yönetim ve ekonomi araştırmaları dergisi
journal of management and economics research
Cilt/Volume: 15 Sayı/Issue: Özel Sayı 1/ Special Issue 1 Aralık/December 2017 ss./pp. 27-39
E. İpek, H. Akyazı Doi: http://dx.doi.org/10.11611/yead.373438

EXPECTATIONS AND HOUSEHOLD EXPENDITURE: CASE OF TURKEY[1]

Asst. Prof. Egemen İPEK*

Prof. Haydar AKYAZI**

ABSTRACT

The expectations of households have a significant impact on their current period decision-making behavior. In this study, it is aimed to investigate the linkage between households' expectations and household expenditure behavior in an empirically. In the analysis, expectations of households are represented by consumer sentiment index and the sub-components of this index, and consumption behavior are represented by total expenditures, durable, semi-durable, non-durable and service expenditures. In this context, baseline model, which investigates only the linkage between consumer sentiment index and household expenditures are estimated using the Vector Autoregressive (VAR) Method for the period 2009q1-2017q2. According to result, household consumption expenditure Granger causes on consumer sentiment index. Finally, incremental model with various control variables is estimated using by OLS method. The most important results obtained from the study are that (i) there is a statistically significant relationship between durable goods expenditures and the consumer centiment index (ii) only income and gold return ratio is statistically significant effect on consumption expenditure as a control variable.

Keywords: *Consumer Sentiment, Household Expenditure, Expectations*

Jel Codes: *D12, D84, C32*

BEKLENTİLER VE HANE HALKI HARCAMALARI: TÜRKİYE ÖRNEĞİ

ÖZ

Hanehalklarının gelecek beklentileri onların cari dönem karar verme davranışları üzerinde önemli etkiye sahiptir. Bu çalışmada, hanehalklarının ekonomiye dair beklentileri ve hanehalkı

[1] This paper was presented at the "3rd International Conference on Applied Economics and Finance (ICOAEF 2017) in Kyrenia, North Cyprus on December 6-7, 2017.

* Corresponding Author. Dept. of Economics, Gümüşhane University, Gümüşhane, Turkey, eipek@gumushane.edu.tr

** Dept. of Economics, Karadeniz Technical University, Trabzon, Turkey, hakyazi@yahoo.com

Yönetim ve Ekonomi Araştırmaları Dergisi / Journal of Management and Economics Research
Cilt/Volume: 15 Sayı/Issue: Özel Sayı 1/ Special Issue 1 Aralık/December 2017 ss./pp. 27-39
E. İpek, H. Akyazı Doi: http://dx.doi.org/10.11611/yead.373438

harcamaları arasındaki ilişkinin ampirik olarak test edilmesi amaçlanmıştır. Analizde hanehalkı beklentileri tüketici güven endeksi ve tüketim davranışı ise dayanıklı, yarı dayanıklı, dayanıksız ve hizmet harcamalarını içeren toplam harcamalar ile temsil edilmiştir. Bu bağlamda, tüketici güven endeksi ve hanehalkı harcamaları arasındaki ilişkiyi inceleyen baseline model 2009Q1-2017Q2 dönemi için Vektör Otoregresif tahmin yöntemi kullanılarak test edilmiştir. Model sonucuna göre, hanehalkı tüketim harcamaları tüketici güven endeksinin Granger nedenidir. Son olarak, birçok kontrol değişkenin eklendiği model EKK tahmin yöntemi kullanılarak test edilmiştir. Çalışmadan elde edilen önemli sonuçlar (i) dayanıklı tüketim harcamaları ve tüketici güven endeksi arasında istatistiksel olarak anlamlı bir ilişkinin olduğu, (ii) kontrol değişken olarak sadece gelir ve nominal altın getiri oranının anlamlı olduğudur.

Anahtar Kelimeler: *Tüketici Güven İndeksi, Hanehalkı Harcamaları, Beklentiler*

Jel Kodları: *D12, D84, C32*

1. INTRODUCTION

In economic theory, expectations play an important role in current or future decision-making process of economic units. For this reason, it is aimed to provide important information to policy makers and economic decision-makers calculating by consumer confidence / expectation indices either by private research institutions or by official statistical institutes. In addition, consistent estimates of expectations will help in creating strategic plans both by governments and companies, efficient use of resources, and making decisions more effective (Pauwels et al. 2004, Baghestani and Williams 2017). Since expectation surveys are based on future expectations of households / consumers, it is thought that expectations will have a significant effect on household future expenditures. Optimist and pessimistic expectations of households are the most important factor shaping the consumer confidence index. For this reason, it is generally accepted that expectations is a useful source in explaining households' current period durable goods, travel plans or any arbitrary consumption and in estimating the future consumption behavior of households. In addition, the consumer confidence index is also an important source for the firms to estimate their demand function to be generated by households (Raaij, 1989).

Consumer confidence, in general, consists of the future expectations of country and households' economic situation and it affects the country's economy through the consumer behavior channel. This interaction has been addressed in the literature in two basic approaches. The first idea is that consumer confidence can be used as an important and useful predictive tool to be able to prediction the possible change in the country's economy originating from differences in consumer behavior that may occur in the future due to consumer confidence. This approach generally examines the interaction between

consumer confidence and macroeconomic variables. On the other hand, the second one focuses on the direct interaction between consumer confidence and household consumption behavior. In this approach, firstly the lean effect between consumer confidence index and consumption behavior of households is revealed, and then the interaction is expanded with the help of various control variables.

In this study, the second approach mentioned above has been adopted and the possible effects of the Consumer Confidence Index and sub-indices, which are calculated by the Turkish Statistical Institute for the period 2009q1-2017q2, on household private consumption expenditures (total, durable, semi-durable, non-durable goods and services spending) will be estimated within the framework of the VAR model. For this purpose, firstly, the direct relationship between the confidence index and expenditures will be investigated through the simplified model, and then the effects will be estimated with the Least Squares method on the extended model created with the restricted control variables including income level, Euro, Dollar, Gold, and various securities return ratios. We preferred to use VAR model as the econometric estimation method in the first stage because the exact direction of the interaction between expectations and expenditures is not obviously determined at the beginning. For this reason, the Granger causality analysis will be conducted before testing the ultimate model to show short-run relationship. (Kirikkaleli, 2016)

The rest of the study consists of three parts. First the literature review will be presented, and the data and meteorology section will be included, finally the conclusion section will be included.

2. LITERATURE REVIEW

It is generally believed that consistency in estimating the consumption behavior of households is considered to be the most important source of information whether by policy makers or private sector decision makers, in order to take pre-position and to monitor / measure the effectiveness or success of the policies they implement (İpek and Akyazı, 2017). From this point of view, there are many studies offering that consumer confidence indices could be used as a predictive tool to represent the economic expectations.

Acemoğlu and Scott (1994) showed that consumer confidence index could be used as an indicator for consumption expenditures and other macroeconomic indicators in the United Kingdom for the 1974q2-1990q4 periods. Similar results were obtained in Matasusaka and Sbordone (1995) study where the interaction between US consumer confidence index and macro variables such as GNP, technology, and money supply was analyzed by the VAR method for the period 1953q1-1988q4. The study concluded that the consumer confidence index could explain the volatility in GDP; in other words, the change in consumer confidence has had an impact on the economic outcome. Similar results were

obtained from the studies that have been done by Golinelli and Parigi (2004), for France, Germany, Italy, United Kingdom, USA, Japan, Canada and Australia; Gayer (2005), for the Euro Area; Kim (2016) for OECD countries, Baghestania and William (2017), for USA, Ceritoglu (2013), and Arısoy (2012) for Turkey.

Contrary to these results, there have been few studies argued that the effect of confidence index on macroeconomic indicators is limited. In the study by Batchelor and Dua (1998), it was suggested that the US consumer confidence index for the period 1978-1993 was an effective predictor only in the 1991 crisis period, but it was not the case in other periods. Similar results were obtained from the studies of Vuchelen (2003), for Belgium; Charoenrook (2003), for USA and Erdogdu (2007) for Turkey.

Because of the complexity of the determining the relationship between the consumer confidence index and macroeconomic variables, many researchers have focused on the direct interaction between consumer confidence index and consumer expenditures. According to Caroll et al. (1994) the University of Michigan Consumer Confidence Index has had an impact on 4 basic expenditures: total consumption expenditures, motor vehicle expenditures, goods expenditures excluding motor vehicles and services for the period 1955-1992. Moreover, they observed that the power of consumer confidence index to explain consumption expenditures and its sub-items has decreased when the unemployment rate, the S&P500 price index, and series of three-month treasury bills were added as independent variables in the extended model. Bram and Ludvigson (1998) examined the interaction between consumer confidence index and consumption expenditure and its sub-components based on the five survey questionnaires that constitute the consumer confidence index. Two different indices Consumer Confidence Index, namely the Congressional Board and the University of Michigan Consumer Confidence Index were used in the study. The most important result obtained from the study, unlike the Caroll et al. (1994), is that control variables such as the lagged values of the Michigan index, the labor income, stock prices and interest rates in the extended model is not sufficient the explain the consumption. On the other hand, according to Bram and Ludvigson (1998), the Congressional Index contains more consistent information about the expenditures than the Michigan index.

Many prior academic researches, including this study, are based on these two articles. For example: Kwan and Cotsomitis (2004), Gelper et al. (2007), Barnes and Olivei (2017) for USA; Li (2016) for Canada; Gausens and Hasan (2017) for United Kingdom; Lek Goh (2003) New Zealand and Zavacka (2016) for the European Union.

In the literature, when focusing on some important studies carried out in Turkey, Erdoğdu (2007) investigated the effect of the sub-items constituting consumer confidence on the total private consumption of households using the data of December 2003-May 2006 through the Rational

Expectations Permanent Income Hypothesis (REPIH). The study concluded that the consumer confidence index had no effect on household consumption expenditures but the household's expectation on purchasing power and job opportunities had a positive effect on savings.

Another study on the REPIH approach carried out by Ceritoğlu (2013). In this study, the relationship between job opportunity expectation and consumption expenditure for the next 6 months period was estimated using by the Generalized Moments Method (GMM) for 2004q1-2012q3 periods. The most important result obtained from this study is that there is a positive and statistically significant relationship between the job opportunity expectation index and the durable consumption goods expenditures. Although our study shows some similarities with the study of Ceritoğlu (2013), our study differ from this study in terms of the variables used, period covered and the econometric method estimated.

3. DATA SET AND METHOD

In the study, Consumer Confidence Index (E^{CSI}) calculated by TURKSTAT for the period 2009q1-2017q2 for consumer expectations and four sub-indices based on the questionnaire of this survey were used as variables. These four sub-indices are; expectation of the financial status of the households in the next 12 months (E^{Q1}); general economic situation expectation in the next 12 months (E^{Q2}); the expectation of the number of unemployed in the next 12 months (E^{Q3}); and finally the possibility of saving in the next 12 months (E^{Q4}).

In addition, household total consumption expenditures (C^{Total}) consist of durable goods expenditures ($C^{Durable}$); semi-durable goods expenditures (C^{Semi}); non-durable goods expenditures ($C^{Nondurable}$); and service expenditures ($C^{Services}$). Also nominal 3-month financial return ratios such as income (Y), deposits (D), Dollar ($), Euro (€), Stock Exchange Istanbul (S), Gold (G) and government debt securities (GDS), are used as control variables in the model. All economic variables are seasonally adjusted by using the X12 method. All expenditure items are transformed in natural logarithm form and their first difference is taken due to the unit root problem. After all this adjustments they are added in the model. As can be seen in Table 1, the first differences of these variables are stationary.

Yönetim ve Ekonomi Araştırmaları Dergisi / Journal of Management and Economics Research
Cilt/Volume: 15 Sayı/Issue: Özel Sayı 1/ Special Issue 1 Aralık/December 2017 ss./pp. 27-39
E. İpek, H. Akyazı Doi: http://dx.doi.org/10.11611/yead.373438

Table 1. Unit Root Test for Variables

Variable	Test	Statistics	Lag	1% Crt val.	5% Crt val.	10% Crt val.
$\Delta C^{Durable}$	ADF	-7.086	0	-3.702	-2.980	-2.622
	P-P	-37.659	0	-17.676	-12.724	-10.340
ΔC^{Semi}	ADF	-8.131	0	-3.702	-2.980	-2.622
	P-P	-45.642	0	-17.676	-12.724	-10.340
ΔC^{Non}	ADF	-6.724	0	-3.702	-2.980	-2.622
	P-P	-37.442	0	-17.676	-12.724	-10.340
$\Delta C^{Service}$	ADF	-12.429	0	-3.702	-2.980	-2.622
	P-P	-53.124	0	-17.676	-12.724	-10.340
ΔC^{Total}	ADF	-9.679	0	-3.702	-2.980	-2.622
	P-P	-51.401	0	-17.676	-12.724	-10.340
ΔY	ADF	-45.314	0	-3.702	-2.980	-2.622
	P-P	-9.822	0	-17.676	-12.724	-10.340

In the study, the relationship between consumer confidence index and expenditures will be analyzed on the basis of both question-based and consumption expenditure sub-items. It is thought that consumption expenditures are influenced by the confidence index because of due to the information contained in previous period consumption values, consumer confidence index. The causality relationship between consumption and consumer confidence index, which is the first research questions in our study, has been examined under the Granger causality relationship. It is known that if one variable is the cause of the other variable Granger, this gives us the advantage of using past values of the other variable to make more consistent estimate. However it should be noted that Granger causality generally indicates that a variable is guiding to the other, not the real causality relationship between two variables. If the first research question is to be replaced by a more technical expression, we can ask that is there Granger causality between the consumer confidence index or any of its sub-questions and consumption or any of its sub-items in Turkey? This question has also tried to be answered using the VAR model in the studies of Utaka (2003), Throop (1992), Gleper et.al. (2009). Two variable L-lagged basic VAR model for stationary two time series is as shown below.

Yönetim ve Ekonomi Araştırmaları Dergisi / Journal of Management and Economics Research
Cilt/Volume: 15 Sayı/Issue: Özel Sayı 1/ Special Issue 1 Aralık/December 2017 ss./pp. 27-39
E. İpek, H. Akyazı Doi: http://dx.doi.org/10.11611/yead.373438

$$\Delta C_t = \alpha_1 + \sum_{i=1}^{L} \beta_{1i} \Delta C_{t-i} + \sum_{i=1}^{L} \gamma_{1i} E_{t-i} + \varepsilon_{1t} \quad (1)$$

$$E_t = \alpha_2 + \sum_{i=1}^{L} \beta_{2i} \Delta C_{t-i} + \sum_{i=1}^{L} \gamma_{2i} E_{t-i} + \varepsilon_{2t} \quad (2)$$

Where ΔC represents the change in household consumption expenditures, and E represents the consumer confidence index as household expectancies. The lag length L is determined as 4 periods for durable, semi-durable and total expenditure, 5 periods for durability and service expenditures. LR, FPE, AIC, HQIC, SBIC criteria is used when the optimal lag length is determined. Here it is assumed that the error terms, ε_{1t} and $\varepsilon_{2t,}$ is Gaussian white noisy with zero- mean and fixed covariance matrix. After the estimation of equations 1 and 2, Granger causality tests were performed and the results are shown in Table 2. The direction of the arrow used in Table 2 represents the direction of Granger causality. It is estimated that there is Granger causality from durable, unstable and service spending to consumer confidence index at the level of significance of 0.01.

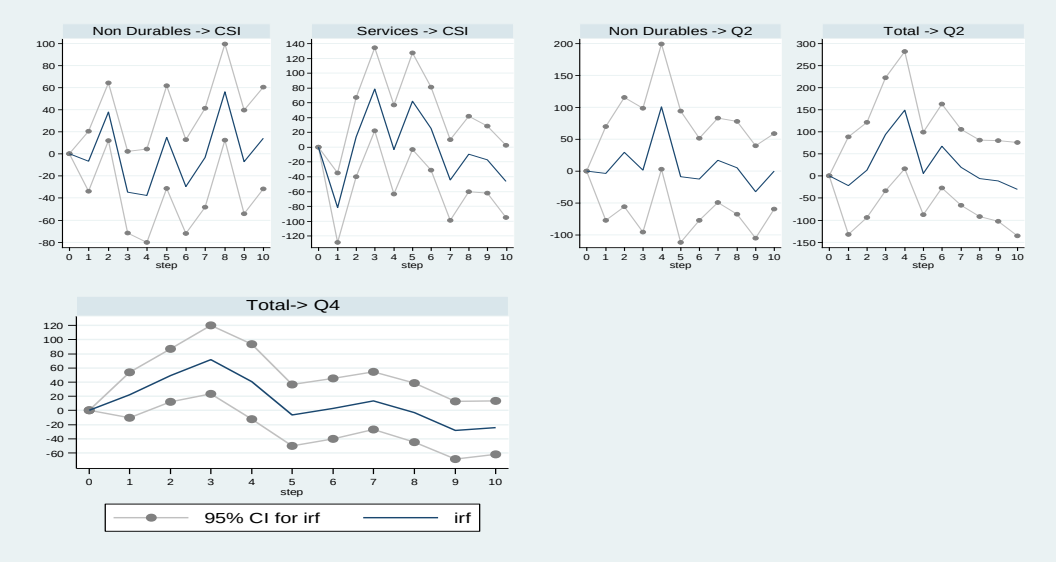
Table 2. Granger Causality Results

Consumption	**0.01 Prob.**	**0.05 Prob.**	**0.10 Prob.**
Durable	$\rightarrow E^{CSI}, \rightarrow E^{Q4}, \leftarrow E^{Q3}$	$\rightarrow E^{Q2}, \rightarrow E^{Q3}$	$\leftarrow E^{CSI}$
Semi Durable	$\rightarrow E^{Q1}$	$\rightarrow E^{Q2}, \rightarrow E^{Q4}$	
Nondurable	$\rightarrow E^{CSI}$		$\rightarrow E^{Q3}$
Service	$\rightarrow E^{CSI}$	$\leftarrow E^{CSI}$	$\leftrightarrow E^{CSI}$
Total		$\leftarrow E^{CSI}, \rightarrow E^{Q3}, \leftarrow E^{Q4}$	

Firstly, with the help of the VAR model established in the study, it was investigated the question of how household consumption expenditures and its sub items consumer confidence index and its sub-indices are interact with each other. Later, adding various control variables that are thought to be important influence in relation between expectations and expenditures created an extended model. Only the statistically significant results of the VAR model are included in the estimation results.

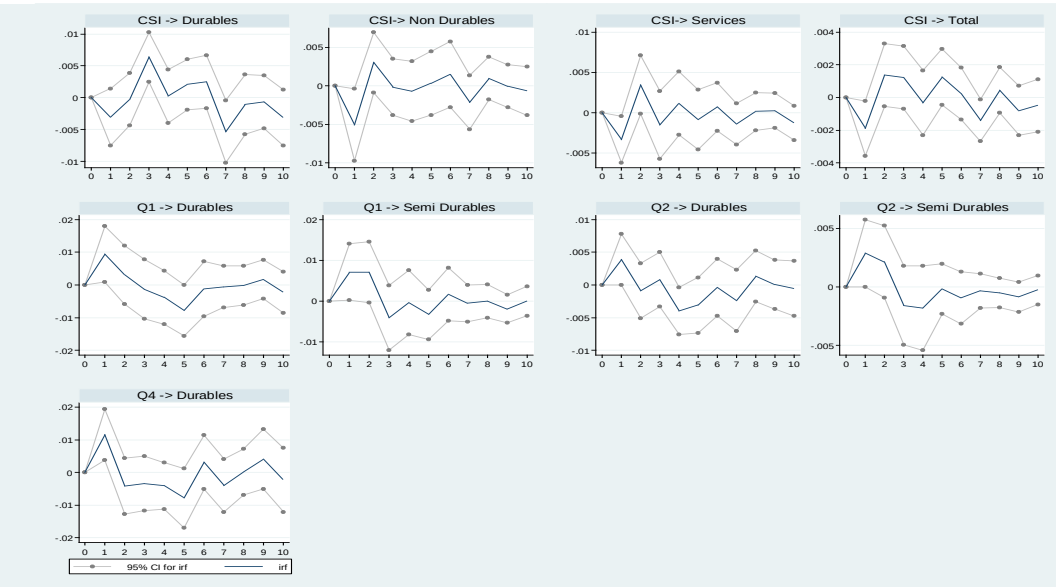
Yönetim ve Ekonomi Araştırmaları Dergisi / Journal of Management and Economics Research
Cilt/Volume: 15 Sayı/Issue: Özel Sayı 1/ Special Issue 1 Aralık/December 2017 ss./pp. 27-39
E. İpek, H. Akyazı Doi: http://dx.doi.org/10.11611/yead.373438

Graph 1. Results of VAR Model for Equation 1



In the Graph1, which is shown the effect of the consumer confidence index and sub-indices on consumption expenditures and its sub-items by the impact response function, any shock to be experienced in consumer confidence index affects non-durable goods consumption in the third quarter positively, services consumption expenditures negatively in the first quarter. The impact on Q2, which is to be experienced in durable goods and total expenditures, is statistically significant and positive in the 4th quarter, and the effect of the shocks has disappeared by decreasing. Finally, a shock on Q4, which is to be experienced in total expenditures, is statistically significant and positive in the 3rd and 4th quarters.

Graph 2. Results of VAR Model for Equation 2



Graph 2 shows the statistically significant effects of the confidence index and sub-indices on household consumption expenditures. It is observed that is observed that the impact of a shock on durable consumption goods to be experienced at CSI is statistically significant and positive in Q3, and and the effect has declined over time. It is also observed that a shock to be experienced in CSI has a negative and statistically significant impact on non durable, services and total expenditure in the first quarter. This impact has disappeared by decreasing in the rest of the period.

When investigating the effects of shocks on question-based expenditures on consumption expenditures, it is seen that the effect of a shock in a E^{Q1} , which shows the expectation of the financial status of the households in the next 12 months in consumer confidence index, on durables and non-durables expenditures is positive and statistically significant . Additionally, the impact on durable and non-durable goods expenditures in a shock to be experienced inE^{Q2}, which indicates the general economic situation expectation in the next 12 months, is statistically significant and positive in the first quarter. Lastly, impact of any shock in E^{Q4}, which signifying "the possibility of saving in the next 12 months", on consumption of durable goods is positive and statistically significant in the first quarter.

Finally, when the VAR model results are examined on the basis of questions and consumption expenditures, it is seen that consumer confidence index is statistically more effective in consumption expenditures and its sub items. These results are different from the results obtained from the studies of Erdoğdu (2007) and Ceritoğlu (2013). After obtaining the first stage empirical findings, the extended estimation model with the control variable matrix (Z) is constructed as shown below.

$$\Delta C_t = \alpha_t + \gamma_t \Delta E_{t-1} + \sum_{i=1}^{L} \theta_{it} Z_{it} + \varepsilon_t \qquad (3)$$

The extended model was estimated by the Least Squares method for all expenditure items and for different control variables. On the basis of the significance of the coefficients obtained by the estimations and the consistency tests the equation 3, where durable consumption expenditures are dependent variables and 1-term lagged value of the consumer confidence index, the current period 3-month nominal rate of return and the current period 3-month income change rate are independent variable, is determined as the best prediction model. The extended model estimated and diagnostically test results are shown in the Table 3. The heteroscedasticity problem in the model is overcome by using the variance robust standard errors in the model. According to the results of the Ramsey Reset test, it seems that there is no variable to be excluded from the model. Finally, the variance inflation factor (VIF) for all variables is less than 10, indicating that there are no multiple linear correlation problems.

Table 3. OLS Estimation of Equation 3 and Model Diagnostics

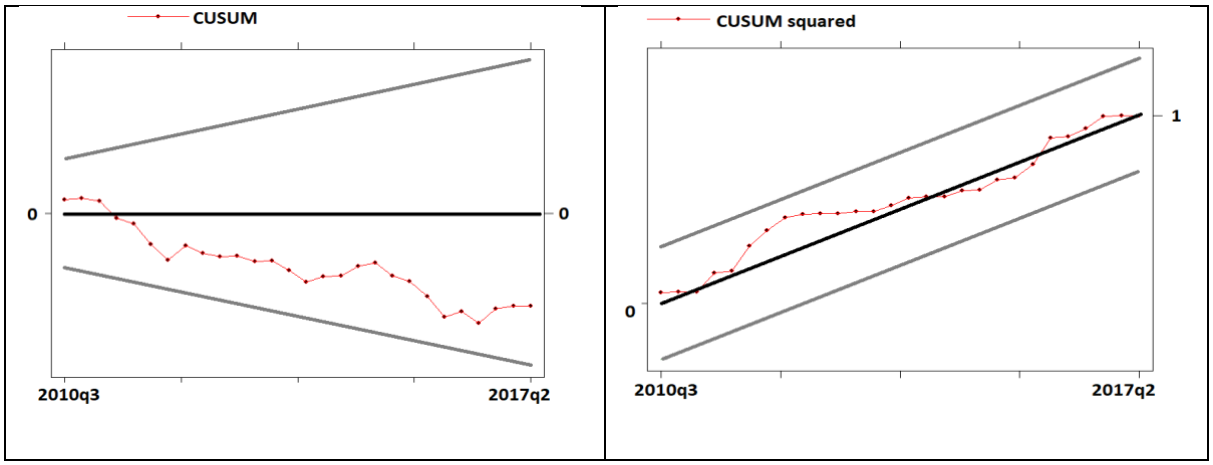
Variable	Coeff.	Robust Std. Error	t Value	P Value	95% Conf. Interval	
ΔY	1.390	0.303	4.59	0.000	0.799	1.981
Gold	-0.002	0.0005	-3.29	0.003	-0.003	-0.001
E_{t-1}	-0.004	0.002	-2.15	0.040	-0.007	-0.001
Constant	0.303	0.146	2.08	0.047	0.099	0.507

Source	SS	df	MS		
Model	0.068	3	0.023	R^2	0.61
Residual	0.043	29	0.002	Adj.. R^2	0.57
Total	0.111	32	0.004	**RMSE**	0.03

Diagnostics					
White's test		**Breusch-Pagan Cook-Weisberg**		**Ramsey RESET**	
chi2(9)	17.99	**chi2(1)**	0.320	**F(3, 26)**	1.51
Prob > chi2	0.035	**Prob > chi2**	0.570	**Prob > F**	0.235
Variable	**VIF**	**Variable**	**VIF**	**Variable**	**VIF**
ΔY	1.08	**Gold**	1.08	E_{t-1}	1.02

After obtaining consistently and statistically significant results from the extended model, the coefficients become interpretable. While the highest effect on durable goods consumption is the current period income with 1.390, the effect of current period nominal gold yield rate and the past period consumer confidence index were estimated as statistically significant and negative. Finally, in order to the estimation results to be interpreted economically, it is necessary to parameters follow a stable course over time. The stability of the estimated coefficients was tested with CUSUM and CUSUM-squared method. As can be seen in Graph 3, the parameters of the estimated model for both test results are stable because they remain within the plot band for a level of five percent significance. Based on these results, it is seen that the extended model is consistent. Moreover, there is a statistically significant relation between durable consumption expenditures and consumer confidence index, unlike previous studies for Turkey.

Graph 3. Model Stability Tests: CUSUM and CUSUM-squared



4. CONCLUSION

It has long been argued that consumer confidence will have an impact on household consumption expenditures and confidence indices can be used as an important information source in estimating the magnitude and direction of this effect. In this study, the linkage between household consumption expenditures and consumer confidence was empirically analyzed and some important results were obtained. Firstly, the effect of consumer confidence index and its sub-indices on consumption expenditures and its sub items has been analyzed. As a result of examining this effect in the framework of the baseline model, it has been found that the incremental model with the help of control variables better exploits this effect. The income level, which is one of the control variables, has a positive and statistically significant effect on durable consumption expenditures whereas the nominal rate of return of gold has statistically significant and negative impact on durable consumption expenditures. In addition, the other nominal rates of return such as Dollar, BIS, Euro, and Government Domestic Debt Instruments do not have any statistically significant effect on consumption expenditures. Moreover, it is also observed that in the applications in which are taken into consideration the effect of the real gains of the corresponding instruments on household consumption real returns are statistically insignificant and consumers determine consumption expenditures by considering the nominal values. Finally, none of the four basic questions constituting the consumer confidence index has a statistically significant relationship on consumption expenditures.

REFERENCES

Acemoglu. D. and Scott. A. (1994) "Consumer Confidence and Rational Expectations: Are Agents' Beliefs Consistent with theTheory?", The Economic Journal, Vol. 104, No. 422, 1-19.

Arısoy, İ. (2012) "Türkiye Ekonomisinde İktisadi Güven Endeksleri ve Seçilmiş Makro Değişkenler Arasındaki İlişkilerin VAR Analizi" Maliye Dergisi, Sayı 162, Ocak –Haziran, 304-315.

Baghestani, H. and Williams, P. (2017) "Does Customer Satisfaction Have Directional Predictability for U.S. Discretionary Spending?", Applied Economics, 49:54, 5504-5511,DOI: 10.1080/00036846.2017.1311002

Barnes, M. L. and Olivei, G. P. (2017) "Consumer Attitudes and Their Forecasting Power for Consumer Spending" Journal of Money, Credit and Banking, Vol. 49, No. 5,1031-1058.

Batchelora, R. And Duab, P. (1998) "Improving Macro-Economic Forecasts: The Role of Consumer Confidence" , International Journal of Forecasting 14, 71–81.

Bram, J. and Ludvigson, S. (1998) "Does Consumer Confidence Forecast Household Expenditure? A Sentiment Index Horse Race" FRBNY Economic Policy Review,59-78.

Carroll, C.D, Fuhrer, J.C. and Wilcox, D. W. (1994) "Does Consumer Sentiment Forecast Household Spending? If So, Why?", The American Economic Review, Vol. 84, No. 5, 1397-1408.

Ceritoğlu, E. (2013) "Household Expectations and Household Consumption Expenditures: The Case of Turkey" Central Bank of the Republic of Turkey, working paper:13/10.

Charoenrook, A. (2005) "Does Sentiment Matter?" Unpublished working paper, Vanderbilt University.

Erdoğdu, O. (2007) "Tüketim Harcamaları ve Güven", Ekonomik Yaklaşun, Cilt: 18, Sayı: 64, 93-102.

Gausden, R. and Hasan, M. S. (2017) "An Assessment of the Contribution of Consumer Confidence Towards Household Spending Decisions Using UK Data", Applied Economics, DOI: 10.1080/00036846.2017.1363859

Gayer,C. (2005) "Forecast Evaluation of European Commission Survey Indicators", Journal of Business Cycle Measurement and Analysis, 2, 157-183.

Gelper, S, Lemmens, A. and Croux, C. (2007) "Consumer Sentiment And Consumer Spending: Decomposing The Granger Causal Relationship in the Time Domain", Applied Economics, 39:1, 1-11. DOI: 10.1080/00036840500427791.

Golinelli, R. and Parigi G. (2004) "Consumer Sentiment and Economic Activity a Cross Country Comparison," Journal of Business Cycle Measurement and Analysis, 1, 2004, 147-170.

İpek E. and Akyazı H. (2017) "Turkish Households Consumption Behavior and Flexible Engel Curves", Dogus University Journal, 18 (2), 35-50.

Kim, J. (2016) "Consumer Confidence and Economic Activity: What Causes What?", Korea and the World Economy, Vol. 17, No. 2 183-212.

Kirikkaleli, D. (2016) "Foreign Bank Penetration and the Domestic Banking System: Empirical Evidence from Turkey Based on the VAR Approach." Acta Oeconomica, 66(1):79-105

Kwan, A. C. and Cotsomitis, J. A. (2004) "Can Consumer Attitudes Forecast Household Spending in the United States? Further Evidence from the Michigan Survey of Consumers", Southern Economic Journal, 136-144.

Lek Goh, K. (2003) "Does Consumer Confidence Forecast Consumption Expenditure in New Zealand?", New Zealand Treasury Working Paper 03/22.

Li, G. (2016) "Forecasting Power of the Consumer Confidence Indices to Household Consumption Expenditures" Unpublished M.A. thesis, University of Ottawa.

Matsusaka, J. G. and Sbordone, A. M. (1995) "Consumer Confidence and Economic Fluctuations", Economic Inquiry, Vol. XXXIII, 296-318.

Pauwels, K., Currim, I., Dekimpe, M.G. et al. (2004) "Modeling Marketing Dynamics by Time Series Econometrics", Market Letter, Volume 15, Issue 4, 167–183.

Throop, A.W. (1992) "Consumer Sentiment: Its Causes and Effects", Federal Reserve Bank of San Francisco, Economic Review,1:35-57.

Utaka, A. (2003) "Confidence and the Real Economy-the Japanese Case". Applied Economics, 35(3), 337-342.

Van Raaij, W. F. (1989) "Economic News, Expectations and Macro-Economic Behaviour", Journal of Economic Psychology, 10(4), 473-493.

Vuchelen, J. (2003) "Consumer Sentiment and Macroeconomic Forecasts", Journal of Economic Psychology, 25, 493–506.

Zavacka, J. (2016) "Alternative Roles of Consumer Confidence in Forecasting Consumption: Evidence from European Countries", Ekonomická revue – Central European Review of Economic Issues 19, 133-142.