network approach

Settlements	Social – economic relation
<ul style="list-style-type: none"> ❖ Natural environment & source • Environment • Basic source ❖ Built environment • Village (road , bridge , housing) • City (water , sanitation , connectivity) • Region (power , commercial center) ❖ Spatial system • Rural population density • Urbanism levels (number of town , terrefic folw) • Accessing between urban center and rural area • Connectivity • Migration between regional 	<ul style="list-style-type: none"> ❖ Social – cultural and economic relation ❖ Rural economic structure • Complex between basic sectors • Distributing of workforce ❖ Producing rural system • Distributing land and ownership • Organizations of Production

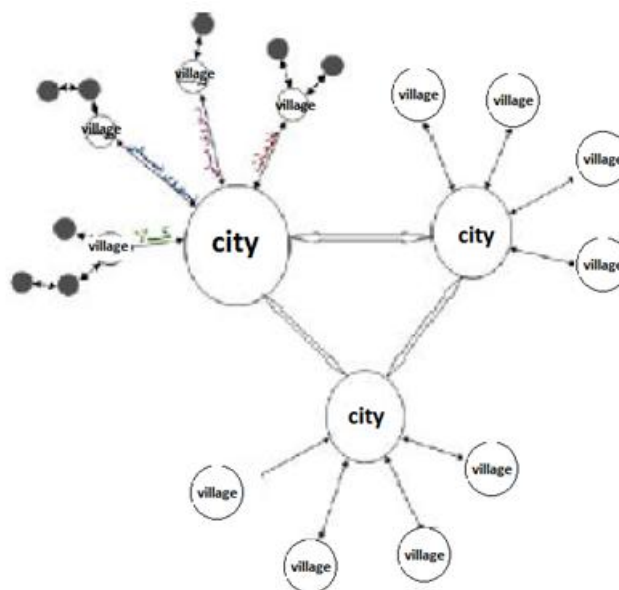


Figure 2 : regional networks

III. Research Method

The methodology of this study is descriptive –analytic and collecting data is done by documents-library. The data are generally gathered from scientific centre libraries like universities, organizations, institutes and research centers such as management and planning organization and internet, official statistics and censuses, urban development plans by consulting engineers, field study and so on. Also, was used from questioner tool.

3.1. Research Hypotheses

- It seems, there isn't balance in order to developing between "SORKH HESAR & HESAR GOLESTAN due to there isn't development network.
- It seems, there are some factors by approach flow network effect on regional development.
- It seems, by development of flow network, we have equal development in this region.

IV. Studied Area

TORQABEH – SHANDIZ were located in west of Mashhad metropolitan. Mentioned county was divided 4 sections. They are: TORQABEH, SHANDIZ, ABARDEH, and JAGHARGH.

HESAR GOLESTAN has been located in 7 kilometer from TORQABEH. Also, it has been located in 5 kilometer from Mashhad. Some factors have been led to absorbing tourism to this region. They are GOLESTAN dam and holy persons "YASER & NASER".

HESAR SORKH was located in 5 kilometer from SHANDIZ.

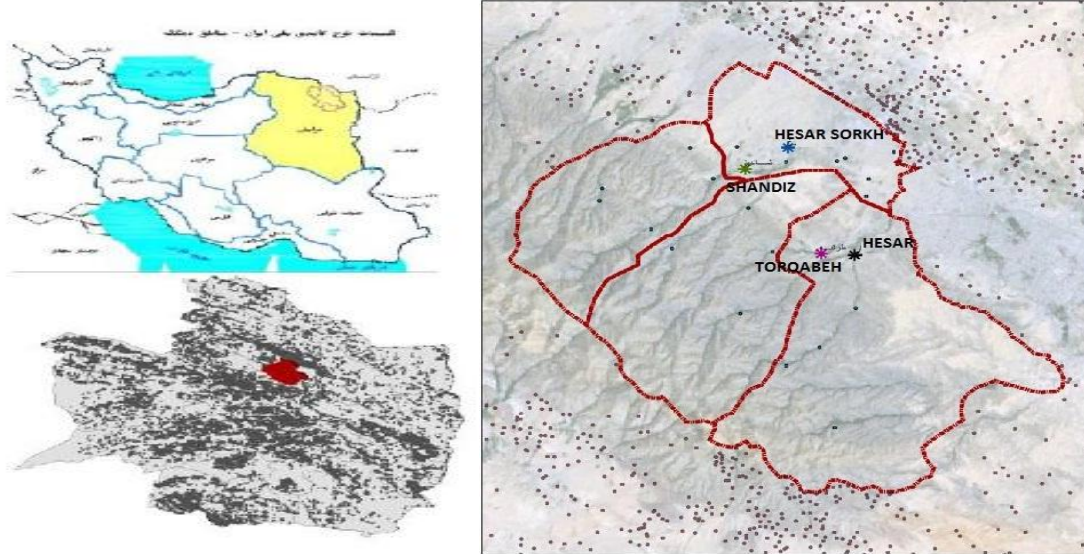


Figure 3: studied area

V. Discussion

Information was divided in three sections of spatial organization. So, settlement information was divided in nods. Information of natural and unnatural networks was divided in network section and three sections is geology. Nods information has been shown in table 2.

Table 2: population information

Row	Settlement	Population(1997)	Household (1997)	Population (2007)	Household (2007)	Population (2012)	Household (2012)	Growth rate(1987 - 1997)	Growth rate(1997 - 2007)	Growth rate2007 - 2012)
1	TORQABEH	9982	2418	13200	3673	16718	5067	1.13	2.83	4.84
6	HESAR GOLESTAN VILLAGE	1780	370	1944	542	1764	569	1.19	0.89	-1.92
11	SHANDIZ CITY	4077	887	6570	1708	10428	3056	-0.13	4.89	9.68
15	HESAR SORKH VILLAGE	988	222	937	245	1570	455	1.55	-0.53	10.87

Population density of TORQABEH, SHANDIZ, HESAR SORKH, and HESAR GOLESTAN are 119.84, 59.25, 30.97, and 50.69.

5.1 Education: Education of nods has been shown in table 3.

Row	Settlement	Elementary school (2012)	Elementary school (2007)	Elementary school (2000)	Middle school (2012)	Middle school(2007)	Middle school(2000)	High school (2012)	High school(2007)
1	HESAR SORKH VILLAGE	1	1	1	1	1	1	0	0
6	HESAR GOLESTAN VILLAGE	2	2	3	1	2	2	0	1
11	SHANDIZ CITY	2	3	5	3	1	3	4	2
15	TORQABEH CITY	6	7	5	4	3	4	4	1

5.2 Services condition

SHANDIZ AND TORQABEH nods propose some services such as post and cooperative offices. There aren't post services in HESAR SORKH village. Also, post services have been started from 2012 in HESAR GOLESTAN village.

Table 4: services indicators

Row	Settlement	Restaurant number (2000)	Restaurant number (2007)	Restaurant number (2012)	Telecom(2000)	Telecom(2007)	Telecom(2012)	ADSL condition		
								Installed	Installing	No
1	SHANDIZ CITY	8	33	90	1500	3049	4578	*		
6	TORQABEH CITY	15	18	21	2000	5000	8000	*		
11	HESAR SORKH VILLAGE	0	0	0	0	750	849	*		
15	HESAR GOLESTAN VILLAGE	0	0	1	256	512	785	*		

Table 5: economic condition of nods

Settlement	Year	2000	2007	2012
	Economic sectors			
SHANDIZ CITY	Services	57.13	85.74	90
	Industry	37.05	13	9
	Agriculture	5.82	1.26	1
TORQABEH CITY	Services	50.4	72.9	65.4
	Industry	38.3	23.7	28.8
	Agriculture	10.4	3.3	5.8
HESAR SORKH VILLAGE	Services	0	25	50
	Industry	0	0	0
	Agriculture	100	75	50
HESAR GOLESTAN VILLAGE	Services	10	10	22.3
	Industry	22	24.9	17.3
	Agriculture	68	65.1	60.4

5.3 Networks

Networks were divided two sections. They are natural & unnatural. Natural network are included rivers, gardens, earthquake line. Also, unnatural are road, gas and power networks.

Figure 4 shows natural network in SHANDIZ-TORQABEH County.

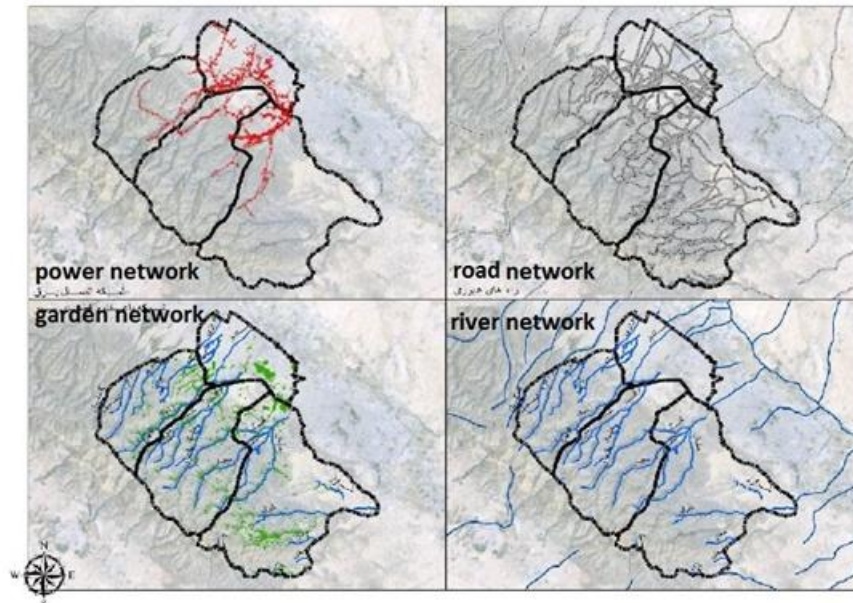


figure 4 : networks condition

5.4 Power network

Power condition shows in table 6. This table shows the number of household that they have power network between 2000- 2012.

Table 6: household power network condition

Row	Settlement	2000	2007	2012
1	HESAR SORKH VILLAGE	230	393	619
2	HESAR GOLESTAN VILLAGE	424	654	965
3	SHANDIZ CITY	1498	3099	4466
4	TORQABEH CITY	2361	3835	6375

5.5 Gas network

TORQABEH had been gas network in 2002. Also, HESAR GOLESTAN in 2003 and SHANDIZ IN 2004 had been gas network.

5.6 Telecom network

Table 7 shows telecom network condition.

Table7: telecom network

Row	Settlement	Telecom(2000)	Telecom(2007)	Telecom(2012)
1	SHANDIZ CITY	1500	3049	4578
6	TORQABEH CITY	2000	5000	8000
11	HESAR SORKH VILLAGE	0	750	849
15	HESAR GOLESTAN VILLAGE	256	512	785

5.7 Zones

Proportion zones: data collected show type of soil. Type of soil is important role in order to selecting land uses. So land use were considered and was produced figure 5.

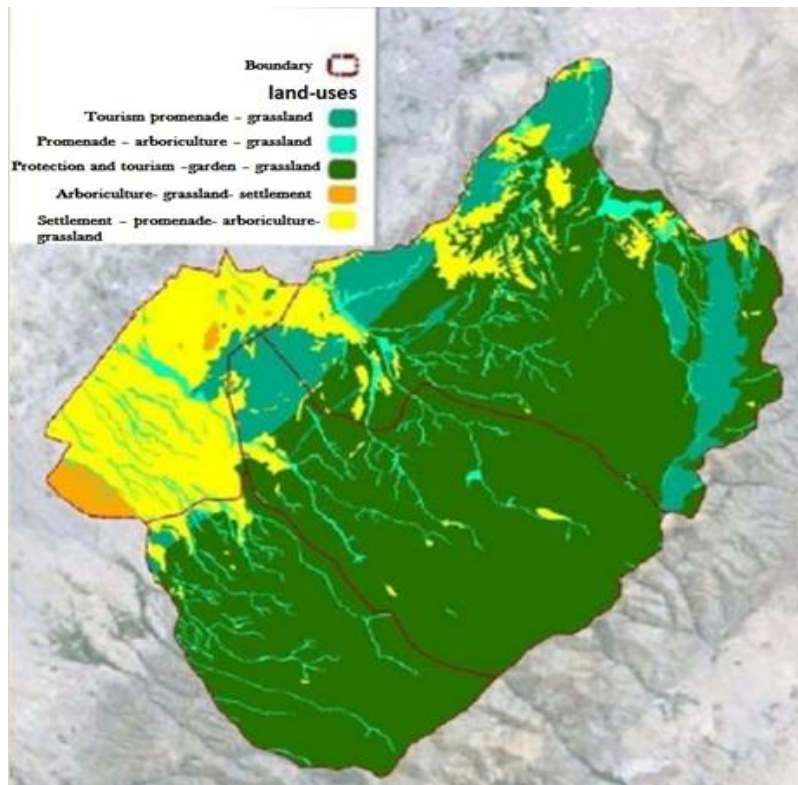


Figure5: Proportions map

VI. Analyzes

Collected data have been divided two sections. They are expositive and numerical indicators. Infrastructure indicators were studied gas, water and power networks. Education indicators were considered the number of school (elementary, middle and high level). Also, economic indicators were analyzed economic role of nodes.

5.8 Development process of HESAR settlement nod

Developing of HESAR village is more than TORQABEH city in 1997. But, has decreased in 2007 -2012.

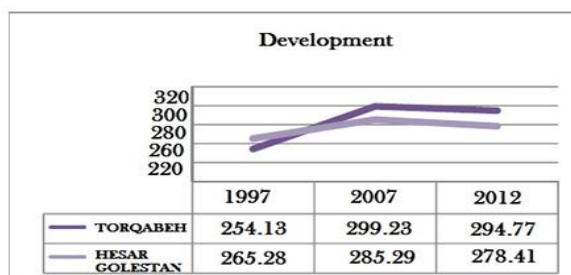


Figure6: Numerical development of HESAR

In 2012 has been increased development due to some factors such as : obstetrician , doctors and some services such as internet and post .

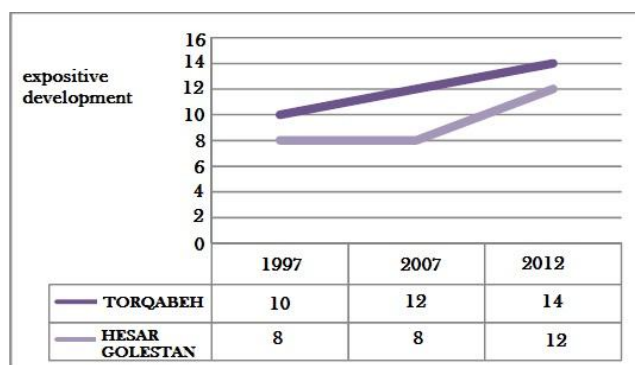


Figure 7: expositive development of HESAR

5.9 Development process of HESAR SORKH settlement nod

As can be seen in the chart below, during the period of 75 to 85 is upwardly red fence rural development but the downside is 2007 to 2012 years. Due to the scale of development in the population indices are available the population growth rate of 0.53 over 2007 to 2012 years - has been upgraded to 10.87. This chart shows the trend in Population growth has been uneven, with facilities in this period. And on the agricultural economy and dramatically reduce the False job (Property and land sales and brokerage) influence. It seems the city and region Increased growth rate, has a direct impact on the population and degree of development.

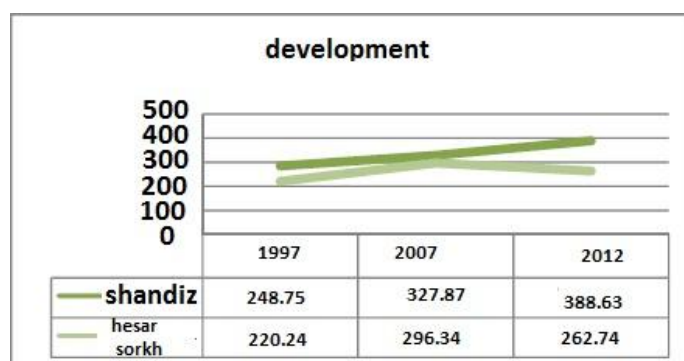


Figure8: Numerical development of HESAR SORKH

In 2012 & 2007 has been increased development due to some factors such as : obstetrician , doctors and some services such as internet and post .

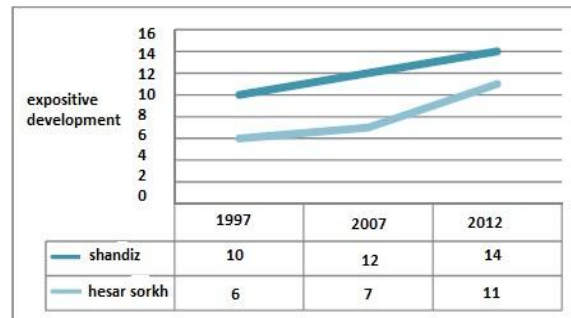


Figure 9: expositive development of HESAR SORKH

VI. Conclusion

Villages close to the city (TORQABEH – SHANDIZ): Along with the germ theory of towns, cities, which are called parasitic. According to experience of B.F. HORLITEZ, the role of SHANDIZ city rather than HESAR SORKH village is parasitic. Also, TORQABEH is the same to HESAR GOLESTAN village.

In fact, in the village organized in a way that serves the interests of capital city freestone exit and transition Investment in rural towns and cities, rural areas are actively exploiting. For this category of rural development oriented the city is a good idea to villages near to the cultural - are connected with the development of the city's economy developed. (Rondinelli theory) network flow theory with emphasis on diversifying agriculture, industries, agriculture, manufacturing-based Resources to the rural agricultural economy plays a role, but in recent years have faltered in the sector strategy It looks good.

References

- [1]. Douglass, Mike : a regional network strategy for reciprocal rural_urban linkage : an agenda for policy research to Indonesia, 1998
- [2]. Dahms, f & , McComb, j .(1999) .Counter Urbanization, Interaction and Functional Change in a Rural Amenity Area-a Canadian Example .Journal of Rural Studies.17-4 ,
- [3]. Giordani, p& ,Ruta, M .(2011) .Why Immigration Policy Should Be a Federal Policy: Considerations on the EU and the US . Perspective on Federalism.
- [4]. Haris, D& ,Tanaka, D .(2002) .Tools for Small Towns .Southern Growth Policies Board.
- [5]. <http://www.ngdir.ir/geoportalinfo>.(1392) .
- [6]. Owusu, G .(2005) .The Rule of District Capitals In Regional Development:Linking Small Towns,Rural-Urban Linkages And Decentralisation In GHANA. Norwegian University of Science and Technology: NTNU Trondheim.
- [7]. Stockdale, N., Findly, A& ,Short, D .(2000) .The Repopulation Of Rural Scotland: Opportunity and Threat .Journal Of Rural Studies.257-243 ,
- [8]. Rondinelli, Dennis A. (1986) 'Extending Urban Services in Developing Countries: Policy Options and Organizational Choices', Public Administration and Development6(1): 1-21.
- [9]. Buchanan, James M. and Gordon Tullock (1962) The Calculus of Consent. Ann Arbor: University of Michigan Press.
- [10]. Ostrom, Vincent, Charles M. Tiebout and Robert Warren (1961) 'The Organization of Government in Metropolitan Areas: A Theoretical Inquiry', American Political Science Review 55: 831-42.
- [11]. Ostrom, Vincent and Elinor Ostrom (1977) 'Public Goods and Public Choices', in E.S. Savas (ed.) Alternatives for Delivering Public Services: Toward Improved Performance, pp. 7-49. Boulder, CO: Westview Press.
- [12]. Olson, Mancur Jr (1965) The Logic of Collective Action. Cambridge, MA: Harvard University Press.
- [13]. Tiebout, Charles M. (1956) 'A Pure Theory of Local Expenditures', Journal of Political Economy 64(5): 416-424.
- [14]. Gibb, Arthur (1984), "Tertiary Urbanization: the Agricultural Market Center as a Consumption related Phenomenon," Regional Development Dialogue, 5:1, Spring, 110-148.