

## **Analysis of the Role of Border Villages in Border Security; Case Study: Zaam and Golbanoo Rural Districts of Torbat-e Jam**

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### **Abstract**

Border security is a major influence on internal sustainability and stability of countries; thus, countries take various military and non-military measures to control their borders and secure them. Residents of border villages and the support they can provide could play a key role in securing borders and bringing profit to them as the main beneficiaries. Therefore, the present study intends to investigate and analyze the roles residents of border villages could play on border security. In order to do so, descriptive-analytical research method is used in both field and library levels and the data are collected and analyzed from 63 local experts in different levels. Findings revealed that, from the point of view of state experts, villagers could be of more significance in economic, social- cultural, political, physical-environmental and defensive- military security. Confirmatory factor analysis on the other hand demonstrated that villagers' maximum impact on border security could be their political collaboration. Economic, social and physical-environmental factors are in the next level and the defensive-military dimension has the lowest impact for military aids are given by border guards and the need for military tools and other special conditions makes it impossible for local people.

**Keywords:** Border, Border villages, Security, Rural developmen, Zaam and Golbanoo rural districts.

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**Introduction**

Borders are either a barrier to integrity and development of border regions or a bridge for interactions between two sides of the border. Understanding this preventive or connective roles greatly depends on our definition of borders and their functions (Chen, 2006: 25). Border regions of all countries possess specific features and differ fundamentally with non-border regions. In other words, border regions are among strategic spots in all countries. The outlandish and non-fertile nature, especially in mountainous and desert regions of Iran have always deprived the region of welfare and incentives for life and induced several political, economic and security problems for all governments of different historical eras. Potential lack of production and proper employment along with low income and absence of basic needs are the biggest socioeconomically characteristics of these regions ending in their evacuation (Management Organization, 1999: 49).

As it was already stated, there are numerous challenges faced by border regions; yet, one important challenge before authorities in these regions is the security of border regions. Maintaining and developing security in border regions, especially in the regions with long borders with neighbouring countries have always been focused by authorities and various solutions have been proposed (Ahmadi & Dadjoo, 2012: 60). Unlike the past, nowadays, military and security solutions are not the only ways to bring security to border regions. Theorists believe that governments could utilize development plans with economic, social and cultural functions without military and security agents in the society in order to create secure border regions (Mohaghar & Shahriari, 2013: 16).

Security and development of logistics in border regions are fully correlated. In other words, development in border regions could never be realized unless their security is guaranteed and the other way around (Ghasemi Nejad et.al. 2014: 7). The issues discussed in border studies are not merely related to the border line; however, the off-border regions of all countries as the provider of security for border lines are of utmost importance.

Demographic properties of border regions including religion, ethnicity, language, social texture, and geographical features along with type and length of the border, adjacency to disputed regions, presence of important installations in the border region, development in different dimensions and characteristics of the outer environment in the border region are among the issues discussed in these regions. The field of borders nowadays together with their challenges and problems have drawn attention from numerous scholars and their influence and influence on and from national security have intensified their significance (Mohammad Hossaini & Alipoor, 2011: 3).

National security is the essence of independence, territorial integrity and sovereignty; thus, several other purposes and all the macro purposes of a country could only be ensured through creating and maintaining national security. The secret behind national security is having secure borders (Roshan & Jafarabadi, 2011: 154). Various political, natural, humanistic and economic parameters play a role in border security; however, one less attended factor is the role of villages particularly the border ones in securing borders. Villages are classified in different ways and their location defines one of these classifications. Border villages, therefore, could be classified as well. A major group of villages in Iran are border villages whose economic, social, political, cultural and security roles intensifies their importance. In other words, taking a proper care from them could stabilize their population and increase border security factors. In fact, villages in border regions are considered among extremely sensitive and strategic parts of the country; yet, their location on outlandish and infertile lands has constantly induced numerous political, economic and security problems for governments. These social and economic problems tend to end in enormous problems in these regions including: immigration, smuggling goods, upheaval and insecurity (Management Organization, 2010: 49).

Iran is among the countries with longest borders with 8731 km sea, mountain and desert borders. It is however unique regarding the variety of

political and social problems in the neighbouring countries. Being neighbour with countries like Pakistan and Turkmenistan with their lowest levels of development in the world along with countries like Iraq, Azerbaijan, Nakhichevan, Turkey etc. with their numerous political and ideological issues and crises in the past decades and the Persian Gulf countries facing serious economic, political and social challenges have posed enormous problems to border regions of Iran. Moreover, the expanse of the borders coupled with various geographical, social, ethnic and climate conditions have augmented these problems. Over the course of political and governmental history, orders of Iran have been protected through different forms. Guards and protectors of these borders have mostly been border tribes and ethnic groups constantly loyal to the central government and the overall territorial structure of the country. Before the present borders were stabilized, the responsibility of protecting borders was on the shoulders of the residents who, besides making their living and social life, took a political defensive responsibility to protect their environment and the territory of Iran. Thus, historically, many tribes and ethnic groups have considered these functions as their inherent duty and therefore, concept like ethnocentricity and ethnic groups with separate ethnic identities and isolated units with inimical relationships are not applicable to Iran (Ghamari, 2005: 187). For instance, north-eastern borders of Iran have drawn attention from kings for their strategic connecting role between Iran and Transoxiana and their fertile soil and have frequently been invaded. In the Safavid era, they made an attempt to prevent Uzbeks invasion to north-eastern Iran and moved tribes of Kurds to these regions. These Kurds used to have a nomadic lifestyle in the grasslands of the region even until Reza Shah Pahlavi was the king of Iran (Ahmadi & Dadjoo, 2012: 61). However, the government in its modern sense considers the tribes and ethnic groups who have historically been protecting the borders and the territory a threat and a challenge and this contradicts their historical functions. Rural residences of the borders are among the most strategically important regions to reduce

border problems. Scientific and logical organization of these villages could greatly influence border control and minimize problems in these regions. Identifying potentials and drawbacks in regions adjacent to borders could be the best approach toward spatial development of borders' rural areas. This development is induced by the border and its potentials. In Iran, type of people living in border regions along with their interactions with the people on the other side of the border will bring about various economic, cultural and security impacts. Organizing these interactions on the one hand, lack of demographic stability in the region on the other hand have affected spatial and regional balances in border regions. This has put population's centres of the border regions in social, economic and national seclusion. Eastern borders of Iran in their northernmost in the Zolfaghar Crater to the linking point of Iran, Afghanistan and Pakistan in Malek Siah Kuh and then to the Gwadar Bay in the Gulf of Oman have been formed under implicit or explicit military presence or dominance of the UK (Golverdi, 2011: 25). The geographical position of the borders in these regions have historically contributed to illegal and back-door transactions in huge rates along with legal and official businesses. However, major portion of human resources in these regions are in illegal businesses due to lack of the ground for proper employment and this one the other hand provides the ground for black economy in huge parts of these regions. The reason for most people entering unofficial economy is their inability to find a job in official economy or even could not start a new business in unofficial economy. Employments in border regions are unstable and incomes are low and inconsistent (Asgari & Zibandeh, 2014: 6). Poverty in these regions could bring insecurity and encourage enemies to use the created clues in the region. For instance, while many of the people living in border regions of South Khorasan Province are rural people, lack of natural conditions like low rainfall, high evaporation, salty and alkali soil, sandstorms on lands and very weak grasslands together with location of border towns in arid and semiarid climate and constant droughts have practically limited

agriculture and farming as the main source of income for rural people. On the other hand, neglecting border regions in allocating large industrial projects with high employment positions intensifies bad economic conditions and unemployment. Border regions and villages have the potentials to take some most fundamental roles like the security ones to the most advanced ones like economic and cultural roles effectively and this depends hugely on the constant trend of advancement in the region and various individuals like politicians and authorities' approaches toward the concept of border and the related issues. The present study intends to investigate the role of border villages in border security. Hence, it aims to study the significant roles border villages play in the security of north-eastern borders of Iran and focuses on Zaam and Golbanoo Rural Districts of Torbat-e Jam as one border town in Iran.

### **Background of the study**

Regarding security and development in border regions and the related issues, several fairly comprehensive studies have been conducted. Table 1 summarizes some of the studies conducted and works done with subjects close to the ones investigated in the present study.

Table 1: Studies conducted on borders, border villages and border security

Researcher, Year	Title	Findings
Asgari & Zibande, 2014	Economic investment in border regions and its effect on the security	Results revealed that most of the security issues and border problems are closely correlated with economic problems. Border regions reach social security when investment is done systematically and seriously so that their residents could utilize the investment for his own and his region's sake.
Ahmadi & Dadjoo, 2012	Sustainable development of border regions, basic strategy for maintaining border security	Results demonstrated that nomad population in border regions with no reliance on a particular soil type requires a specific form of planning in border regions and their security so that their meets and requirements are met.
Mohammad poor et.al. 2006	The role of functional evolution of border on geographical space of Bajgiran region in Iran-Turkmenistan border	Results from this study showed that after Iran-Turkmenistan border in Bajgiran was reopened, the region experienced numerous spatial and geographical changes in the fields of transportation, urban and rural residences, communication and public facilities together with the opening of several governmental

		and non-governmental agencies and organizations and the population movement trend toward Bajgiran so that the face of the city changed significantly.
Poormanafi & Panahi, 2014	Border and border security in Islamic Republic of Iran; a case study on Eastern borders	Results from this study revealed that politicizing identities could be a serious threat to territorial integrity and sovereignty in multiethnic countries. Thus, strategies like cooperation between ethnic groups and other similar methods have to be considered as solutions for creating security in border regions.
Tayebnia, Mohammadi & Manoochehri, 2015	An analysis on the effects of blocking borders on sustainable development of rural areas in border regions; a case study on border villages of Marivan	Results from this descriptive analytical study in western Iranian border regions revealed that responders to the questions both from local people and authorities believe that measures taken to control the border has improved indices of the feeling of security.
Afrakhte & Hajipoor, 2013	Controlling border residences to identify centers of threats; a case study on villages in South Khorasan province	Results demonstrated that security and development are two correlated concepts and lack of one makes it impossible to reach the other one in the process of local and national planning. Furthermore, the relationship between affluence of villages and security is significant and in order to ensure security, first the level of affluence in border villages have to rise and secondly the inequality in providing services has to be reduced.
Ghaseminejad, Sardarian & Jajarmi, 2014	The effect of land logistics in villages located in border regions on development planning	Results showed that lack of regional balance between border regions and central regions is significant. This regional imbalance between border and central regions affects development trends in these regions negatively. Thus, any plan aiming at developing border regions and especially logistics of border regions, development and security are the pillars of border logistics.
Karimi & Vafaei, 2013	Security with sustainable development in border regions; a case study on Marivan	Results from the study demonstrated that sustainable development is the gift of security and security is the gift of development. However, facilities in the region are not distributed based on a proper pattern and may not end in sustainable development.
Sadeghi, Fal-Soleiman, Hashemi & Fadaei, 2014	Limitations and capacities of sustainable development in villages in Iranian eastern borders; a case study on Bandan rural district of Nehbandan	Results revealed that environmental conditions and executive and security circumstances of the region influence development of villages; yet, they were not in a pleasant condition in this region.
Zarghani, 2008	Geopolitical parameters affecting border security with an emphasis on Iran-Afghanistan border	Results showed that parameters affecting border security in most countries are similar and some others are specific to a particular region. They may decrease or increase over time.
Zarghani, 2009	Parameters affecting border security with an emphasis on Iran-Afghanistan border	Results from this study demonstrated that several parameters affect border security in border security of a country. Ranking these parameters based on their level of significance and effectiveness without considering their time and place does not seem to be very accurate. In other words, strength or weakness of their effect varies

		based on geographical location and the element of time.
Andalib & Matoof, 2009	Development and security in border regions' logistics	Results demonstrated that security and development in logistics of border regions are part and parcel to each other. In other words, development of border regions without security is impossible and vice versa.
Zarghani, 2007	An Introduction to identifying international borders (book)	This book defines and classifies borders and investigates their various types in an international level and their problems etc. the book then discusses the challenges faced by different countries in political, social and economic areas in border regions.
Andalib, 2001	Basics and principles of logistics in border regions of the Islamic Republic of Iran (book)	This book investigates borders of a country and their problems along with plans considered for development of these regions and further suggestions in this regard.
Bullock, Hado and Coppola, 2013	Border security, Immigration and Customs	Results revealed that one major feature of borders is illegal smuggling of humans and goods which directly affect security in the host country and particular its border regions. Therefore, investigating this issue is of utmost necessity for the country.
Carol, 2016	Images and experiences in border residence of China	This study revealed that one of the most influential approaches is founding proper factories according to environmental conditions of each region and using the native work force to produce the goods and products needed by the people in the region and even for exporting to other regions.
Timothy Tosun, 2003	Tourist perception of the Canada- USA border as a barrier to tourism at the International peace garden (article)	The role of international borders as explicit barriers of terrorism is examined. This revealed that average influence of borders and not the main influence is a major deterrent for tourists' visit.
Ulius Hotwath, Attila Rattfai, Botond Dme, 2008	The border effect on small open communities (article)	The significance of national borders in the value of changeability is probed in two fairly open economies neighboring each other (Seattle in the US and Vancouver in Canada). Results demonstrated the significant influence of border on the level of changeability.
Okubo, 2004	The border effect in the Japanese market; a Gravity Model analysis (Article)	This paper investigates the influence of border on Japanese market through Gravity Model and the index of interregional business trends and international trade. Results revealed that the border effect is much lower compared to Canada and the US and this effects decreased further between the years 1960 and 1990 gradually.
Sours: Authors, 2017		

Results from all these studies prove that borders and border regions are among important and strategic parts of all countries and their protection is of utmost significance for them. Various factors like development of border regions and expansion of border markets could help improve security in these regions. Together with the studies listed in table 1, several other



studies have been conducted in the field and with similar subjects; yet, the concept of border security in the region under study is unprecedented. In this study, border villages and their importance in the field of border security is analysed and scrutinized.

### **Theoretical framework**

Martin Glassner (1992: 2) believes that border is not merely a line. For him, border is a vertical level cutting the land and underground of neighbouring countries through space. This level seems like a line on the ground. According to Peter Taylor (1989: 72), border is a concept from outside to inside and is a line representing separation. Furthermore, border is also a space demonstrating political sovereignty of a government and blocking the road for humans, goods or thoughts. In fact, the most important function borders have is hindering the movement of humans, goods and thoughts according to particular rules (Mirlotfi et.al. 2015: 60). In this regard, borders formalize geographical, legal and spatial domains of a country and stabilize its dominance and sovereignty inside geographical domains. International borders not only provide the security of a nation and territory, but also play a significant role in political and economic relations between countries. Borders affect the residents' interactions and may take an integrating or separating function. However, most of the time, borders are seen with these both functions simultaneously (Poormanafi & Panahi, 2014: 5). Borders serve different functions; yet, the most important role is and has always been separating two separate political regions or two groups of people. This role however is fading out for mutual interactions and increasing communications change functions of borders significantly (Hafeznia, 2000: 9). Passage of time and advancements in different political, economic, technological and communication have assigned novel functions for borders. Functions like separation, integration, differentiation, challenge, communication along with military, economic, social, political, geographical and cultural are only some of them (Hossaini & Alipour, 2011:

9). Nevertheless, emergence of these real functions for borders depend greatly on the most important parameter i.e. border security. Security is derived from the term secure whose antonym or, according to some morphologists, opposite is fear. It refers to a state in which no threats or dangers exist or there is preparation against any threat or danger (Alain, 1991: 142). It could also be defined as relieving from danger, threat, concern, distress or fear or the presence of relaxation, trust, safety and buffer (Mandel, 1994: 44). Nonetheless, security could be accurately defined in different areas of life:

- Economic security: is a major aspect of security in the post-cold war world. It is generally defined as maintaining and improving the level of people's lives in a society through providing them with goods and services by internal performance and presence in international markets.
- Political and cultural security: is more neglected compared to other aspects of security. Ambiguity in conceptual borders have forced analysts to evade this aspect of security and consider it as a subclass of economic or military security.
- Environmental security: is the newest aspect of national security that has not been merged so much. Resource security includes access to non-renewable resources required for building armed systems on the one hand and access to renewable resources on the other hand.
- Military security: is the capability of armed forces of a country to protect the government and people against violent threats (Afrakhteh & Hajipoor, 2012: 40).

Borders mark the end of the territory of a government. Territory determines the political and legal domain of a nation and is the domain of authority of a government. These lines demonstrate the limits of the sovereignty of a government and display the limits of their authority. Public powers governing countries enjoy a full range of powers in their territory and assign rights and responsibilities for their people. This governance is

naturally practiced inside the identified borders and this differentiates countries from each other so that international relations are formed based on a particular order. Nowadays, protecting territory all over the planet earth is a value and the guarantee for realization of this is through completely secure borders (Roshan & Saadati Jafarabadi, 2011: 159).

In order to bring border security, several approaches have been identified and applied by different countries. Yet, before any security strategy or approach is compiled, the sources for problems and threats have to be recognized. In other words, to compile the strategy and take practical and strategic defensive measures to counter border threats, the sources for threats have to be recognized first. Considering the huge geographical expanse of borders, number of neighbours and geopolitical position of Iran, the sources for border threats are numerous. The most important sources and grounds for border threats in their different forms could be listed as follows:

- Length of the borders and number of neighbours along with natural and humanistic environmental diversity
- Imposed borders and ethnic-cultural interference with neighbouring countries;
- Underdevelopment of border regions;
- Challenges and conflicts in environmental issues and natural resources;
- Particular geopolitical and geostrategic position;
- The trend of political changes in neighbouring countries;
- Instability and inconsistency in neighbouring countries;
- Power conflicts and strategies in the region;
- Globalization and the change in the function of borders;
- Lack of a proper and integrated strategy in border management of countries;
- These parameters provide the ground for numerous border threats and can be considered potential or practical threats with or without combination with other parameters (Akhbari & Nami, 2009: 42).

**Border villagers and border security**

Due to the fact that efficient control over borders necessitates huge expenditure, border-oriented control systems, organized special border forces, mutual and cooperation between neighbouring countries and support from international organizations, very few governments are able to create a management system in an efficient way to control their borders (Karimipour, 2000: 221). However, among all development and improvement policies of border security, the use of and cooperation from border residences as bases with spontaneous motivation is a preventive and management approach to promote border security.

Small residences in border regions are among the most marginal regions in the developing regions. Being located in marginal parts of cities and countries lowers the quality of life and intensifies its related problems (Ghalibaf, Ramezanzadeh & Yari-Shegefti, 2009) one of the most important of which is decreased satisfaction from life in its different dimensions and attempt to increase it through smuggling, alcohol, robbery, assault, arms smuggling and even weakening national security with the aid of opposition groups and finally security problems in border regions. At the first sight, security has priority over development; thus, security is a prerequisite for development. Countries believing in this concept, support establishment of critical installations in regions adjacent to neighbouring countries. In this regard, Iraq could be given as an example. This country tries to bring security to its borders with Kuwait and Iran so that it could concentrate its forces in those regions. At the second sight, it is believed that development induces security (Zarghani, 2006: 170- 171). In this view, governments try to propagate development in marginal regions like borders (Zarghani, 2011) so that security is realized there. However, there is a third approach emphasizing on mutual understanding and interactions as the basis for development and security in border regions (Ghalibaf, Ramezanzadeh, Yari-shegefti, 2009: 172). If such approach is practiced, border village residences could take various and numerous economic, business, cultural and security. Functions to serve in the national level (Figure 1).

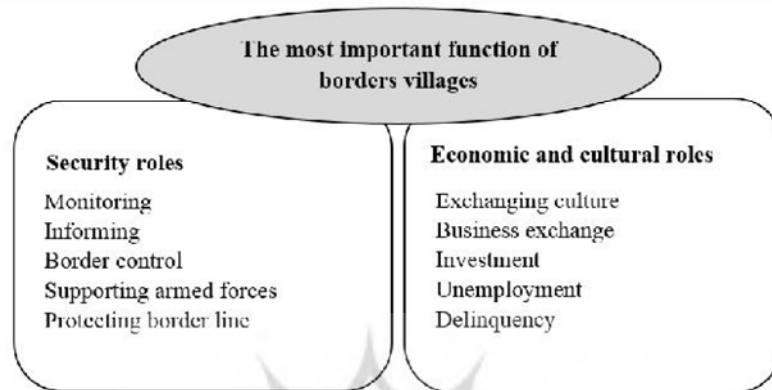


Figure1: The most important functions and positive and negative effects of border villages

In Iran, the number of the people and the people themselves living on borders and their interactions with the people over the border induce several particular economic, cultural and security effects. Organizing these interactions on the one hand and lack of population consistency along with lack of regional and spatial balances between border villages and off-border regions on the other hand impose significant effects on the process of spatial development in border regions so that population centres in border regions are social-economic and national isolation (Hasanzade & Mahmoodi, 2007). Considering the fact that underdevelopment and deprivation from social and economic welfare weakens national spirit and cause upheavals, economy could be considered as the omnipresent parameter behind security policies in different individual, regional and international levels. In other words, economic deprivation and poverty affect domestic stability and shake the foundations of security (Pashazade & Khodakarami, 2012: 270). In this regard, functions discussed for border village residences could not be realized unless the conditions for development of welfare and infrastructures are provided for these spaces. Nevertheless, case studies on some of the issues in eastern borders reveal that eastern borders of Iran face numerous problems including:

1. Threats induces by instability of neighbours;
2. Expansion of religious fundamentalism;
3. The problem of the presence of foreign military forces along with intelligence forces of other those countries and inconsistent policies;

4. Afghan immigrants and illegal transportation in the border;
5. Drugs;
6. Religious terrorism (Poormanafi & Panahi, 2014: 15).

Order village residences are among the most important and strategic spots in reducing border problems. Organizing these residences both scientifically and logically could significantly influence border control and minimize the problems (Kanamaru, 2005: 177). These villages have six types of potentials for development that could not induce national security (Figure 2).

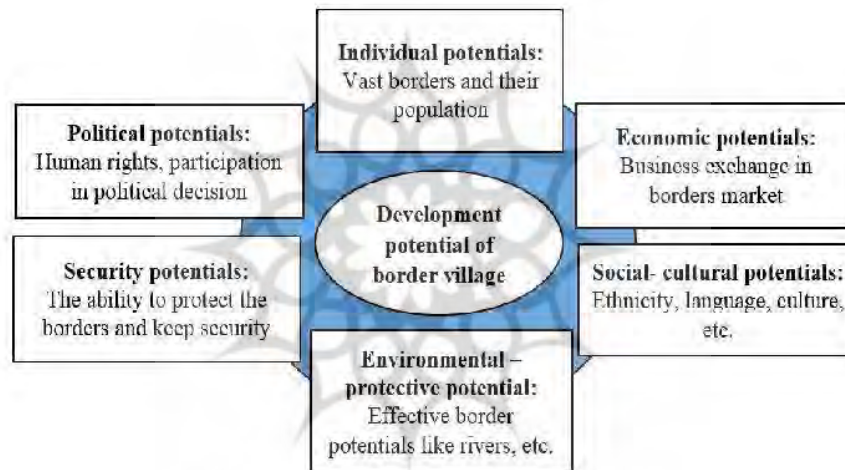


Figure 2: Development potentials with an impact on national security in border regions

Iran with its huge area and as a result with very long borders complex with environmental and geographical conditions and different neighbours with various political views face big problems in controlling its borders. Besides, some of these neighbours are not interested in seriously and constantly controlling their borders due to complex environmental-ecological condition of borders along with several other reasons. This has created active crisis spots (Golverdi, 2011: 19). Nevertheless, residents in border regions could get together with people residing border regions in neighbouring countries in taking the chances and using the resources and this in turn could end in mutual and amiable understanding, security, economic prosperity and development in order to create a relative advantage in border regions (Chandowvit, 2004: 145).

**Research methodology and the region under study**

The present study takes descriptive analytical method and is an applied research from the point of view of purpose. The study was conducted in two levels of library research (based on the library resources available) and field study (through a researcher made questionnaire). Based on library research and a review over relevant theoretical framework, this study is a single-variable study with five indices of maintaining military and defensive security, maintaining physical and environmental security, maintaining political security, maintaining social and cultural security and maintaining economic security along with 27 items using the Likert scale (table 2).

Table 2: Items of the roles played by border villagers in border security

Index	Item
Maintaining economic security	Reducing goods, fuel and drugs smuggling in the border, flourished border business transactions, attracting investment in border regions, producing border revenue, increasing border exports, creating jobs for border residents, strengthening border and local markets
Maintaining social and cultural security	Reducing immigration of border residents, reducing unemployment, reducing delinquency (theft, smuggling etc.), cultural exchange
Maintaining political security	Supporting the central government, regulating border passing, strengthening national identity and authority
Maintaining physical and environmental security	Reducing waste of resources (water, soil etc.), maintaining border line, participation in construction projects in border regions, attracting infrastructures of development
Maintaining security and defensive security	Cooperation with border guards in controlling borders, providing logistic services for border guards, helping to control blind spots and impassable passes, preventing the evacuate border villages as the centers of life, taking role of border guards
Source: research findings, 2017: based on the resources available	

Later on, in order to execute the field study, 10 spots were selected from Zaam and Golbanoo rural districts in the lower Torbate- Jam in the eastern borders of Iran with Afghanistan. Based on the level of the study, the scale of the statistical population of the study was selected to be local experts so that collecting data on the role and significance of villagers in border security could be possible. In order to do so, the experts were selected in two levels of local experts and governmental officials in border security.

Since the number of experts in the field were unknown, the statistical population was not known; yet, 63 subjects responded to the questions of the questionnaire from which 30 subjects were local experts (e.g. one village head and two village council members) and the remaining 33 were governmental experts active in border security (e.g. border guard forces of the city, governor's office's expert, city security council). It is worth mentioning that validity of the indices was insured through literature review and university professors' panel along with village studies experts. Reliability of the data was tested using Cronbach's alpha test. Results represented in table 3 demonstrate how good and satisfactory were the data for the study.

Table 3: reliability of research indices in questionnaire form

index	No. of items	Cronbach's alpha
Economic	9	0.73
Social and cultural	6	0.71
Political	3	0.70
Physical and environmental	4	0.73
Military and defensive	5	0.63
Total	27	0.86

Source: Research findings, 2017

In order to analyse the data collected descriptive and inferential statistics (confirmatory factor analysis, one-sample T-test and Independent 2-sample T-test) in SPSS and GIS computer applications.

### Research findings and discussion

#### Descriptive findings

From all 63 responders in the sample under study, 4.8% were women and 95.2% were men. 1.6% of them were single and 98.4% were married. From the point of view of employment, 31.7% were governmental experts and 95.2% were local experts. In case of level of their education, more than 60% of respondents were elementary school, high school or higher than bachelor's degree and elementary school with 27% was the most frequent one.



**Distribution of border security indices in both local and governmental experts**

In order to investigate the frequency of the responses from respondents on research indices in both local and governmental experts' groups, coefficient of variation for each index was calculated. The results are represented in table 4. Considering what can be seen in the table 4 and figure 3, the lowest frequency in the local experts group was for their economic index with 0.106 and in the case of governmental experts group, it is for the political index with 0.103. This shows that the responses on these indices were similar and had little difference compared to other indices. The highest frequency in case of local experts group was for the physical and environmental and political indices with 0.139; however, for the governmental experts, the social and cultural index with 0.180 was the highest. This shows that responses from respondents are far from each other and there is a big difference compared to other indices.

Table4: mean, standard deviation and coefficient of variation of research indices in two groups of governmental and local experts

	Local experts			Governmental experts		
	Mean	Standard deviation	CV	Mean	Standard deviation	CV
Economic	4.22	0.45	0.106	4.35	0.57	0.131
Social and cultural	4.05	0.48	0.117	4.04	0.73	0.180
Political	4.16	0.58	1.139	4.59	0.47	0.103
Physical and environmental	4.17	0.58	0.139	4.24	0.66	0.155
Defensive and military	4.13	0.57	0.137	4.12	0.63	0.153

Source: research findings, 2017

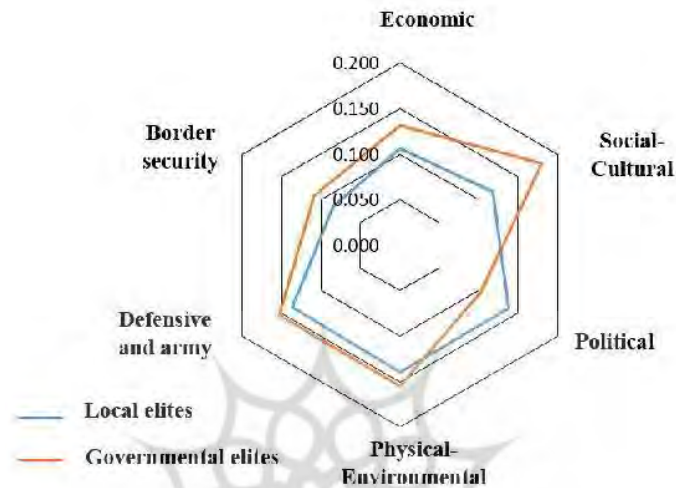


Figure 3: Coefficient of variation of research indices

Source: Research findings, 2017

Furthermore, in order to investigate the factors affecting security in the region under study, with a regard to normality of research indices, one-sample T-test was utilized. In this test, in case the level of significance is lower than the level of error, it is inferred that the mean of the society under investigation is not the tested value. Now, to find out if the mean of the society is more or less than the tested value, the high or the low limit in the computer application outlet have to be referred to. In the one-sample test, the positive high and low limits show that the mean of the society is higher than the value under study in case of that variable. If the first one is positive and the second one is negative, the mean of the society is almost the same value of the test. If both values are negative, the mean of the variable in the society is lower than the test value and the values in the society are in a low level. Therefore, the calculated mean of research indices was tested with a hypothetical mean of 3 and this confirmed that real mean of all respondents is higher than 3 and is above average. Considering the level of significance obtained for this index which was lower than 0.05, was significant and could be generalized to the entire society. Besides, the high and low limit of the indices was positive. In other words, mean of the society on this index was

higher than the tested value. This means, in the villages under study, research indices had a positive effect on border security in the region (Table 5).

Table 5: Security in the border region under study (one-sample T-test)

Research variable	T statistic	mean	Standard deviation	Level of significance	Difference from mean	Confidence interval 95%	
						lower	higher
Economic	28.95	4.41	0.39	0.00	1.41	1.31	1.51
Social and cultural	15.69	4.05	0.53	0.00	1.05	0.91	1.18
Political	17.08	4.25	0.58	0.00	1.25	1.10	1.39
Physical and environmental	14.36	4.09	0.60	0.00	1.09	0.94	1.24
Defensive and military	15.62	4.13	0.57	0.00	1.13	0.99	1.27

Source: research findings, 2017

In order to further analyse the issue, due to normality of the indices, the T-test with two independent groups was used to evaluate the means of the level of security. Therefore, the respondents were put into two expert groups in local and governmental levels. Table 4 demonstrates the results from T-test with two independent groups on the relationship between level of security in the view of local and governmental experts. In order to conduct the T-test with two independent groups, variances had to be evaluated through Levene test. According to table 6 and the level of significance of Levene test, in cases where  $Sig > 0.05$ , the T-test is conducted supposing the equality of variances, otherwise, the T-test is conducted supposing inequality of variances. As it can be seen, in case of security, the variances are supposed equal.

Table 6: results from comparison of the mean of security in both groups of local and governmental experts

	Descriptive statistics		Levene test		T-Test for equality of means		
	mean	Standard deviation	Statistic	Level of significance	T statistic	Degree of freedom	Level of significance
Local experts	4.10	0.34	4.18	0.045	-2.59	61	0.21
Governmental experts	4.36	0.41					
					Source: Research findings, 2017		

As it can be observed in table 4, the level of significance of security in both local and governmental experts' groups with Sig= 0.021 which is lower than 0.05 and reveals the difference between these two groups in the level of confidence of 95%. Results revealed that from the point of view of governmental experts, factors like economic, social and cultural, political, physical and environmental and defensive and military factors had greater effect on border security compared to local experts. These findings demonstrate the basic fact that governmental believe in the role villagers play in border security in its various aspects. However, local experts new little about tis and emphasized less on the fact.

#### **The effectiveness of each variables of the villagers' roles on border security**

In this study, in order to investigate the roles of border villagers in border security, confirmatory factor analysis was utilized. In order to evaluate decency of the data on a set of variables analysed on border security for the beginning of factor analysis, Bartlett and Kaiser-Meyer-Olkin (KMO) Tests were used. Significance of Bartlett test in the level of significance of 99%, decent value of KMO which is more than 0.5 and the level of significance of all factors which are less than 0.05 all prove the decency and correlation between variables for conducting factor analysis (Table 7).

Table 7: Bartlett Test

Set under analysis	KMO value	Bartlett value	Degree of freedom	Level of significance
Economic	0.671	130.33	36	0.00
Social and cultural	0.673	75.01	15	0.00
Political	0.666	32.56	3	0.00
Physical and environmental	0.647	58.36	6	0.00
Defensive and military	0.540	65.16	10	0.00
				Source: Research findings, 2017

Later on, using 27 variables extracted from the questionnaire, confirmatory factor analysis was utilized to investigate the role of border villages on border security. Results from investigating 27 variables in five factors demonstrated that the highest variance percentage is for the political factors with 62.70% and the lowest one was for the Defensive and military factor with 40.21%. This shows that confirmatory factor analysis and variables under study were satisfactory. Table 8 represents Eigenvalues and variance percentage for each factor separately.

Table 8: name of the factor, Eigenvalue and variance percentage of each factor

No.	Name of the factor	Eigenvalue	Variance percentage
1	Economic	2.98	33.18
2	Social and cultural	2.47	41.27
3	Political	1.88	62.70
4	Physical and environmental	2.24	56.03
5	Defensive and military	2.01	40.21
Source: Research findings, 2017			

### 1. The first factor: Economic dimension

The eigenvalue for this factor is 2.98 which can solely clarify 33.18% of the variance. In this factor, 9 variables are loaded. From among these 9 variables, producing border revenues with factor load of 0.71, strengthening border and local markets with factor load of 0.693 and flourished border business transactions with factor load of 0.688 had the greatest effect on border security in the region under this study. Besides, three variables of preventing smuggling goods, lack of interest in drug dealing and lack of interest in fuel smuggling had factor loads lower than 0.5; thus, they were

omitted from the analysis (Table 9).

Table 9: factor analysis on indices of economic dimension

Variable	Factor load
Flourished border business transaction	0.688
Attracting investment	0.646
Increasing border exports	.674
Strengthening local and border markets	0.693
Producing border revenues	0.710
Creating jobs	0.520
Source: research findings, 2017	

## 2. The second factor: Social and cultural dimension

The eigenvalue for this factor is 2.47 which can solely clarify 41.27% of the variance. In this factor, 6 variables are loaded. From among these six variables, increasing cultural exchange with other residents of border with factor load of 0.856 and reducing immigration with factor load of 0.742 had the highest impact on border security in the region under study. Furthermore, reducing unemployment with factor load of less than 0.5 were removed from the analysis (Table 10).

Table 10: factor analysis on indices of social and cultural dimension

Variable	Factor load
Reducing immigration	0.742
Increasing cultural exchange with other residents of border	0.856
Reducing delinquency (robbery)	0.613
Reducing delinquency (smuggling)	0.559
Increasing place belonging	0.569
Source: research findings, 2017	

## 3. The third factor: political dimension

The eigenvalue for this factor is 1.88 which can solely clarify 62.70% of the variance. In this factor, three variables are loaded. From among these three variables, supporting the central government with factor load of 0.81 had the highest impact on border security in the region under study (Table 11).

Table 11: factor analysis on indices of political dimension

Variable	Factor load
Supporting the central government	0.818
Regulating border passing	0.755
Strengthening national identity and authority	0.801
Source: research findings, 2017	

#### 4. The fourth factor: Physical and environmental dimension

The eigenvalue for this factor is 2.24 which can solely clarify 56.03% of the variance. In this factor, four variables are loaded. From among these four variables, maintaining borderline with factor load of 0.804 had the highest impact on border security in the region under study (Table 12).

Table 12: factor analysis on indices of physical and environmental dimension

Variable	Factor load
Reducing waste of resources (water, soil etc.)	0.746
Maintaining borderline	0.804
Increasing participation in construction projects in border regions	0.782
Attracting infrastructures of development	0.654
Source: research findings, 2017	

#### 5. The fifth factor: Defensive and military dimension

The eigenvalue for this factor is 2.01 which can solely clarify 40.21% of the variance. Five variables are loaded in this factor. From among these five variables, providing logistic support for border guards with the factor load of 0.766 had the highest impact on border security in the region under study.

Table 13: factor analysis on indices of defensive and military dimension

Variable	Factor load
Cooperation with border guards in controlling borders	0.560
Providing logistic service for border guards	0.766
Helping to control blind spots and impassable passes	0.635
Preventing evacuation border villages	0.516
Taking the role of border guards	0.664
Source: research findings, 2017	

After all, it could be concluded from among five factors under analysis, political factors had the highest percentage of variance. In case of the variables of each factor, producing border revenue in economic dimension, increasing cultural exchanges with in the social and cultural dimension, supporting the central government in political dimension, maintaining

borderline in physical and environmental dimension and providing logistic service for border guards had the highest percentage of variables. Thus, considering local and governmental experts' view, the variables with highest impact on border security have to be taken more seriously so that border security could be further strengthened (figure 4).

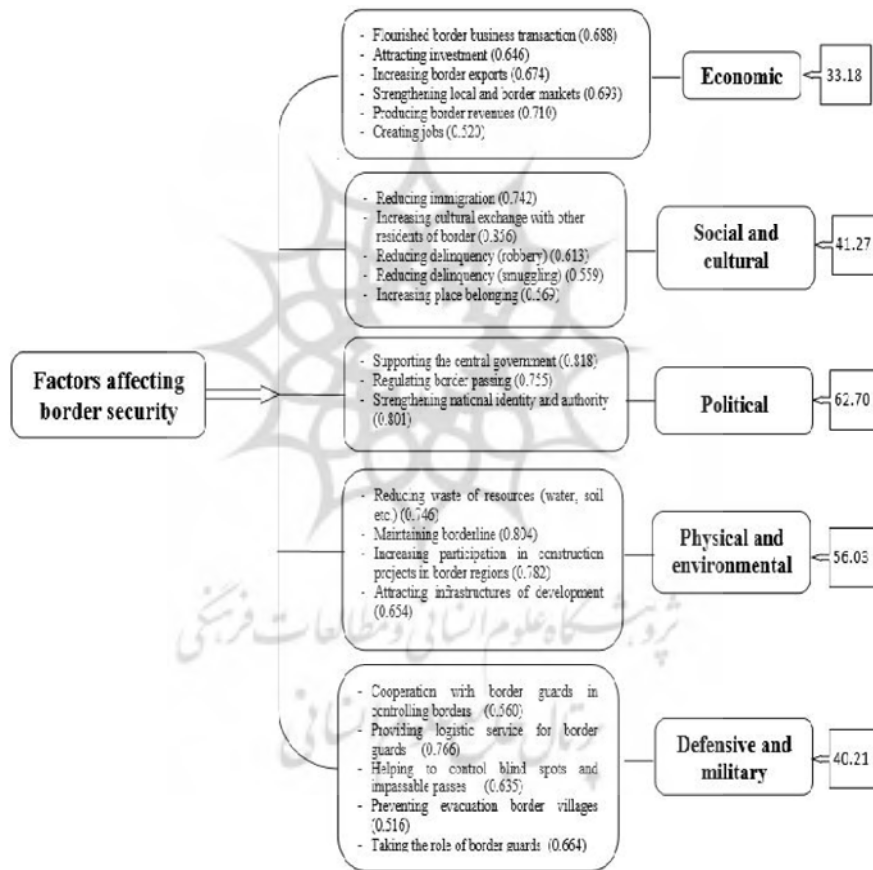


Figure 4: the impact of each factor on border security



### **Conclusion and Suggestions**

Islamic Republic of Iran with its particular geographical conditions has borders with several countries. One important point about all these borders is to keep them secure. In the eastern regions, Afghanistan and Pakistan are Iran's neighbours. These eastern neighbours have always had their own security, political, social and economic problems. One major threat on these borders is illegal passing through border, conducting terrorist acts along with smuggling fuel and drugs etc. Having these vast borders and unstable conditions in these two countries in mind, it could easily be concluded that their threats to Iranian national interests is on the rise. Border security is influenced by several factors some of which are almost common all around the world and some are unique to a specific border region. Nevertheless, several factors affect border security in eastern borders of Iran. One of these factors is border villages that could have a positive performance if proper conditions are provided for them. Thus, the present study aimed at investigating the role of border villages in border security. In order to do so, five indices of economic security, defensive and military security, physical and environmental security, political security and social and cultural security were used together with 27 items extracted based on Likert scale. In order to investigate the role of these factors, Zaama and Golbanoo rural districts were selected from Torbate-Jam, Razavi Khorasan province. This region is on the border and this brings numerous security challenges for it. This study used ideas from local and governmental experts. According to the findings, coefficient of changes in the study revealed that the lowest frequency in these two groups was the economic index with 0.106 for the local experts and the political index with 0.103 for the governmental experts. Furthermore, the highest frequency for the local experts' group was for political and physical and environmental indices with 0.139 and for the governmental experts' group was the social and cultural index with 0.180.

Later on, in order to investigate the factors affecting security in the region under study, one-sample T-test was utilized. Results from this test showed that in the villages under study, present indices had positive impact on border security in the region. Besides, according to the findings from two-sample independent T-test, it could be said that compared to local experts, governmental experts considered economic, social and cultural, political, physical and environmental and defensive and military dimensions

to be of more impact on border security. Later on, 27 variables extracted from the questionnaire were used to evaluate the role border villages play in border security through factor analysis. Results revealed that the highest percentage of variance is for the political factor with 62.70% and the lowest is for the defensive and military factor with 40.21%. In other words, the biggest impact on villages have on border security is from the political factor and the smallest impact is from the defensive and military factor. In conclusion, it could be said that various policies could be taken to strengthen security in these regions. Yet, challenges are still there to be identified and tackled so that border security is improved in these regions:

- Not having a mere security view toward residents in border regions and villages on border security and looking at villages as an important and efficient factor to improve and maintain border security;
- Further attention to village welfare in border regions and improving services to those villages so that the distance between border villages and non-border villages and cities is decreased and these villages become desirable residents for their residences;
- Attention to infrastructures in border villages especially village roads improve access to these regions, transportation of their people and security factors there;
- Creating decent jobs in border regions and fighting unemployment of the youth could prevent temporary or permanent immigration of border villagers and evacuation of their residences;
- Providing the ground for free trade zones and border markets along with strengthening business trade in the border region improves economic condition of villagers and prevents them from smuggling fuel, drugs, goods etc. or any other illegal occupation;
- Increased communication between police and governmental departments on the one hand and border village residents on the other hand creates mutual trust and further cooperation between these departments and the people.

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