

## **Analyzing small town centralization effects on spatial organization of rural settlement (Case study: Zoshk, Noqondar, Virani village)**

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**ABSTRACT :** *Nowadays, unbalancing and inequality of spaces among urban and rural settlements are important subjects of economists and regional programmers. Existing economical divergence, development poles and dispersion of rural regions are the effects of this phenomenon. So accessing to balance and consistent expansion in regional space, establishing regular and ordered sequences are major needs and pay attention to small towns is one of the ways to equilibration this situation. The purpose of research is, studying influence Torqabeh & Shandiz cities on Zosh, Noqondar, Virani villages. The research is applied and method is descriptive –analytic and collecting data is done by documents-library. Indeed, has been studied the effect of centralization mentioned cities on 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.*

**KEY WORD:** *Decentralized, small towns, spatial organization, rural settlement, Zoshk, Noqondar*

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### **I. INTRODUCTION**

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. 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 theory, which argued that the metropolitan nations of the North actively under-developed the agrarian economies of the South. Rural-urban linkages were thus part of global chains of power and control the perpetuated conditions of rural poverty and underdevelopment. Although the idea that cities act as “theaters of accumulation” inhibiting rather than fostering the development of rural regions (Armstrong and McGee 1985) has continued to find adherents, the position that gained wider agreement was that the “backwash” effects of urbanization on rural areas were expected to be only short-term, i.e., occurring only in the “early stages of development” (Williamson 1965). As spatial systems matured, development impulses were expected to naturally become more readily articulated over national territories, thus reversing previously dominant polarization processes. Although much research was stimulated by this thesis, it did not result in any consistent evidence that polarization reversal has either occurred in a sustained manner in any developing country or that it is an automatic outcome of increasing levels of per capita GDP reaching “mature” stages of development (Douglass 1990). The general case could still be made, therefore, that if a polarization reversal were to occur, it would be best pursued through government interventions. The question of what kind of policy interventions would be needed was given a single answer: induced urbanization in the periphery, which came to be known as the growth pole or growth center approach to regional development (Friedmann 1968). As a strategy, it argued that only the rise of cities in the periphery could challenge the growth of core urban centers. As such, it has no explicit rural content; rural areas are still seen as being developed by the city and remain “out there” as uninvestigated hinterlands.

The absence of any rural development component in this strategy is glaring, but despite this and many other criticisms of the growth pole model (Friedmann and Weaver 1979), notably those positing that in a transnational age the likelihood that linkage and spread effects will be captured locally is extremely low, this remains the dominant spatial development strategy throughout the world, including Asia. In the 1970s a new slant on the idea that cities were the cause rather than solution to rural problems received a new thrust under the title of “urban bias” in rural development, which argued that rural underdevelopment is perpetuated by unrelenting political, social and economic forces favoring cities over the countryside (Lipton 1977). Subsequent treatments of the same theme cited the development planner as a principal culprit in putting rural development last rather than first. The incentive to be in the capital city for career advancement, the low status of agricultural economics, the avoidance of rural visits during the rainy season when conditions were worst, the disdain of actually staying overnight in a village, and the diplomacy of not asking rural elites embarrassing questions about social cleavages or poorer village residents were part of the systematic biases preventing planners from comprehending rural issues and taking appropriate actions (Chambers 1985). While most of the debates on rural-urban relations remained abstract and without conclusive empirical evidence supporting either pro- or anti-urban stances, over the decades the cumulative result has been a curious divide in planning. On one side are urban planners who continue to plan for rural development from cities and who know exceptionally little about and give scant regard to the potential for an agriculture- or rural-led development. Their rural landscapes consist of urban nodes and transportation linkages overlaid on topographical maps. For them regional integration through urbanization remains the key. Their policies have a decisive urban bias. On the other side are rural development planners who tend to view cities as parasitic and alien to rural interests. Wary of cities, they rarely put them in their rural landscapes, preferring instead to define rural areas as consisting only of agricultural plots, resource areas and villages. Efforts at integrated rural planning generally use the village and its agricultural land as the highest units of development. The resulting policies for typically have a discernible rural bias with little or no interest in investigating how cities might be better brought into rural planning frameworks. To a rural household, however, the landscape of daily life includes both rural and urban elements. Rural-urban linkages are part of the local reality for household members carrying out the diverse tasks of producing income on and off-farm, maintaining a living space in the village, and going to local and even distant towns for shopping, marketing, work, and specialized services. The challenge for rural regional planning is to overcome the rural-urban divide by incorporating this reality into development frameworks and, further, identifying policy measures to foster mutual benefits for both town and village households.

## II. Research Literature

### a. 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).

**b. 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).

**c. 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, ruralurban 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.

**Table 1 : Regional network approach**

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

### 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.

**Studied area**

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

**a) Zoshk**

The distance of Mashhad and Shandiz is 31 kilometer and 16 km. Zoshk is the most beautiful area in Iran. In this village were done some activities such as production of fish, gardenairy production and etc.

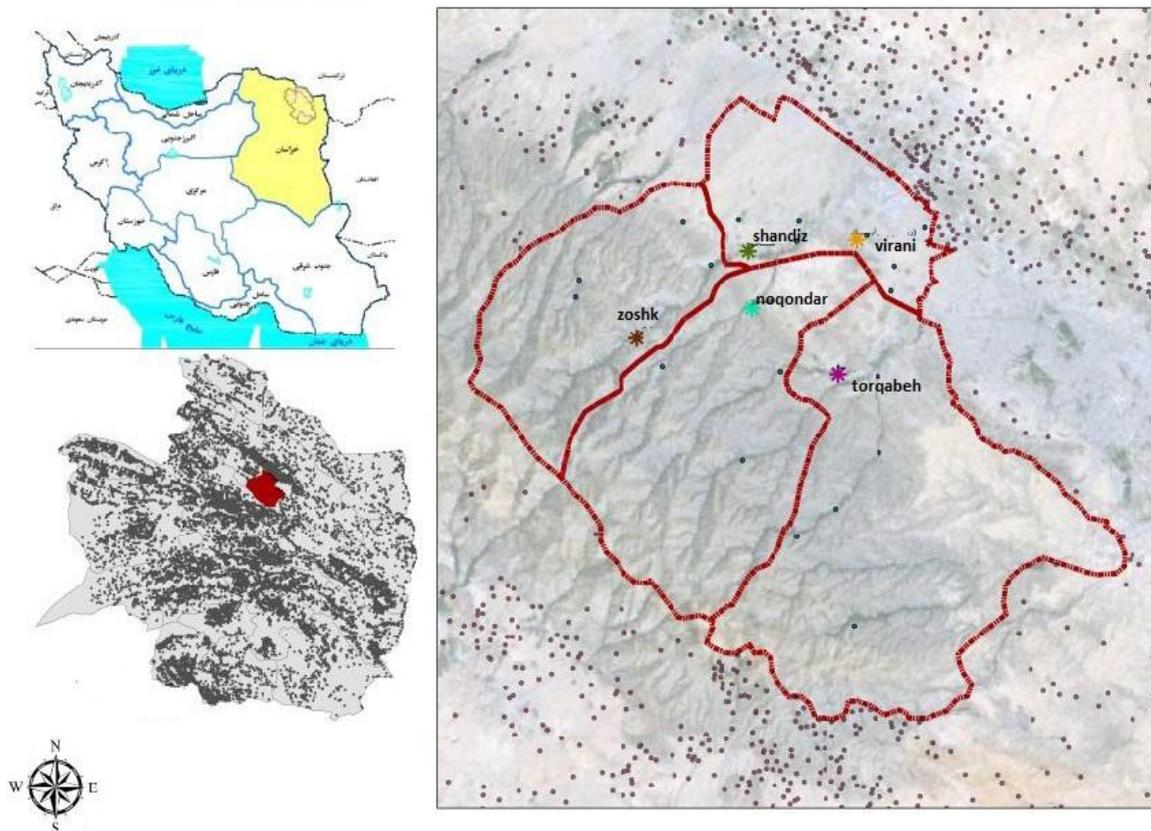
**b) Virani**

The distance of Mashhad and Shandiz cities is 12 km & 8 km. this village is one of the historical places in Iran. Also, there are historic stones in this area. On the other hand, Virani is touristic place. So has been built famous museum in this place.

**c) Noqondar**

This village has been located 15 kilometer of Mashhad and 8 kilometer of Torqabeh. This village has been located between some valleys. There is beautiful and greenery landscape in this place. There is appropriate climate especially in summer. So this place famous due to natural viewpoint. On the other hand, there are several historic places such as historical towers that there are two towers until now.

**Figure 1: studied area**



**IV. 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: information of population

Area	Population (1997)	Household (1997)	Population (2007)	Household (2007)	Population (2012)	Household (2012)	Growth rate 1967-77	Growth rate 1977-2007	Growth rate 2007-2012
TORQABEH CITY	9982	2418	13200	3673	16718	5067	1.13	2.83	4.84
NOQONDAR VILLAGE	812	189	813	216	739	209	-2.70	0.01	-1.89
SHANDIZ CITY	4077	887	6570	1708	10428	3056	-0.13	4.89	9.68
ZOSHK village	1371	309	2171	535	2984	808	-7.07	4.70	6.57
VIRANI village	1861	418	2787	741	4065	1135	1.23	4.12	7.84

Density population in Torqabeh, Noqondar, Shandiz and Zoshk are 119.84, 85.93, 59.25, 17.05 and 52.68.

**A. Education condition**

Education condition has been shown in table 3.

Table 3: education

Settlement	Elementary school (2012)	Elementary school (2007)	Elementary school (1997)	Middle school (2012)	Middle school (2007)	Middle school (1997)	High school (2012)	High school (2007)
TORQABEH CITY	6	7	5	4	3	4	4	1
NOQONDAR VILLAGE	1	1	1	0	1	1	0	0
SHANDIZ CITY	2	3	5	3	1	3	4	2
ZOSHK village	2	1	2	2	1	2	0	0
VIRANI village	2	2	0	2	1	0	2	1

**B. Hygiene condition :** Each five settlements in 1997, 2007 and 2012 have hygiene centers. Also, Zoshk and Noqondar villages in 2012 had doctors. In Torqabeh and Shandiz in three periods had been obstetrician and dentists. But, there had obstetrician and dentists in 2012 at Zoshk village.

**C. Services condition:** Shandiz and Torqabeh nods propose some services such as post and cooperative offices. Also, Zoshk, Noqondar, Virani village haven't started their activities until 2012. table 4 shows other services in these nods.

Table 4: services condition

Settlement	Restaurant number (1997)	Restaurant number (2007)	Restaurant number (2012)	Telecom(1997)	Telecom(2007)	Telecom(2012)	ADSL condition		
							Installed	Installing	No
SHANDIZ CITY	8	33	90	1500	3049	4578	*		
TORQABEH CITY	15	18	21	2000	5000	8000	*		
ZOSHK village	2	5	13	182	607	726	*		
NOQONDAR VILLAGE	3	3	11	203	392	353	*		
VIRANI village	0	2	3	256	721	1500	*		

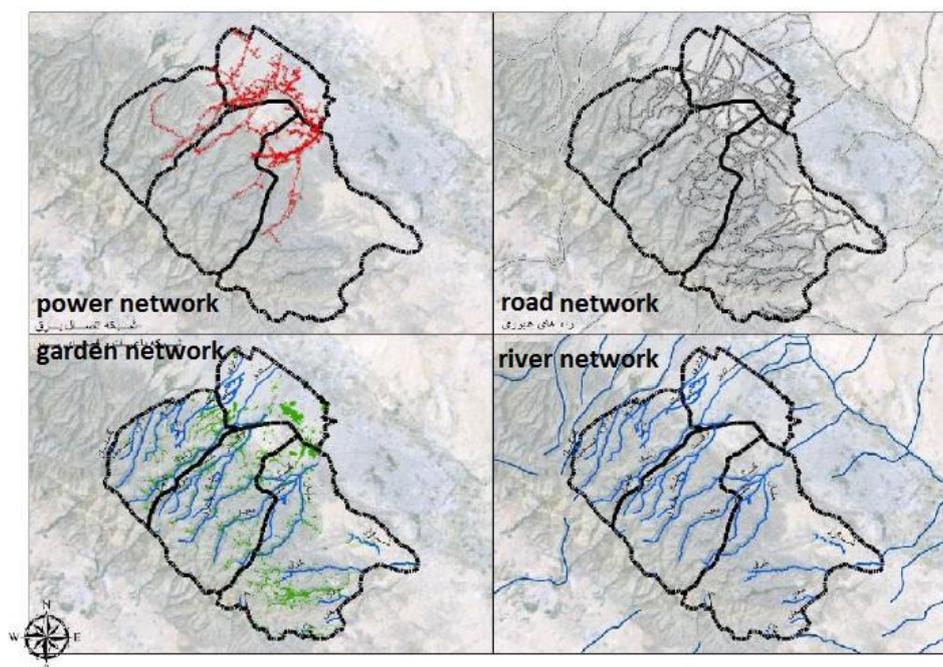
**D. Economic condition**

Table 5 shows economic condition in nodes in some aspects.

**Table 5: services condition**

Settlement	Year	1997	2007	2012
	Economic sectors			
SHANDIZ CITY	Services	57.13	85.47	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
ZOSHK village	Services	5	5	6.67
	Industry	0	0	5.33
	Agriculture	95	95	88
NOQONDAR village	Services	20	20	20
	Industry	0	0	0
	Agriculture	80	80	80
VIRANI village	Services	10	5	5
	Industry	60	90	90
	Agriculture	30	5	5

E. **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 2 : networks in Torqabeh & Shandiz**

**F. Infrastructure**

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	2012	2007	1997
1	SHANDIZ CITY	4466	3099	1498
2	TORQABEH CITY	6375	3835	2361
3	NOQONDAR village	486	397	257
4	ZOSHK VILLAGE	1563	1094	809
5	VIRANI village	1763	1018	507

**Gas network**

TORQABEH had been gas network in 2002. Also, Shandiz & Noqondar had been gas network 2004 had been gas network. After 2 year (2006) Zoshk had gas network. At finally, Virani village had gas network in 2009.

**Telecom condition**

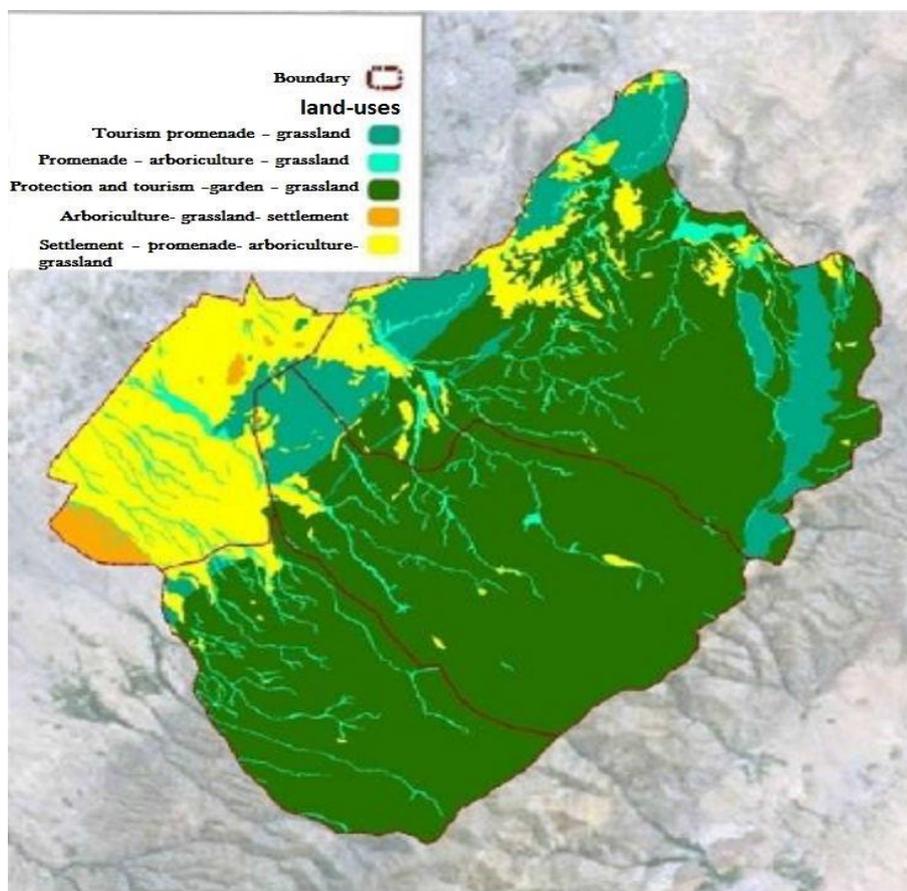
Table 7 shows telecom condition network.

**Table 7: telecom condition**

Row	Settlement	1997	2007	2012
1	SHANDIZ CITY	1500	3049	4578
2	TORQABEH CITY	2000	5000	8000
3	ZOSHK village	182	607	726
4	NOQONDAR VILLAGE	203	392	353
5	VIRANI village	256	721	1500

**G. Zones**

Proportion zones: data collected show type of soil. Type of soil is important role in order to Selecting land uses. So land uses were considered and were produced figure 3.



**Figure 3: Proportions map**

**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.

Development process of Noqondar settlement nod : There isn't influence Torqabeh city on Noqondar village in 1997. Thus, development of Noqondar village rather than Torqabeh city is due to decreasing population.



Figure 4: Numerical development of Noqondar



Figure 5: expositive development of Noqondar

**Development process of Zoshk settlement nod**

Development of Zoshk village in 1997-2007 has been increased. But in 2007 to 2012 has been stopped .although, the growth rate is positive. In 1997-2012 development of Shandiz is the same as Zoshk village. After that development of Shandiz is better.



Figure 6: Numerical development of Zoshk

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

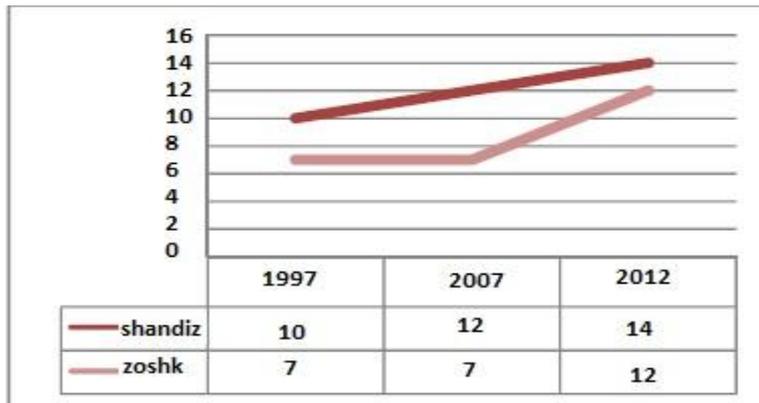


Figure7: expositive development of Zoshk

**Development process of Virani settlement nod**

Virani village in 1997 -2007 has been appropriate development. But, in 2007-2012 has been decreased. The growth rate is positive.



Figure 8: Numerical development of Virani

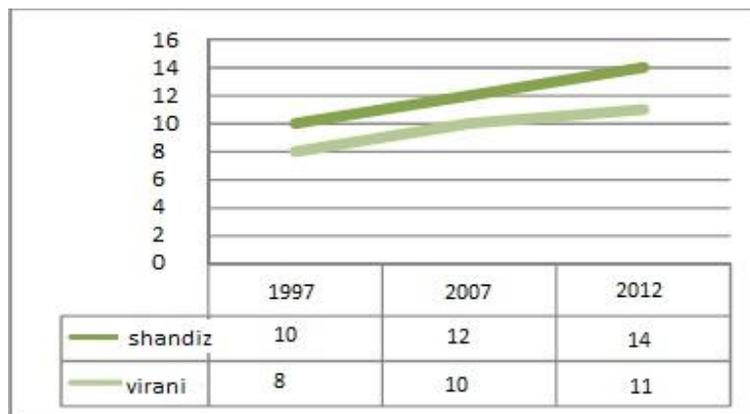


Figure9: expositive development of Virani

Expositive indicators in Virani village had been appropriate development.

**V. CONCLUSION**

The results shows, the village that have located far from cities, are appropriate development. Virani and Zoshk village have been located in Shandiz sector. Also, Noqondar has been located in Torqabeh sector. The distance of Noqondar from Torqabeh is 9.5 km. there isn't oriented relation between developments of village with city development. So, could be increased development of them by using services , education , hygiene and etc .

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