THE RELATIONSHIP BETWEEN SALES VOLUME AND CONSUMER CONFIDENCE INDEX IN THE TURKISH RETAIL INDUSTRY

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Abstract

In this study, the relationship between retail sales volume index and consumer confidence index has been examined. The data is for the period 2010Q1-2015Q4. While retail sales volume index is used as the dependent variable in the analysis, independent variables such as consumer confidence index, real GDP and consumer price indices are used. ADF (Augmented Dickey-Fuller) method was applied to determine the stationary state of the series. In addition, an ARDL test was performed for the short and long term applications of the series. According to the research findings obtained, we can see that consumer confidence index and consumer price index variables affect the retail sales volume index variable positively and significantly in the long run; however, it was determined that the real GDP variable positively but did not significantly affect the retail sales volume.

Keywords: Retail Sector, Retail Sale Volume Index, Confidence, Consumer Confidence Index.

JEL Codes: L81,D12, D24

TÜRKİYE PERAKENDE SEKTÖRÜNDE SATIŞ HACMİ İLE TÜKETİCİ GÜVEN İNDEKSİ ARASINDAKİ İLİŞKİ

Öz

Bu çalışmada, perakende satış hacmi endeksi ile tüketici güven endeksi arasındaki ilişki incelemiştir. Veriler 2010Q1-2015Q4 dönemine aittir. Analizde bağımlı değişken olarak perakende satış hacmi endeksi kullanılırken, bağımsız değişkenler tüketici güven endeksi, reel GSYİH ve tüketici fiyat endeksleri kullanılmıştır. Serilerin durağan durumunu belirlemek için Augmented Dickey-Fuller yöntemi uygulanmıştır. Ayrıca serinin kısa ve uzun vadeli analizleri için ARDL sınır testi yapılmıştır. Elde edilen araştırma bulgularına göre, uzun vadede tüketici güven endeksi ve tüketici fiyat endeksi değişkenlerinin perakende satış hacmi endeksi değişkenini olumlu ve anlamlı düzeyde etkilediğini ancak gerçek GSYİH değişkeninin perakende satış hacmini olumlu ancak önemli ölçüde etkilemediği belirlenmiştir.

Anahtar Kelimeler: *Perakende Sektörü, Perakende Satış Hacmi Endeksi, Güven, Tüketici Güven Endeksi.*

JEL Codes: *L81,D12, D24*

Introduction

In recent years, the retail sector has had a significant effect on the economic performance of many countries. The dynamic structure of this sector also plays an important role in generating new opportunities in numerous fields. This sector is amongst the important sectors in terms of Turkey's economy. Hence, having concluded with a revenue of 663 billion TL at the end of 2015, the retail sector in Turkey is expected to reach approximately 880 billion TL in the year 2018. There are other positive impacts of the retail sector on the economy, presenting itself in investment, employment, reduction of grey economy and high tax income. In this respect, according to the study conducted by the Turkish Federation of Shopping Centers and Retailers, the grey economy in Turkish retail sales is only around 33%, which is well under the European average of 80%. According to the data from 2015, there are approximately 2 million people employed in this sector. The sector's GDP share is considerably high. Hence, according to fixed prices, wholesale and retail trade takes third place in terms of size, following the manufacturing and agriculture sectors.

Food and beverage hold an important position in the retail sector. With the food industry shares close to 290 billion TL in the GDP, with businesses recording

over 42 thousand in production and over 480 thousand employees, the food and beverage industry takes its place as the largest production industry within the Turkish economy. The Turkish food industry has also increased its share in exports by around 3.5 times and with a share in exports of over 7% as of 2014, it has become the 15th largest food and beverage exporter in the world. Along with this, the food and beverage sector as part of the retail sector is incredibly significant in terms of employment as it has the highest amount of labour. Workers employed in the food and beverage sector in Turkey are 12.4%. Also, active firms within the food and beverage sector contribute to the Turkish economy with extraordinary levels of added value. The total added value put forth by the sector in 2009 was 13.9 billion TL; in 2014, this increased by approximately 41% and became 23.5 billion TL.

This data demonstrates the importance of the retail sector for the Turkish economy. For this reason, identifying the factors that affect the retail sales volume is significant for the development of the sector. In this sense, with the belief that confidence is an essential factor that affects the sector's sales volume, this study has been designed accordingly. Economists explain social capital, a new form of capital in today's world, with the concept of confidence. Confidence is the sense of believing and attaching oneself without fear, hesitation or doubt.

In the economic sense, confidence is defined as a mutual confidence amongst economic decision-making units without harming relationships.

Consumer confidence can be described as a concept that measures consumers' savings and consumption behaviours as well as their experiences and emotions concerning the general condition of the economy. Consumer confidence is measured with the consumer confidence index, which consists of consumers' views regarding the future in terms of general economic conditions. In instances in which relationships based on confidence formed by companies amongst themselves or with consumers reflect on economic efficiency and production, positive outputs are obtained. According to Francis Fukuyama, a scientist who studied the effect of confidence on economic indicators, all economic activities in the world today are carried out by organizations that require considerably high levels of social collaboration rather than individuals. Even though property rights, agreements and trade regulations comprise the foundation of the market economy when such institutions and legislative regulations join together with social capital and confidence, transaction costs can be reduced significantly (Fukuyama, 2000, p. 351).

Exploitation and fraud do not enter relationships built on trust, and significant benefits can be gained through such collaborations. Organizations built by people who have invested a low level of confidence cannot go beyond the system of official rules and regulations (Ergin, 2007, p. 10). Confidence and environment go hand in hand, and people feel trust and confidence in environments where they are surrounded by family, close friends and colleagues, and in many environments such as institutions and organizations.

It is possible to come across studies that have been conducted on the effect of confidence on economic indicators in literature. In this respect, in the study conducted by Neira et al. (2009), certain factors such as networks of confidence and norms which comprise social capital are used with a series of other factors, they can contribute a fair amount to development (Neira et al., 2009). In places where confidence and social communication networks have developed, individuals, companies, settlement areas and even the nation will gain wealth (Plutnam, 2000, p. 319). Summarizing the scope and significance of confidence in the economy, Arrow's statement, "Virtually all commercial transactions, all transactions that take a certain amount of time include, in essence, an element of confidence. It can be argued that most cases of backwardness in the world can be described as a lack of mutual confidence," carries an evidential quality in terms of the contribution of the sense of confidence in economic development. (Arrow, 1972) from this point of view, confidence can be regarded as an important factor for economic stability. The expectations of economic decision-making units are important in terms of economic performance. Expectations of confidence can keep it at the desired level. Connections lacking in confidence in economic relationships have a decreasing optimism when it comes to future expectations (Çalışkan and Meçik, 2011). With the help of confidence, social relation structures can affect economic coordination mechanisms. With the positive effect on economic coordination mechanisms having a positive effect on economic performance as well, the economic development potential increases. In another research carried out to study the relationship between the confidence aspect of social capital and economic growth, heading out from a section of countries and a general balance model, it was concluded that a high level of confidence increased investments and growth, that homogenous societies created high levels of confidence and that for this reason, the investments and growth in such societies increased, that equal distribution of income formed confidence and that in instances which a decrease in confidence was felt, investments and growth slowed down (Zak and Knack, 2001). When a society is self-sufficient and has a

high level of confidence, it contributes to developing their spirit of entrepreneurship and makes it possible for their competitive power to rise in production and in trade on a global scale (Lin et al., 2006, p. 172). Confidence has a considerable effect on countries' competitive power (Humphrey and Schmitz, 1998). As relationships between economic units are based on confidence, lack of confidence increases professional development costs and reduces competitiveness.

There are some studies that explain the relationship between retail sales volume and trade and service indexes. In this context, in a study conducted by Germir et al. (2015), a high level of positive relationship was identified between the hours worked index, the gross wage index, and the retail sales volume index. Some studies have examined the e-commerce and consumer confidence relationship. In this context, in the study conducted by Fidani and Albeni (2014), dependent variables presented to have a personal confidence tendency, while independent variables were identified to have the adverse selection and moral hazard. As a result of the analyses conducted, the issues of adverse selection and moral hazard experienced in e-commerce were determined to have a negative impact on people's confidence in regard to e-commerce. In an empirical study conducted by Türen et al. (2011), the gross domestic product per person and the number of internet users positively affected the electronic commerce transaction volume. Brown and Jayakody (2008) have indicated that e-customers sales demonstrate an increase in line with the service and confidence that customers experience. In a study conducted by Kayahan and Hepaktan (2016), it was determined that the e-commerce volume in Turkey is influenced by the fixed broadband internet penetration rate, GDP, consumer confidence index, number of credit and debit cards and inflation rates. According to the parameters measuring the long-term correlation in the study, the e-commerce transaction volume is affected by the gross domestic product, inflation, fixed broadband internet penetration rate, and card users' number in a negative way. At the same time, the consumer confidence index variable has a positive effect. In a study conducted in Turkey by Görmüş and Güneş (2010), it was determined that the consumer confidence index has a positive impact on equity share prices.

The number of sales in the retail sector may change according to the attitudes and preferences of consumers. Varinli and Acar (2011) determined that the atmosphere of the store has an important effect on consumers, while Akinci (2013) found that physical, environmental factors affected, such as the location of the store and ease of access, and Bakan et al. (2013) indicated that the service

quality perception was of importance, while Altinay and Bilgimöz (2015) recorded that the combination of shopping and fun, sport, art and cultural activities were effective for consumers.

Of the literature review that was carried out, no studies explaining the relationship between the retail sales volume in Turkey with consumer confidence were encountered. Presenting the relationship between the sales volume of the retail sector, an important sector in the Turkish economy, with consumer confidence is the main objective of this study.

1. Data and method

In this section, there are explanations in relation to the data used in the study and the method of analysis.

1.1. Data obtained from the study

In this study, in order to identify the relationship between the retail sales volume and consumer confidence in Turkey based on data from the 2010Q1-2015Q4 period; the retail sales volume index (RSVI)[3], the GDP per person with constant prices (GDP), consumer price index (CPI) and Consumer confidence index (CCI)[4] were used as variables. Information regarding these variables used are presented in Table 1.

Table 1. Variables and their Definitions

Variable	Definition	Source
RSVI	Retail Sales Volume Index	Turkish Statistical Institution Database *
GDP	GDP p/p with Fixed Prices	Central Bank Database **
CPI	Consumer Price Index	Central Bank Database **

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[3]It is calculated with the aim of measuring the development of the retail, commercial sector. The index for measuring retail sales are created with both current prices and with constant prices as the volume indicator. The volume measure is obtained by means of clearing the effects of prices. The index calculation was done using the year 2010 as the fixed base year and the Laspeyres Calculation method. (TÜİK, 2017)

[4] The aim is to measure consumers' personal financial states and their evaluations of the current state of the general economy and future expectations against their near-future spending and savings tendencies. According to the balance method, the percentage difference between those who have responded positively and negatively will be taken into account for the calculation, and by adding 100 to this difference, a separate expansion index will be created for each question. This is followed by calculating the Consumer Confidence Index by taking the arithmetic average of the expansion indexes of selected questions. The index extracts values between 0 and 200. When the index is higher than 100, this indicates an optimistic state in consumer confidence, while an index lower than 100 demonstrates a pessimistic state in consumer confidence. (TÜİK, 2017)

CCI	Consumer Confidence Index	Turkish Statistical Institution Database *

Source obtained from: *http://www.tuik.gov.tr. Date of Access: 15.02.2017

Source obtained from: *http://evds.tcmb.gov.tr/. Date of Access: 15.02.2017

Note: The monthly RSVI and CCI data have been converted into quarterly data by the author.

Graphs related to the time series of the variables used in the study have been presented in Figure 1.
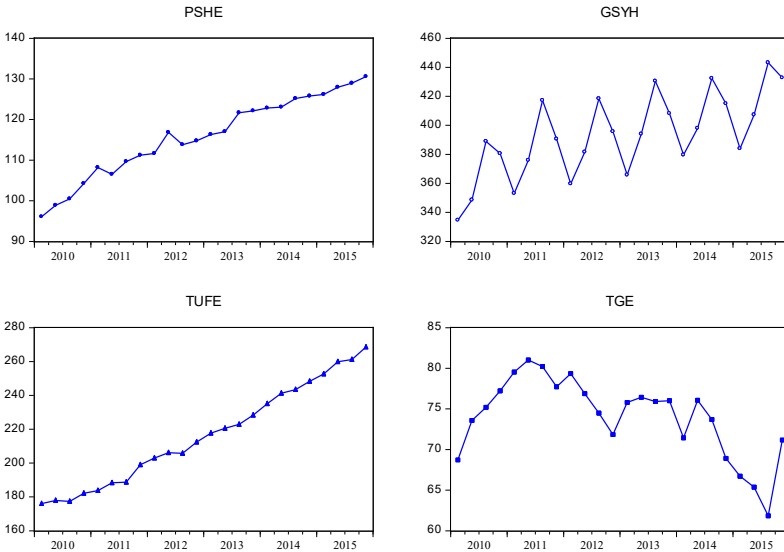

Figure 1. Graphs Related to the Time Series of the Variables Used in the Study

As shown in Figure 1, while data belonging to the GDO and CCI variables demonstrate fluctuations with conjuncture by years, RSVI and CPI variables demonstrate a general increase.

1.2. Method of Analysis

In the study, whether the series demonstrated a static nature were first determined with the Augmented Dickey–Fuller (ADF) (1979) methods. Later on, the cointegration between series and their short and long-term analyses were carried out with the ARDL-bound testing approach.

Long-term correlations between economic variables are examined with the Engle-Granger (1987) test, which is generally based on residuals and the Johansen-Juselius (1990) tests based on primary similarities. For these tests to be

applied, all variables in the model built are required to be non-stationary at the first level I(0)and must become stationary upon differencing (Pesaran et al., 2001: 289-290). Used in instances in which variables are I(0) or I(1), but not used when variables are integrated at I(2) or higher levels, the Bound Testing Approach is observed to be a widely preferred method in econometric literature in recent years. Defined as the ARDL approach, this method was introduced by Pesaran and Shin (1998) and Pesaran et al. (2001).

2. Findings

In this section of the study, the unit root findings of the series belonging to the variables used are presented first. Later, the Cointegration and ARDL-Bound Testing approach results are presented.

2.1. ADF unit root test findings

Used to determine the short and long-term relationship between dependent variable RSVI and independent variables GDP, CPI and CCI, the ARDL approach can use the series belonging to the variables if they are I(0) or I(1). However, in the instance in which variables are integrated at I(2) or higher levels, this method cannot be used. In order to examine whether the variables are integrated at I(2) or higher levels, a unit root analysis with the Dickey Fuller (1979, 1981) test was carried out, results of which are presented in Table 2.

Table 2. Unit Root Test Results

Variables	Level	Initial Differences	Conclusion
RSVI (Intercept and No Trend)	-1.858	-6.812*	I(1)
GDP (Intercept and No Trend)	-1.141	-4.155*	I(1)
CPI (Intercept and No Trend)	2.431	-4.221*	I(1)
CCI (Intercept and No Trend)	-1.841	-4.284*	I(1)

* 1% significance

The first difference at the 1% significance level of all variables used in the study is concluded to be stationary (Table 2). This result indicates that the data in the study can be analyzed under the ARDL approach.

2.2. Cointegration and ARDL Bound Testing

In the ARDL approach, the first thing that needs to be determined is whether there is a long-term relationship between the variables in the model. For this purpose, an Unrestricted Error Correction Model is first created. The maximum delay number in the study is determined as one.

The adapted form of the test based on UECM for this study is shown below:

$$
\Delta RSVI_t = \beta_0 + \sum_{i=1}^{m} \beta_{1i}\Delta RSVI_{t-i} + \sum_{i=0}^{m} \beta_{2i}\Delta GDP_{t-i} + \sum_{i=0}^{m} \beta_{3i} CPI_{t-i} + \sum_{i=0}^{m} \beta_{4i}\Delta CCI
$$
$$
+ \beta_5 RSVI_{t-1:} + \beta_6 GDP_{t-1:} + \beta_7 CPI_{t-1:} + \beta_8 CCI_{t-1:}
$$
$$
+ \mu_t \tag{1}
$$

The Δ in equation 1 represents the first differences. The hypotheses which indicate whether there is cointegration between the first term delays of the dependent and independent variables in equation 1 are formed as demonstrated in Table 3.

Table 3. Hypothesizes of F and t statistics

	H₀ Hypothesis	H₁ Hypothesis
F$_{III}$	*H₀ :*	*H_A:*
	β₅=β₆=β₇=β₈=0	*β₅≠β₆≠β₇≠β₈≠0*
t$_{III}$	*H₀ : β₅=0*	*H_A: β₅≠0*

The hypothesis and alternative hypotheses of the no trend model used to test the cointegration relationship between the variables in the number (1) equation are respectively *H₀:β₅=β₆=β₇=β₈=0*, *H_A:β₅≠β₆≠β₇≠β₈≠0*. The cointegration relationship between variables are determined by testing the total significance of the coefficients *β₅, β₆, β₇ and β₈* in the number (1) equation with the *F* test. Whether or not there is a cointegration relationship between variables is concluded upon comparing the calculated F, and the dependent variable's one delayed level value t statistic with the critical bound value of the Perasan et al. (2001). The number (1) model in this study has been estimated as having a maximum of 1 delay and of no trend. Results of the *F*-statistic in relation to the testing of the cointegration relationship are presented in Table 4.

Table 4. Cointegration Test Results

Model	*m*	*k*	*F*-Statistic	*I*(0) and *I*(1) Critical Values
				4.29-5.61*
ARDL(1,0,0,1)	1	3	9.536	3.23-4.35**
				2.72-3.77***

*, ** and *** represent, respectively, 1%, 5% and 10% significance levels. *m* represents the maximum number of delays, while *k* represents the number of independent variables present. Critical values, Pesaran et al. These are values

belonging to the *k*=3 status presented in Table CI(iii) found in the (2001:300) studies. The value in brackets indicates the *p*(probability) value of the *F*-statistic.

It was discovered that the calculated *F*-statistic is greater than the top critical values in all significance levels (Table 4). For this reason, the zero hypotheses, which predicts there is no long-term cointegration relationship between RSVI and GDO, CPI and CCI, is rejected. Accordingly, it can be indicated that there is a long-term correlation between the retail sales volume index in Turkey during the 2010Q1-2015Q4 period and the GDO, CPI and CCI independent variables.

Upon identifying a long-term correlation between the variables, the ARDL model is required to analyze the short and long-term correlation between the variables. The ARDL model adapted for this study to estimate the correlation between the dependent and independent variables is presented in Equation 2.

$$RSVI_t = \beta_0 + \sum_{i=1}^{p} \beta_{1,i} RSVI_{t-i} + \sum_{i=0}^{q} \beta_{2,i} GDP_{t-i} + \sum_{i=1}^{q} \beta_{3,i} CPI_{t-i}$$
$$+ \sum_{i=1}^{q} \beta_{4,i} CCI_{t-i} + \omega_t \quad (2)$$

In order to determine the ARDL model most suitable to the Eviews program, all probable values of the number (2) equation *p* and *q* = 1, 2,…,*m* and *i*=1, 2,…,*k* are first estimated with the OLS approach. The maximum delay length in this estimation has been taken as (*m*) 1. Later, a model which adheres to the model selection criteria was determined according to one of the model selection criteria amongst estimated models: R^2, Akaike Information Criterion (AIC), Schwartz Bayesian Criterion (SBC) or the Hannan-Quinn Criterion (HQC). Accordingly, the most suitable ARDL (1,0,0,1) model was estimated based on the SBC number (2) equation. In the analysis carried out by taken the RSVI dependent variables into account, the short and long-term coefficient of the ARDL (1,0,0,1) model was estimated, and these results are presented in Table 5.

Table 5. Short and Long-Term Coefficients

Independent Variables	Short-term coefficients	Long-term coefficients
$RSVI_{t-1:}$	0.131 (0.677)	
GDP_t	0.011 (0.721)	0.012 (0.722)
CPI_t	0.308 (4.123) *	0.355 (16,373) *

CCI_t		0.081(0.711)	0.460 (4.041) *
$CCI_{t-1:}$		0.319 (2.505) **	
C		0.407 (0.038)	0.468 (0.038)
$ECM_{t-1:}$		-0.869 (-7.674) *	
Diagnostic Tests			
R^2	0.982	$\chi^2_{BG}(1)$	2.346 [0.126]
$\overline{R}^2$	0.977	$\chi^2_{RAMSEY}(1)$	1.606 [0.223]
DW	2.399	χ^2_{NORM}	2.136 [0.344]
$F\ statistics$	186.089	χ^2_{WHITE}	22.675[0.305]

Values stated in brackets are *t*-statistic values. $\chi^2_{BG}, \chi^2_{RAMSEY}, \chi^2_{NORM}, \chi^2_{WHITE}$ The tests, respectively, are: Breusch-Godfrey to test serial correlation, Ramsey to test model set-up errors in regression, Jarque-Bera to test normality and White for changing variance testing. Values indicated in square brackets represent the p-probability values belonging to diagnostic tests. *, ** represent significance at 1% and 5% significance levels, respectively.

Note: The (ECM) series of the error term has been determined to be stationary at a level value (P<0.01).

When examining Table 5, which presents the long-term coefficients calculated when the retail sales volume index is used as a dependent variable, it is evident that all long-term coefficients of independent variables signal positive and statistical significance, except for the GDP per person. The consumer confidence index presents a significant and positive effect on the retail sales volume. That is, with the increase in consumer confidence, the retail sales volume also increases. A single unit increase in the consumer confidence index has increased the retail sales volume index by approximately 0.46 units. The parameter is also statistically significant. It has also been predicted that of the other estimated independent variables, the consumer price index has a positive effect on the retail sales volume index. The variable that has the greatest effect on the long-term retail sales volume index here is the consumer confidence index with a 0.46 variable coefficient value.

After establishing its long-term correlation, the short-term correlation was estimated using the error terms derived from this relation and the differentials of the variables. The estimated short-term results are presented in Table 5. It has been established that in the short term, the retail sales volume index is positively affected by its own one unit delay value, but that this correlation is not significant. As is the case with the long term, in the short term, CPI coefficient values are statistically significant and positive. It has also been determined that the CPI has a significant and positive effect on the retail sales volume in the short term.

When short-term coefficients are taken into account, it is evident that the consumer confidence index value of the previous term (excluding the current period coefficient value) is statistically significant. In other words, it has been established that the short-term consumer confidence index value of the previous term in Turkey has had a positive effect on the retail sales volume index and these effects are significant. The other independent variable in the econometric model, the GDP per person, as is the case in the long term, signals a positive current coefficient value in the short term as well; however, it is estimated to be statistically insignificant.

On the other hand, when Table 5 is examined, the fact that the ECM_{t-1} error correction coefficient is negative and statistically significant confirms a long-term correlation between the RSVI and the GDP, CPI and CCI. The model's error correction term has been estimated to be -0.869, and as expected, the signal is negative and statistically significant at a 1% level. Therefore, a deviation occurring in the retail sales volume in the short term may indicate that it will be possible to reach the long-term balance by clearing an 86.9% section of the following term. In other words, it is possible to say that when a short-term shock exists between variables, this shock will normalize in the long term. This also means that the model created is significant and in working order.

When the diagnostic test results of the ARDL (1,0,0,1) model in Table 5 is examined, it can be observed that the sequential dependency, heteroscedasticity, model set-up errors and the *p* (probability) normal distribution test values are greater than all significant levels (1%, 5% and 10%). Therefore, it can be stated that diagnostic test problems concerning the ARDL (1, 0, 0, 1) model that was set up are not in question. In addition, the multicollinearity problem is investigated in the model. Since VIF (Variance Inflation Factors) values were less than 5, it was decided that there is no multicollinearity problem.

To investigate the existence of structural breaks in relation to variables, CUSUM and CUSUM Q graphics were utilized, which are based on the reversible residuals' squares and determine structural breaks in relation to variables in the system in this way.
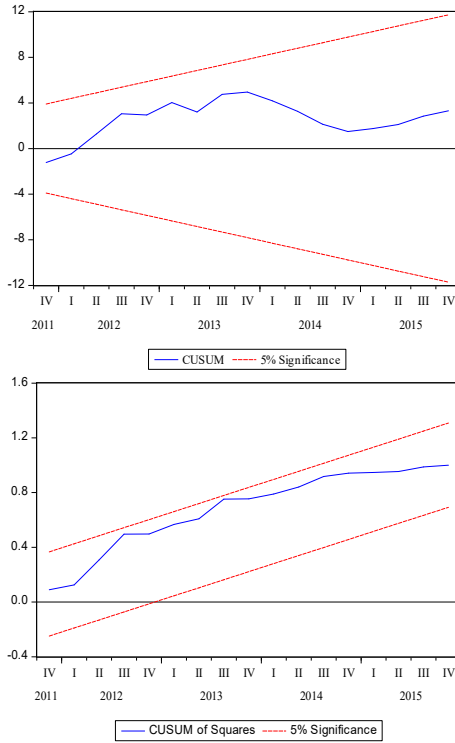
Figure 2. CUSUM and CUSUMQ Graphic (2010Q1-2015Q4)

As it is between the critical boundaries at a 5% significance level in the CUSUM and CUSUM graphics, it can be stated that the long-term coefficients derived from the estimated result of the ARDL model are consistent, and there are no structural changes in the model (Figure 2).

Discussion and Conclusion

Implemented in order to determine certain factors which effect the retail sales volume in Turkey, this study has made use of the quarterly data from the 2010Q1-2015Q4 period and used the ARDL-bound testing approach developed by Perasan et al. (2001) for the estimations.

As a result of the analysis, it has been determined that the consumer confidence index and consumer price index in Turkey has had positive short and long-term effects on the retail sales volume index and that this effect is significant. This conclusion demonstrates that consumer confidence and inflation in Turkey increases the retail sales volume in the short and long term significantly. In accordance with economic expectations in the short and long term between the

GDP and retail sales volume index, a positive correlation has been identified; however, it has been determined that this correlation is not statistically significant. The positive correlation found in this study between consumer confidence and retail sales volume is further supported by the study's findings conducted by Kayahan et al. (2016) on the electronic sales volume in Turkey. In fact, in another study conducted, a high level of confidence has been proven to increase investments and growth, and the decline of confidence, in turn, causes a reduction in investments and growth (Zak and Knack, 2001). A society's sufficient and high level of confidence contributes to developing their spirit of entrepreneurship and enables their competitive power to rise in production and in trade on a global scale (Lin et al.: 2006:172).

Contrary to studies in the field, it has been determined that inflation increases retail sales volume in the short and long term. In various studies conducted recently, it has been determined that when inflation has exceeded a certain threshold, it has a negative effect on growth (Khan and Senhadji, 2000; Yılmaz et al., 2002). The threshold value in these studies was determined as 7-13 per cent for developing countries, including Turkey, and 1-3 per cent for developed countries. The study examines the 2010-2015 period, and Turkey's average growth rate during this period is approximately 5.3$, while its average inflation rate is 7.9%. Therefore, it can be stated that inflation had a direct effect on growth[5]That is why inflation was taken into account as a positive influence on the retail sales volume in terms of growth.

Another significant result of the study is that a deviation occurring in the retail sales volume in the short term may indicate that it will be possible to reach the long-term balance by clearing an 86.9% section of the following term. This finding demonstrates that consumer confidence is a significant parameter in the long-term balance of retail sales volumes. In other words, it is an indication that, due to an increase in consumer confidence, long-term balance can be achieved by clearing a deviation that occurs in the retail sector in the short term, in the following term.

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[5]In the correlation analysis carried out on the CPI and GDP series belonging to Turkey's 2010Q1-2015Q4 period, a positive and strong correlation was found between these two variables (Correlation coefficient:0.95, p<0.05). Also, in the correlation analysis between the annual inflation rates obtained from the World Bank and growth figures from Turkey's 2010-2015 period, a positive and strong correlation was found between these two variables (Correlation coefficient:0.65, p<0.05).

Consequently, confidence is an important factor in economic relationships. The results of the study, which indicate that confidence has a positive contribution to the sales volume in the retail sector, verify these cases further.

As the retail sector is generally comprised of food and service sub-sectors, these companies in this sector have to continue their operations with consumers in person. For this reason, companies in the retail sector are obliged to give importance to customer satisfaction. With the aim of gaining the trust and confidence of consumers, carrying out projects in the field that are focused on increasing customer loyalty may increase sales volumes in the long run. Besides these, another critical course of action is to communicate the production process of their products to customers in various ways, with a transparent policy; transparency is a crucial element in building trust.

Also, Turkey's economic administration should create policies that ensure optimism in consumers, and these policies should be implemented transparently. This way, consumer confidence will be increased, the market will be revived, and sales in the retail sector will be increased.

In academic studies to be conducted in the future, expanding the scope of the study by changing the variables and the time interval covered by the data used in this study and adding new methods can be suggested.

References

AKINCI, G.M. (2013), Gençler ve Alışveriş Merkezleri (AVM'ler): AVM Kullanım Tercihleri Hakkında Bir Alan Çalışması, *MEGARON*, 8(2), 87-96.

ALTINAY, M. ve Bilgimöz, S. (2015), Alışveriş Merkezlerinin Tercih Edilme Nedenleri ve Rekreasyonla İlişkisi, *Journal of Recreation and Tourism Research*, 2 (3), 37-47.

ARROW, K.J. (1972), "Giftsand Exchanges", *Philosophy and Public Affairs*, 1(4), (Aktaran: Oğuz, H. (2006), Makroekonomik Politikaların Performansında Sosyal Sermayenin ve Kurumların Rolü, *Akdeniz İ.İ.B.F. Dergisi,* (12))

BAKAN, İ., Eyitmiş, A.E. ve Fettahlıoğlu, H.S. (2013), Kahramanmaraş'ta alışveriş merkezleri algısı, *Kahramanmaraş Sütçü İmam Üniversitesi İİBF Dergisi*, 3(1), 195-208.

BROWN, I. and Ruwanga, J. (2008), B2C E-Commerce Success: A Test and Validation of a Revised Conceptual Model, *The Electronic Journal Information Systems Evaluation*, 1(3), 167-184.

DİCKEY, D.A., Fuller, W.A. (1979), Distribution of The Estimators for Autoregressive Time Series With a UnitRoot". *Journal of theAmerican Statistical Society.* 74 (366), 427-431.

ENGLE, R.F., Granger, C.W.J. (1987), Co-integrationandErrorCorrection: Representation, EstimationandTesting. *Econometrica,* 55 (2), 251-76.

ERGİN, R.A. (2007), *Sosyal Sermayenin Yöneticiler Bağlamında Ölçülmesine Yönelik Konya Sanayisinde Bir Araştırma*, (Yayımlanmamış Yüksek Lisans Tezi), Selçuk Üniversitesi Fen Bilimleri Enstitüsü, Konya.

FİDANİ, H., ve Albeni, M. (2014), Asimetrik Bilginin E-Ticaret Üzerindeki Etkileri: Tüketicilerin Güven Eğilimleri Üzerine Bir Araştırma, *Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 19(2), 287-298.

FUKUYAMA, F. (2000), *Güven: Sosyal Erdemler ve Refahın Yaratılması*, (1995), (Çev.:Ahmet Buğdaycı), Türkiye İş Bankası Kültür Yayınları, Ankara.

GERMİR, H.N., Korkmaz, M., Şen, E., Şahbudak, E. ve Kart, N. (2015). Perakende Satış Hacim ve Ticaret ve Hizmet Endeksleri Analizi,*Uluslararası Hakemli Pazarlama ve Pazar Araştırmaları Dergisi*, 6, 1-30.

GÖRMÜŞ, Ş. ve Güneş, S. (2010), Consumer Confidence, Stock Prices and Exchange Rates: The Case of Turkey. Applied Econometrics and International Development, 10(2).

JOHANSEN, S., Juselius, K. (1990), Maximum LikelihoodEstimationandİnference on Cointegration – with Applications toThe Demandfor Money. *Oxford Bulletin of Economicsand Statistics,* 52 (2), 169-210.

HUMPHREY, J.andSchmitz, H. (1998), Trustand Inter-FirmRelations in DevelopingandTransitionEconomies,*TheJournal of Development Studie,* 34(4), 32-61.

KAYAHAN, L., Hepaktan, C.E. (2016), Türkiye'de Elektronik Ticaret Hacmini Etkileyen Faktörlere İlişkin Var Analizi (2005-2015), *Ardahan Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 4, 159-190.

KHAN, M.S. ve Senhadji, A.S. (2000), Threshold Effects in the Relationship Between Inflation and Growth, IMF WorkingPaper, No:00/110,

June 2000. https://www.imf.org/external/pubs/ft/wp/2000/wp00110.pdf (30.03.2017)

LİN, B.W., Li, P.C. andChen, J.S. (2006), Social Capital, Capabilities and Entrepreneuiral Strategies: *A* Study of Taiwanese High Thec New Ventures*, Technological Forecasting and SocialChanges*, 73.

NEIRA, I., Vázquez, E. and Portela, M. (2009), An Empirical Analysis of Social Capitaland Economic Growth in Europe (1980-2000), *Social Indicators Research*, 92(1), 111-129.

PESARAN, H., Shin, Y., Smith, R.J. (2001), BoundsTestingApproachestothe Analysis of Level Relationships. *Journal of AppliedEconometrics*, 16 (3), 289-326.

PESARAN, H., Smith, R.P. (1998), Structural Analysis of CointegratingVARs. *Journal of EconomicSurveys*, 12 (5), 471-505.

TÜREN, U., Gökmen, Y. ve Tokmak, İ. (2011), Türkiye'de E-Ticaret İşlem Hacmini Etkileyen Faktörler Üzerine Bir Araştırma: Bir Model Önerisi, *Savunma Bilimleri Dergisi,* 10(1), 49-71.

VALADKHANİ, A. (2003), The Causes of Unemployment in Iran: An Emprical Investigation. *International Journal of Applied Business and Economic Research*, 1 (1), 21-33. http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1416&context=commpapers. (27.01.2017)

VARİNLİ, İ. ve Acar, N. (2011), "Tüketicilerin Alışveriş Yaptıkları Mağazayı Değerlendirmelerinde Etkili Olan Faktörler ile Sadakat Arasındaki İlişki: Kayseri İlinde Yapılan Bir Araştırma", *C.Ü. İktisadi ve İdari Bilimler Dergisi*, 12(1), 1-20.

YILMAZ, K., Akçay, C. ve Alper, E. (2002), Enflasyon ve Büyüme Dinamikleri: Gelişmekte Olan Ülke Deneyimleri Işığında Türkiye Analizi, TÜSİAD Yayını.

ZAK PJ and Knack, S. (2001), "Trust and Growth" *Economic Journal*, 111(470), 295-321.