



## **An Analysis of the Economic and Physical Effects of Border Markets on the Development of Rural Areas (Case Study: Incheh Borun Border Market)**

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### **Abstract**

**Purpose-** The present study aims at establishing border markets with the purpose of legalizing the deals and economic boom, employment, and promoting life standards in border areas. The main purpose of the present study is to analyze the physical and economic effects of border markets on the development of rural areas .

**Design/methodology/approach-** The present study is an applied study with regard to nature, and descriptive-analytic with regard to methodology. The population of this study includes the villages in the city of Agh-Ghala; 7 villages were selected as the sample, and the data was collected through researcher made questionnaires (383 questionnaires according to Cochran formula). Data analysis was done using Friedman, Chi square, Wilcoxon, and one sample t-tests in SPSS .

**Findings:** Developing border markets leads to improvement in economic and physical indices in rural areas. The most effects were found on the quality of new-built houses, and the fewest effects were found on rural facilities and infrastructures. Border markets had important effects both on economy and culture of rural residents. The only component indicating insignificance was the effect of border markets on the reduction of unemployed people in the society, which is because of lower market boom during recent years and lack of free zones .

**Research limitations/implications-** Spatial dispersion of the villages, limitations in obtaining information, and concerning about questionnaires being completed are some of the issues .

**Practical implications-** Through planning and shift in attitudes in economic issues, sufficient attention will be paid to less considered needs of the residents of border areas; and the rural physical and economic indices will be improved through creating border markets .

**Originality/value-** Border markets and their development can lead to the improvement and promotion of life quality of the residents of border areas and the population willingness to stay .

**Key words:** Border markets, economic and physical indices, developing border rural areas, Incheh Borun.

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## 1. Introduction

Human beings' reaction to time and place situations is different regarding content and face. The abounding reactions by human beings indicate the wide range of needs and requirements. Economic interactions and fulfilling livelihood requirements is one of these abounded actions (Ghaderzadeh & Esmailzadeh, 2013). Border areas are considered as sensitive and strategic zones in the country. The sequestered nature of border areas, particularly in mountains and deserts, have always caused economic, politic, and security problems for the government, because of the lack of welfare and motives required for living (Mahdizadeh et al, 2012). Potential disability in production, unemployment, low income, and inaccessibility of basic needs are the most important economic and politic characteristics of these areas that make goods smuggling possible (Esmailzadeh, 2006). Therefore, these areas are known as marginal and undeveloped areas; however, the cause may be the geographical condition of the border areas, that is, being located in borders itself vanquishes many facilities and capabilities in these areas. By establishing a border between two countries, the areas connecting the two countries will be broken off and become marginal. It is the reason why these areas are underdeveloped (Amanpour et al, 2012). Therefore, creating border markets is a main issue to improve the economic and social conditions and to increase the willingness of people to stay. The strategy of establishing border markets has been followed in recent years as one of the main policies in planning to decrease the negative effects of underdevelopment and to respond people's needs (Mirzaei & Abdozadeh, 2014). The economic activities in border areas can play an important role in the economic development and improvement of border areas, improvement of people's life standards, decrease of poverty, appropriate distribution of income, creation of friendship relationships, and acceleration of collaborations between border areas (Chandoevvit et al, 2005). Accordingly, many countries in the world consider creating border common markets as one of the main mechanisms and solutions to create development, welfare, and security in border areas (Zarghani et al, 2012). Therefore, decreasing the development gap between central cities and border

areas is only practical through applying the policies to extend international collaborations and border relationships. The following are the goals of the Ministry of Interior by creating border markets: 1) creating economic and commercial relationships in bordering areas and decreasing poverty; 2) increasing employment and security, stabilizing population in the borders and preventing irregular migrations to cities; 3) preventing waste of national assets through smuggling; 4) promoting economic boom and social mobility to achieve development in rural areas of the borders; 5) creating cultural and economic connections with central cities out of the borders. As a matter of fact, market establishment has reduced informal economies significantly but it hasn't been able to decrease the mass migrations of young rural people to cities (Mousavi, 2013). Therefore, the first step in comprehensive planning is to recognize the existing conditions in order to improve the employment in deprived areas, to identify these areas and plan appropriate to economic, social, and environmental conditions. The fact that Turkmen Sahra is a bordering area, made the policy makers to make an essential step to alleviate the poverty and increase employment through establishing Incheh Borun bordering market. The purposes of this market included: creating jobs for local people and increasing their income through exchanging goods, preventing drug trade, protecting stability and security in borders, cooperating with police, and improving sociocultural conditions of the people in this area. This market is located in the vicinity of Tangly Village and close to the bordering river Atrak. Since it is 25 years that it is built, and due to its primary purposes, its effects on the surrounding rural areas have not been studied exactly. Therefore, the present study is seeking to answer the question whether creating and developing Incheh Borun market have improved the economic and physical indices in the surrounding rural areas? Two hypotheses are presented in this regard:

There is a significant relationship between creating Incheh Borun border market and the improvement of physical indices of the surrounding rural areas.

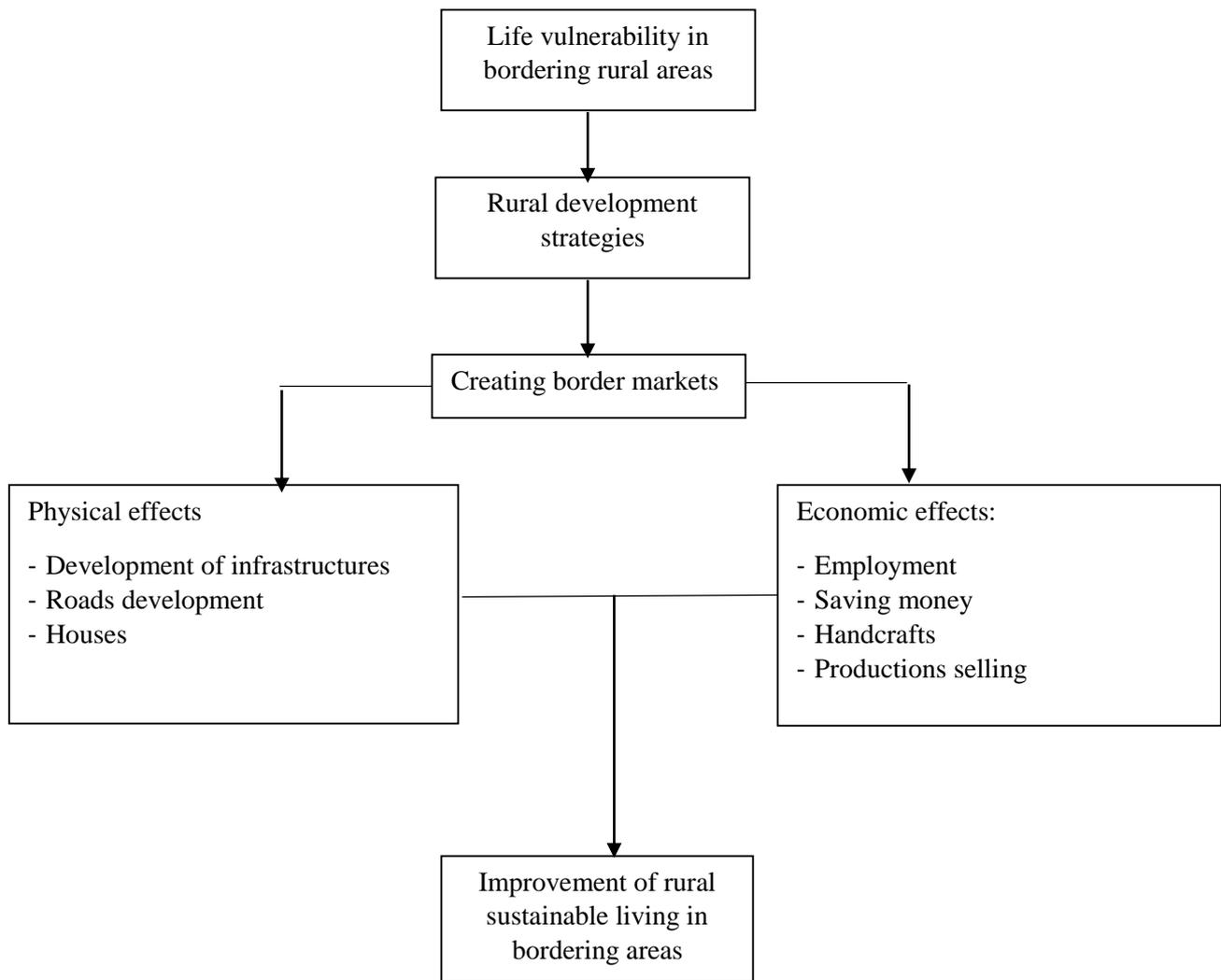
There is a significant relationship between creating Incheh Borun border market and the improvement of economic indices in the surrounding rural areas.

## 2. Research Theoretical Literature

Today trading is known as the driving force for growth and development in all countries particularly developing countries. These countries are required to seek an active presence in world trade to achieve this goal. Focusing on the extension of regional exchanges among countries is an effort in this regard. Border commercial exchanges are the main indices in creating connection between neighboring countries and livelihood of the border residents. Emphasizing on such exchanges is followed by increased economic interactions, extended immediate local markets, peace and stability in bordering areas and improved security, and improved infrastructures and services for the region and even the country. Attention to border residents' economy can play a significant role in improving welfare and economy, increasing people's living standards, decreasing poverty, appropriate distribution of income, creating job opportunities, establishment of friendship, and accelerating collaborations among bordering areas. The goal of development planning is a comprehensive development which is not achieved unless policies are made based on social justice. Bordering areas often are not able to present sufficient potentials of skillful work force in industry and production; therefore, they are counted as deprived areas (Mirzaei & Abdozade, 2014).

The goal of establishing border markets is to increase economic and commercial relationships with neighboring countries and employment in border areas which are more deprived than other areas. Therefore, if they are neglected for any reason, serious challenges such as population instability will occur. In rural areas, especially in bordering points, social development as a process of social change is a goal which is realized through economic development because of the inevitable importance of economy (Nahar, 2014). Any arrangement for developing bordering areas must be aimed at improving the income conditions of rural people so that other economic and social indices are improved as well (Veysi & Ahmadi, 2015). Border markets are centers to drive rural areas to be more seriously present in regional,

national, and strategic development, so that these areas can exit geographical and economic isolation through increasing national and international collaborations (Szalontai, 2011). Actually, establishing border markets as a tactic which leads to dynamism and variety in rural economy can resolve many problems that rural people currently face (Tayebnia & Manouchehri, 2017). Due to the complex and multi-facet problems in bordering areas, we shouldn't look for a simple solution, but different approaches must be tried against these problems (Rokn-al-Din Eftekhari et al., 2008). Economic development in bordering areas, the residents' economic income through healthy economic activities, and the government's support and investment have positive effects on security functions of the borders; on the other hand, increasing healthy economic activities and the governments' investment in bordering areas, provided that the difference between the economies on the two sides of the border is not so high, can have positive effects on the relational functions of the borders (Ghaderi Hajat et al., 2010). Although establishment of border markets is critical for economy and welfare in these areas, they have not been so much successful in realizing their defined purposes, and they have been far from their mission because of the lack of required conditions (Saeidi et al, 2009). One of the successful policies made by the government of Iran during the two recent decades has been establishing border markets which have positive effects not only at the national regional dimensions, but also at the local level; it has led to positive changes in economic and social aspects including an increase in life satisfaction, willingness to stay in the village, decrease in migrations, literacy, skillfulness, and tendency to invest, from the social point of view, and increased satisfaction with income, travelling, enjoying life facilities and house quality, from the economic point of view (Armaghan, 2012). Local markets as an economic phenomenon have various functions. While they fulfill the needs of local people, they create motivations among the villagers by presenting local and domestic products directly without the presence of brokers.



**Figure 1. The Conceptual Model of the Study**  
Source: Research finding, 2017

Evidently, more production will be followed by increased economic efficiency for rural (and even urban) people. Meanwhile, by creating relationships between the central habitation (the location of the market) and its sphere of influence at different levels and creating balance among the relationships, rural links and consequently spatial integration will be created. Finally, these factors lead to economic dynamism and cash flow in the area and consequently economic development. Economy in bordering areas is the main index in creating connection between the neighboring countries and livelihood of local people; hereby people residing in bordering areas in the neighboring countries can use common resources and opportunities which can lead to friendship,

security and economic boom, job opportunities, and formation of a relative advantage in the bordering areas. These points have made countries to step toward fighting against different problems resulted from retardation in these areas. One of the main goals of border markets is to create jobs for the local people. Fortunately, border markets are the objective manifestation of people presence in economic affairs such that not only they have been able to make a step toward realizing one of the goals of development plans, that is, non-oil exports but also could play an important role in creating job opportunities (figure 1). Border markets and the role they play in developing bordering areas have been subjects of a large number of studies. Most of them have

focused on developing rural areas, income generation and employment for the people residing in deprived bordering areas, and decreasing poverty and unemployment (table 1). However, in

addition to the above mentioned topics, the present study deals with the effect of border markets on the improvement of economic and physical indices of the villages in Incheh Borun bordering areas.

**Table 1. Literature review**

Rezaei 2010	In his MA thesis, “the effect of border markets on physical and socioeconomic growth of the cities neighboring Bashmogh market borders in Marivan” he explains that because of connection with various outer environments, bordering areas have especial characteristics. Spatial links and interactions on the other side of the border and vulnerability and different threats have made these areas particularly important in the process of development and land use planning.
Amanpour et al, 2012	In an article titled “investigating and analyzing the effects of border markets on economic and social structure of cities; case study: Javanroud”, they explain that unemployment percentage in Javanroud has been high before establishment of the border market which caused many social and cultural disorders. Establishing border markets in this city proved that it can become an active economic center in west of Iran provided that correct planning is performed at all levels.
Mohammadi Yeganeh et al, 2012	In a study titled “evaluating the economic effects Mehran border market on development of rural areas”, they proved that there is a significant relationship between establishing market and its economic effects such as increasing employment, decreasing poverty, increasing income, and decreasing tendency to migrate among the people residing in bordering areas.
Asheri et al, 2012	The results of s study named “the role of border market in economic and social development” indicated that establishing a border market in Sanam Balaghi district in Poldasht was effective in increasing employment, stabilization of population, increasing income, and living level, and sustainable development as well as mutual regional collaborations, the obvious example of which is the mutual collaboration between Iran and Azerbaijan.
Sadeghi and Rabiei 2015	In a study named “analyzing localization of optimal establishment of border market in rural habitations in the city Gonbad Kavus” they explain that the indices facilities of the habitations and the distance of market to border play an effective role in localizing rural border markets which helps increasing cash flow in the area and formation of a favorable economy as well as increasing security in bordering areas.
Kiani et al, 2010	In their study: “the role of cultural commonalities in developing border trading terminals in Tamarchin area in the city Piranshahr”, they indicated that sustainable development of border areas, and increasing welfare and income among the local people through healthy economic activities, with support and investment by the government have positive effects on security function of the borders. Currently, the countries who have considering border development as a priority, have been more successful in stability; in contrast countries who neglect it, are faced with various challenges like evacuation, instability, and insecurity in borders.
Esmaili et al, 2016	They showed in their study, “evaluating the role of border markets in development of bordering villages in Incheh Borun zone in Golestan”, that economic development in bordering areas and increasing welfare and income through healthy economic activities with support and investment by the government have positive effects on security function of the borders and the results indicated a significant relationship of 99% between the effects of border market and realizing social and economic sustainability in rural areas.
Leebouapao et al, 2005	He investigated the socioeconomic effects of border trading and its effects on increasing living standards in three states of Laos. In first section he deals with political frameworks of trade and economy in bordering areas, in the second part he studies the goods produced in the area under study and how they are exported, and then he analyzes the effects of border trading in increasing variety and quality of goods, employment, and increasing living standards in these three states in Laos.
Murshid and Tuot, 2005	They investigated the border exchanges among Kambui, Laos, Vietnam, and Thailand relating border economy in Kambui. They evaluated all legal and political regimes for Kambui liberation, political topics or development strategies, the flow of trading agreements in bordering areas, and the effects of poverty in bordering areas on local levels. They found that investment risk increased because of increase in market competitions and increased formal and informal costs of good clearance especially for small trades.

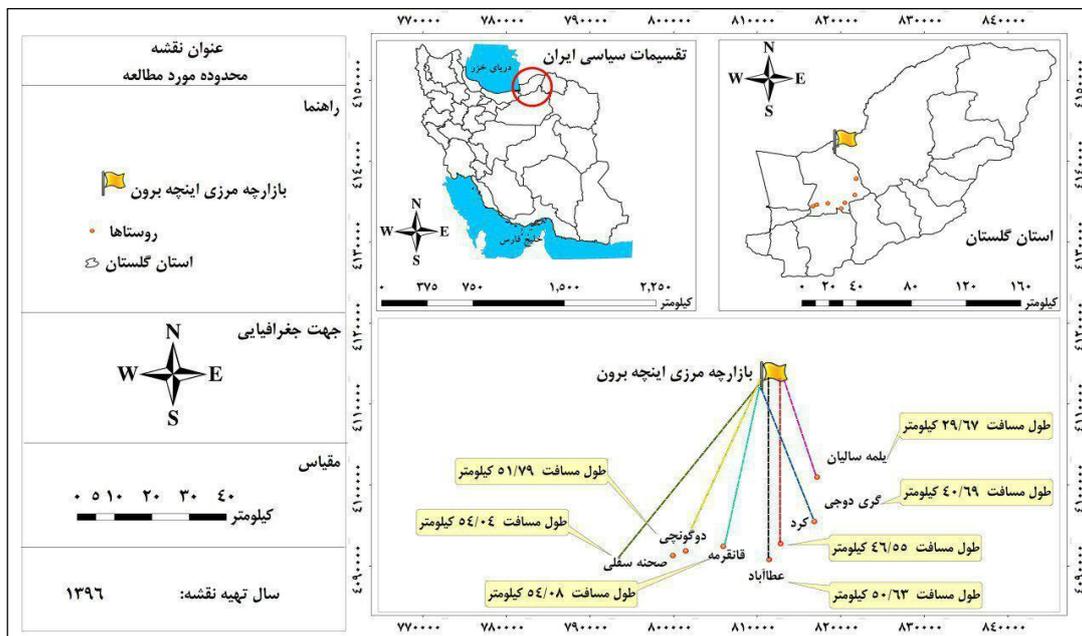
**Table 1.**

<p>Kurowska, 2016</p>	<p>He studied bordering areas in Poland and showed that regarding border development, economic area is much more retarded than social activities such as cooperation, culture, education, and tourism. Border sustainable development must consider both social and economic aspects at the same time, so that entrepreneurial opportunities are realized.</p>
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### 3. Research Methodology

#### 3.1. Geographical Scope of the Research

Incheh Borun is located at the north of the province of Golestan in borders with Turkmenistan. Incheh Borun border market is the most important trading and tourism factor in this small city; and Almagul and Alagul ponds are two tourism attractions there. Incheh Borun is a bordering region and in spite of its proximity to Agh Ghala, it has been considered as a region in the city of Gonbad Kavuous in Golestan province. It is located in a salt-marsh and the surrounding lands are affected by seasonal floods of Atrak River (figure 2). Incheh and Borun mean narrow and foreland respectively. It used to be a camping place for the passengers between Khiveh and Astarabad. The strategic importance of this area is because of the establishment of the first Russian battalion through which the surrounding and conquest of Turkmenistan became easy. The people of Incheh Borun occupy in agriculture and animal husbandry and trade in Incheh Borun custom. This market was established after Gedraloum Bridge border was opened, and passengers' traffic to Turkmenistan started informally. At that time, according to a commercial collaboration agreement between the two countries, the current border market was established. Incheh Borun border market is the most important commuting factor and tourist attraction for the small city of Incheh Borun. This market attracts many passengers in Nowruz holidays.



**Figure 2. The map of the area under study**

Source: Research finding, 2017

#### 3.2 Methods

The present study is an applied study regarding the nature, and is descriptive-analytic regarding the methodology. Data collection was done through library and cross-sectional survey methods, in which data was collected using digital resources

and books. In order to analyze the hypotheses, data was collected by the researcher-made questionnaires. Three hundred and thirty three questionnaires (using Cochran formula) were completed and imported to SPSS for statistical analysis. Because of the dispersion of the villages

in this area, the samples were selected randomly in a systematic way among the classified villages showed in Table 1. Cronbach alpha was 0.87 for the data related to the economic indices of the questionnaire and it was 0.79 for the data related to the physical index. However, due to the fact that the variables in the present study including independent variable, border market, and dependent variables, economic and physical characteristics of the villages, and because each of these groups includes some sub variables, different reliabilities are calculated for each sub-variable. These values and variables are shown in table 2. Finally, regarding the first hypothesis related to physical aspect of the villages, since the data in this hypothesis is qualitative, first using non-parametric tests like Friedman and Chi-square we evaluated the change from the point of view of villagers; finally, the effect of border market on rural body was calculated using linear regression indicating a clear picture of the hypothesis.

With regard to the second hypothesis, first normal responses were evaluated using normal distribution

test; then improvement of economic indices because of developing border market is evaluated using one-sample T-test parametric test. To examine the expectations and performance of the market, we used HOLSAT model. It is a relatively new model trying to deal with the complexity of measuring satisfaction of people residing in a place (Truong & Foster, 2006). It was first introduced by Tribe and Snaith in 1998 (Tribe & Snaith, 1998). They have tried to overcome the limitations in other models like Servqual and Servperf regarding the measurement of satisfaction with a phenomenon whether it is human or natural. In fact, the key characteristic and distinction of this model is in measuring satisfaction with the relevant subject, while in other models the mere emphasis was on a special service provider such as market and its services. The present model measures the satisfaction of the residents of a phenomenon including their positive and negative attitudes by analyzing their expectations and performance.

**Table 2. Class distribution of questionnaires in the sample society**

Source: Research finding, 2017

row	Name of village	Number of households	Sample size
1	Sahneh Sofla	877	61
2	Dogunchi	634	45
3	Ghanghermeh	487	33
4	Kurd	583	41
5	Ata Abad	1333	91
6	Yalmeh Salian	1002	69
7	Gary	636	43
8	Total	5552	383

### 3.3 Variable and Research Indices (table 3)

**Table 3. Dependent variables: economic and place indices**

Source: Research finding, 2017

Economic indices		Physical indices
Tendency of villagers to work in border markets	Effect of selling food and daily requirements on villagers' income	Effect of development of border markets on rural facilities and infrastructures
Effect of border markets on employment in the area	Effect of border markets on job varieties in rural areas	The effect of establishment of border market on qualitative and quantitative development of the roads
The effect of border markets on decreasing unemployment in rural communities	The effect of working in border markets on households' savings	The effect of establishment of border market and commuting by urban people as a result of maintaining and correct use of plans and projects

**Table 3.**

Economic indices		Physical indices
The effect of increased market boom on economic boom in rural areas	Ability to variegate income sources in rural areas	The effect of establishment of border market on changing decisions, planning, and prioritizing rural plans
Tendency of the villagers to sell their handicrafts in border markets	Changing consumption pattern in rural families	The effect of border markets on quality of new-built houses in rural areas
The effect of border markets on decreasing unemployed women	Developing border markets as a result of increasing selling markets	The effect of border markets boom on improvement of transformation networks

**4. Research findings**

**4.1 Descriptive Findings**

Descriptive findings indicate the demographic characteristics and socioeconomic specifications of the sample society. It is notable that the reason of

the higher percentage of male respondents compared to female respondents, and the higher percentage of married respondents compared to single ones is that the targets of our study were householders (table 4).

**Table 4. Social and personal characteristics of respondents**

Source: Research finding, 2017

Gender		Age		Marital state		Education level		Monthly income	
Male	83%	24-34	30.20	single	24%	illiterate	22.71	Less than 800000 Tomans	32.14
		35-44	22.97			Under diploma	37.85	800-1200	25.32
		45-54	21.93			Diploma	19.84	1200-1600	16.71
Female	17%	55-64	19.39	Married	76%	Associate degree	6	1600 to 2 million	14.88
		+64	5.48			Bachelors'	11.48	More than 2 million	10.96
						MA and above	2.08		
Carrier		Industry	Services	Farmer	Self-employed	Employee			
		13.31	29.76	31.33	23.49	2.08			

**4.2 Analytic Findings**

The first hypothesis says: there is a significant relationship between the establishment of border markets and the improvement of physical indices of the surrounding villages. Regarding type of the indices in physical aspect, they were evaluated using questionnaires and a Likert scale. Due to the qualitative nature of our considered indices, Chi-square and Friedman tests were used; then to

calculate the ordinal averages and to compare them, we used non-parametric Friedman test and to show the effect of the market and how it affects physical indices, we used linear regression (table 5).

**Table 5. Non-parametric one-way Chi-square and Friedman tests to investigate the effect of development and establishment of border markets on physical changes**

Source: Research finding, 2017

Component	Chi-square coefficient	Chi-square degree of freedom	Significance level of Chi-square	Friedman ordinal average	Friedman degree of freedom	Friedman level of significance
The effect of development of border markets on rural facilities and infrastructures	25.40	4	0.000*	7.29	5	0.074**
The effect of establishment of border markets on quantitative and qualitative development of rural roads	26.60	4	0.000*	6.65		
The effect of establishment of border markets and commuting by urbans as a result of maintenance and correct use of plans and projects	20.20	4	0.000*	6.24		
The effect of establishment of border markets on changing decisions, planning, and prioritizing rural plans	26.20	4	0.000*	5.62		
The effect of presence of border market on the quality of rural new-built houses	38.20	3	0.000*	6.30		
The effect of border market boom on improvement of rural transportation networks	29.00	4	0.000*	5.81		

Significance level to 99% (\*)

Significance level to 95% (\*\*)

Not significant (NS)

As it can be seen, according to the [above table](#) and the results of Chi-square test, all components are significant to 99% and the development of the border market has been able to change and improve the rural physical indices in the area under study. It is notable that changes in rural living environment and development of transportation limes have been affected by the development of this market and the extension of border custom activities leading to the development of rail transportation; and changes in the quality of houses have been affected by the increased cultural feedbacks and access to effective resources through the market and increased transportation lines. This high level doesn't mean the market has been completely effective in all aspects, but it indicates the amount of effect, that should be measured using the relevant tests. Of course, because the Chi-square obtained for each component was different and according to the findings, all indices didn't have similar correlation coefficient and according to the value of obtained

Chi-square, the highest value was for the effect of border market on the quality of rural new-built houses equal to 38.20, and the least value was for the effect of the border market on rural facilities and infrastructures equal to 25.40. According to the results of Friedman test, the significance level of 95% was found for the physical aspects affected by the establishment of the border market, indicating a high amount of relationship among these issues, so the one-way Chi-square test was confirmed. According to the obtained ordinal average, indices in the subset of physical components affected by the market didn't have similar importance. Due to the data in the above mentioned [table 5](#), the highest value for Chi-square was for the effect of border market on rural facilities and infrastructures with the ordinal average equal to 7.29; and the lowest value was for the effect of border market on changing decisions, planning, and prioritizing rural plans with the ordinal average equal to 5.62. According to the above findings, it can be

concluded that the effect of border market on relevant physical indices has been high. Once the effectiveness was determined and the results were found, a problem raises that is: how much was this amount of change in the rural body before the establishment of the border market? In order to

respond to this issue, the effect of border market on physical indices of the villages was evaluated using linear regression, the result of which are showed in [table 6](#).

**Table 6. summarized model and estimated parameters to show how the effect of border market on physical changes of surrounding villages is**

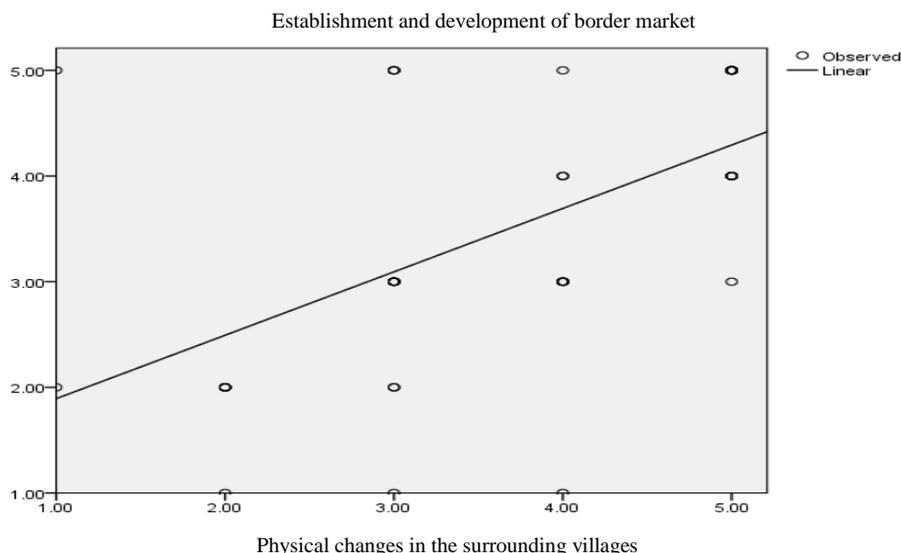
Source: Research finding, 2017

Equation	variables	Sub-variables	Summarized equation					Estimated parameters	
			Square regression	Anova	Freedom degree 1	Freedom degree 2	Significance level	constant	Inconstant
Linear regression	Establishment of border market	Physical changes in villages	0.311	18.50	1	41	0.000*	1.292	0.600

Significance level to 99% (\*), significance level to 95% (\*\*), not significant (NS)

The above results indicate that the effect of establishment of border markets is direct, and this kind of market in the area affects physical characteristics directly which can be seen in the estimation of the final parameters as well. To show this relationship, the linear regression diagram is drawn. It is notable that the values related to border

market is through evaluating the amount of development of this market in border custom organization and ordering development from the point of view of this organization which is equal for the free zones and border markets all over the country ([figure 3](#)).



**Figure 3. linear regression to show the effect of border market on physical changes in surrounding villages**  
Source: Research finding, 2017



The second hypothesis is: there is a significant relationship between the establishment of the border market and improvement of economic indices. To examine this hypothesis, we used Kolmogorov test to evaluate the normality of the

data; then to estimate the effect of border market on residents' economy, a parametric one-sample t-test was used. Finally, HOLSAT satisfaction model was used to measure people's satisfaction (table 7).

**Table 7. evaluating the results of opinions regarding the effects of the border market on economy and the residents' satisfaction through Kolmogorov and one-sample t-test**

Source: Research finding, 2017

Item	Sample size	Kolmogorov statistic	Kolmogorov significance level	T Freedom degree	T value	Standard deviation	Mean difference	T Significance level
Tendency of rural people to work in border market	383	0.231	0.000*	382	21.12	0.789	0.773	0.000*
The effect of border market establishment on employment in the area	383	0.285	0.000*	382	35	0.613	0.728	0.000*
The effect of border market on decreasing the number of unemployed people	383	0.249	0.000*	382	12.36	0.678	0.728	0.352 (NS)
The effect of increasing market boom on economic boom among rural people	383	0.286	0.000*	382	16.23	0.704	0.703	0.000*
Tendency of rural people to sell their handicrafts in border market	383	0.231	0.000*	382	27.60	0.631	0.774	0.000*
The effect of border market on decreasing the number of unemployed women	383	0.224	0.000*	382	6.84	0.695	0.695	0.000*
The effect of sale of food and daily needs on villagers' income	383	0.293	0.000*	382	9.45	0.698	0.594	0.000*
The effect of the market on job variety in the villages	383	0.193	0.000*	382	28.92	0.574	0.645	0.000*
The effect of working in border market on saving status of the families	383	0.236	0.000*	382	18.91	0.736	0.688	0.000*
The ability to variegate villagers' income sources	383	0.249	0.000*	382	27.72	0.622	0.612	0.000*
Changing consumption pattern of rural families	383	0.211	0.000*	382	27.19	0.503	0.641	0.000*
Development of border market as a result of increased sales	383	0.279	0.000*	382	35.85	0.549	0.523	0.000*

Significance to 99% (\*), significance to 95% (\*\*), not significant (NS)

According to the results of Kolmogorov test and the significance level of each component in the economic aspect and considering the value of each statistic, it can be concluded that the significance equal to 0.000 indicates the rejection of zero

hypothesis; and there is no reason to confirm the "normal distribution of the sample". In other words, this sample is not distributed normally and the data distribution is different. So, it can be said that people had different opinions in responding to

different parts of the [table 7](#). One-sample t-test was used to complete the performance, because data was normally distributed in Kolmogorov test. According to the results obtained from one-sample t-test, the effect of the border market on economic indices in the surrounding villages was high. It is confirmed by the significance level of 99% in all indices except one. It can be concluded that according to the results of this test, and the previous complement test, the second hypothesis is not rejected. It should be considered that just the index “the effect of border market on decreasing the number of unemployed people in rural communities” was not significant which is because of many reasons such as lack of liquidity; therefore this index has not been considered as positive by the rural people. Accordingly, here a problem raises: have the effects of border market on economic indices created satisfaction among the rural people? Therefore, we tried to answer this question using HOLSAT satisfaction model, the results of which are shown in the [table 8](#) and scenario.

In order to calculate how much the locals’ expectations have been fulfilled in economic

indices, we first calculated the average of each index in two parts “expectations and performance”; the results were then imported into the HOLSAT model. Comparing expectations and performance observed for the economic indices indicated that means differences were positive for them all. It is because they didn’t have high expectations from the market regarding these items; and on the other hand the market performance in fulfilling their expectations has been high. It is notable that [Tribe and Snaith \(1998\)](#) suggested that mean difference will be negative if the expectations are high and performance is low. Therefore, according to the results shown in the [table 8](#), the highest satisfaction level is for the effect of border market on families saving state (1.42). The economic state of the people who have been able to buy a store in the border market has improved significantly. The lowest satisfaction level was for the effect of sale of food and daily needs on the villagers’ income (0.01). It is because they compare their border market to the border markets in other areas in the country and also because of the lack of commuting in this market.

**Table 8. expectations, performance, and satisfaction of residents with the economic components of the border market affecting their lives**

Source: Research finding, 2017

row	Economic aspect components	satisfaction	performance	Expectations
		Performance-expectations	Average	Average
1	Tendency of rural people to work in border market	0.12	1.61	1.49
2	The effect of border market on employment	0.62	2.21	1.59
3	The effect of border market on decreasing the number of unemployed people in rural communities	0.24	2.57	2.33
4	The effect of increased market boom in economic boom among rural people	1.23	2.43	1.2
5	Tendency of rural people to sell their handicrafts in the border market	0.86	2.56	1.70
6	The effect of border market on decreasing the number of unemployed women	0.5	2.25	1.75
7	The effect of selling food and daily needs in the border market on villagers’ income	0.01	1.34	1.33
8	The effect of the market on job variety	0.74	2.21	1.47
9	The effect of working in the market on saving state of the families	1.42	2.64	1.22
10	The ability to variegate income resources for the rural people	0.53	2.77	2.24
11	Changing consumption pattern in rural households	1.33	2.33	1
12	Development of the border market as a result of increased sales	1.92	2.84	0.92

In order to clarify the expectations of local people in economic indices, HOLSAT model matrix was used, which is the matrix of expectations on performance. 12 items in the economic aspect

(Win) indicated that the economic features of the village are affected by the border market; therefore, it has been able to satisfy local people in some way (figure 4).

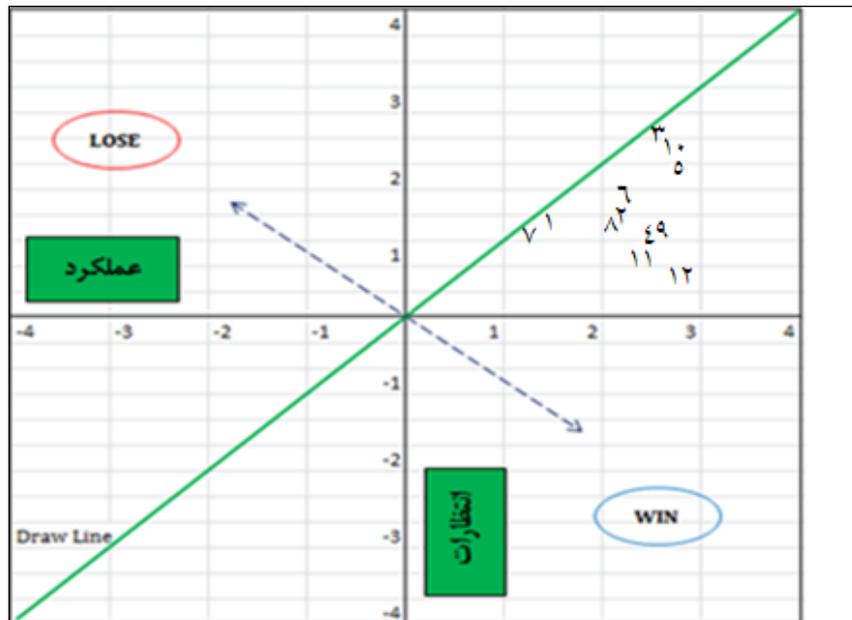


Figure 4. expectation/performance scenario in the economic aspect

Source: Research finding, 2017

## 5. Discussion and Conclusion

In the present study physical and economic effects of Incheh Borun border market on the surrounding villages were investigated. The first hypothesis dealt with the establishment of the border market and improvement of physical indices in the surrounding villages. The results of one-way chi-square test indicated significant relationship among all components to 99%; it means that the establishment of the border market has improved the physical features of the villages. The highest effectiveness was on the quality of rural new-built houses and the lowest was on rural facilities and infrastructures. According to the results of Friedman test, the relationship was high and the results of chi-square tests were confirmed. Generally, border market affects the physical features very much. In order to clarify the difference between physical state of the surrounding villages before and after establishment and development of the border market, we used Wilcoxon test, and the results indicated that the border market has been able to improve rural

physical indices. Establishment of border markets affects local people both economically and culturally. The results obtained from linear regression indicated that the effects of the border market have been direct, which is in line with the findings by Ghaderi et al. (2010). Also, there was a significant relationship between the establishment of border market and improvement of economic indices and rural families' satisfaction. According to the results obtained from Kolmogorov test, people's opinions were different in responding; to complement the performance of this test, we used a one-sample t-test, the results of which indicated that the importance of the effects of this border market is high. Only the index "effect of border market on decreasing the number of unemployed people" proved to be not significant; this means that rural people believe that this market has not been able to create jobs for the young people as it was supposed to. It is because of market depression during recent years and lack of free zone in this area. To calculate how much the expectations of people have been fulfilled in the economic aspect, the average of each index was calculated in two

parts: expectations and performance. HOLSAT model indicated that the differences of means were positive because their expectations were not high. The highest level of satisfaction was for the effect of working in border market on the family saving state. The people who had been able to buy or rent a store in this market had changes in their economic situation and improved it significantly. The lowest level of satisfaction was for the effect of selling food and daily needs in the market on the villagers' income, because urban people didn't commute to this area very much. To clarify people expectations

in the economic aspect indices, we used HOLSAT model, which indicated that rural economic features were affected by the market and it had somehow fulfilled the expectations of local people and satisfied them. The findings of this study are consistent with the findings of [Mohammadi Yeganeh et al. \(2013\)](#), [Veysi et al. \(2012\)](#), [Mirzaei & Abdozadeh \(2014\)](#).

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## تحلیلی بر تاثیرات اقتصادی و کالبدی بازارچه‌های مرزی در توسعه نواحی روستایی

### (مطالعه موردی: بازارچه مرزی اینچه برون)

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#### چکیده مبسوط

##### ۱. مقدمه

مهارت‌ها و تمایل سرمایه‌گذاری در بعد اجتماعی و افزایش رضایت از درآمد، مسافرت، سطح برخورداری از امکانات زندگی و کیفیت منزل در بعد اقتصادی مهمترین تغییرات حاصله در خانوارهای روستایی مرتبط با بازارچه است.

##### ۳. روش تحقیق

اینچه برون محدوده‌ای مرزی در استان گلستان و در تقسیمات کشوری به رغم نزدیکی به شهرستان آق‌قلا متعلق به شهرستان گنبدکاووس است. تحقیق حاضر به لحاظ ماهیت کاربردی و به روش توصیفی - تحلیلی می‌باشد. برای بررسی فرضیه‌ها، اقدام به جمع‌آوری اطلاعات مورد نیاز از طریق پرسشنامه محقق ساخته صورت گرفته است. تعداد ۳۸۳ پرسشنامه (با استفاده از فرمول کوکران) تکمیل و برای انجام تجزیه و تحلیل‌های آماری وارد نرم افزار SPSS گردید که این تعداد نمونه با توجه به پراکندگی روستاها در محدوده مورد مطالعه بصورت تصادفی سیستماتیک طبقه‌بندی شده بین روستاها و جامعه آماری مورد نظر تقسیم شده است. میزان آلفای کرونباخ برای کل پرسشنامه برابر با ۰/۸۲ محاسبه شده است. با توجه به فرضیه اول که به مبحث کالبدی روستاها اختصاص یافته، ابتدا از طریق آزمون‌های ناپارامتریک فریدمن و کای اسکور به سنجش میزان تغییر از منظر روستاییان پرداخته و در راستای مقایسه شرایط کالبدی کنونی با شرایط پیش از توسعه بازارچه از طریق آزمون ویل کاکسون به بررسی این مقوله اقدام و در نهایت در راستای مشخص نمودن میزان و نحوه اثرگذاری بازارچه مرزی بر کالبد روستایی از طریق رگرسیون خطی پرداخته شد که تصویر واضحی از نتیجه فرضیه پژوهش را ارائه دهد. در راستای فرضیه دوم پژوهش یعنی مولفه‌های اقتصادی روستاییان، برای بررسی این فرضیه ابتدا از طریق

مناطق مرزی از نقاط استراتژیک کشور بعثت ناتوانی‌های بالقوه در تولید، فقدان اشتغال، نازل بودن درآمد، بعنوان نواحی توسعه نیافته شناخته می‌شوند. منطقه ترکمن صحرا از مناطق مرزی، به منظور رفع محرومیت و ایجاد اشتغال برای مرزنشینان با ایجاد بازارچه مرزی اینچه برون گامی اساسی برای توسعه پایدار این منطقه برداشته است. با عنایت به اینکه چند سالی از راه‌اندازی این بازارچه می‌گذرد و با توجه به اهداف اولیه از ایجاد این بازارچه، پیامدهای آن بر روی نواحی روستایی بطور دقیق مطالعه نشده است. لذا تحقیق حاضر به دنبال پاسخ به این سوال است که ایجاد و توسعه بازارچه مرزی اینچه برون باعث بهبود شاخص‌های اقتصادی و تغییرات کالبدی در نواحی روستایی پیرامون گردیده است؟

##### ۲. مبانی نظری

مبادلات تجاری مرزی یکی از شاخص‌های اصلی در برقراری ارتباط بین کشورهای همسایه و امرار معاش مردم مرزنشین و باعث بهبود زندگی ساکنین نقاط مرزی می‌شود. هر اقدامی در راستای توسعه مناطق مرزی باید بهبود وضعیت درآمد روستاییان فقیر را هدف قرار دهد تا بهبود این شاخص بتواند زمینه ارتقاء سایر شاخص‌های اقتصادی و اجتماعی شود. یکی از سیاست‌های موفق دولت در دو دهه اخیر ایجاد بازارچه‌های مرزی بوده است و این بازارچه‌ها نه تنها در ابعاد ملی و منطقه‌ای اثرات مثبت، بلکه در سطح محلی نیز اثرگذاری شایان توجهی را داشته و دگرگونی جدی در ابعاد اقتصادی و اجتماعی ایجاد نموده و باعث افزایش رضایت در زندگی، تمایل به ماندن در روستا و کاهش مهاجرت، باسوادی،

در عدم اشتغال‌زایی مناسب برای جوانان روستایی بخاطر کاهش رونق این بازار در چند سال اخیر و عدم وجود منطقه آزاد بوده است.

#### ۵. بحث و نتیجه گیری

به رغم بالا بودن میزان اثرگذاری بازارچه مرزی بر روی معیارهای کالبدی می‌توان با برنامه‌ریزی‌های جدید و طراحی‌های مدرن‌تر، شاخص‌های کالبدی روستاها را ارتقاء داد. ایجاد بازارچه مرزی هم از نظر اقتصادی و هم در فرهنگ ساکنان روستایی تاثیرات مهمی داشته و تغییرات مهمی در کالبد و شیوه مدیریتی کالبدی روستاها بر جای گذاشته است. در بعد اقتصادی بالاترین سطح رضایت، مربوط به مولفه تاثیر اشتغال در بازارچه مرزی و بر وضعیت پس‌انداز هر خانوار روستایی بوده است کسانی که توانسته‌اند مغازه‌ای در این بازارچه برای خود تهیه کنند وضعیت اقتصادی آنها بهبود چشمگیری حاصل نموده و کمترین سطح رضایت مربوط به میزان اثرگذاری فروش مواد غذایی و مایحتاج روزانه در بازارچه بر درآمد روستاییان به علت کمبود آمد و شد شهرنشینان به این بازارچه می‌باشد. به منظور مشخص نمودن وضعیت انتظارات مردم محلی از مولفه‌های بعد اقتصادی با ماتریس مدل HOLSAT نشان می‌دهد که ویژگی‌های اقتصادی روستا تحت تاثیر بازارچه بوده است و انتظارات مردم محلی را تا حدودی برآورده و رضایت آنها را جلب نماید.

**کلیدواژه‌ها:** بازارچه‌های مرزی، شاخص‌های کالبدی و اقتصادی، توسعه نواحی روستایی مرزی، اینچه برون.

#### تشکر و قدرانی

پژوهش حاضر حامی مالی نداشته و حاصل فعالیت علمی نویسندگان است.

آزمون توزیع نرمال به سنجش نرمال بودن، سپس از طریق آزمون پارامتریک تی تک نمونه‌ای، به سنجش میزان بهبود شاخص‌های اقتصادی روستاییان بعلاوه توسعه بازارچه مرزی اقدام و در نهایت برای سنجش میزان رضایت روستاییان از توسعه بازارچه مرزی متناسب با انتظارات و عملکرد بازارچه از طریق مدل HOLSAT به سنجش موضوع پرداخته می‌شود.

#### ۴. یافته‌های تحقیق

یافته‌ها بیانگر معنادار بودن تمامی مولفه‌ها تا سطح ۹۹ درصد بوده و توسعه بازارچه مرزی توانسته موجب بهبود کالبدی روستاها گردد. مقدار اثرگذاری با توجه به میزان کای‌اسکوئر اختصاص یافته به هر مولفه، متفاوت است بیشترین به مولفه اثرگذاری وجود بازارچه مرزی بر کیفیت مسکن تازه ساز روستایی و کمترین به تاثیر توسعه بازارچه مرزی بر امکانات و زیرساخت‌های روستایی اختصاص یافته است. می‌توان نتیجه گرفت میزان اثرگذاری بازارچه مرزی بر معیارهای کالبدی مورد سنجش روستاهای پیرامونی بسیار بالا بوده است. نتایج حاصل از رگرسیون خطی حاکی از این است که این اثرگذاری بصورت مستقیم بوده و به وجود آمدن این نوع از بازارچه در منطقه توانسته، بصورت مستقیم بر ویژگی‌های کالبدی منطقه تاثیرگذار باشد. همچنین توسعه بازارچه مرزی با بهبود شاخص‌های اقتصادی و رضایت خانوارهای روستایی ارتباط معناداری وجود دارد که با توجه به یافته‌های آزمون تی تک نمونه‌ای میزان اهمیت تاثیرگذاری این بازارچه بسیار بالا بوده، بطوری که بر روی بیشتر مولفه‌های مورد سنجش شدت اثر گذار بوده است. تنها مولفه تاثیر بازارچه مرزی در کاهش میزان افراد بیکار در جوامع روستایی عدم معناداری را نشان می‌دهد که از منظر روستاییان علت آن

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