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Pass-through Effect from Exchange Rates to the Prices in the Framework of Inflation Targeting Policy: A Comparison of Asia-Pacific, South American and Turkish Economies

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Abstract

Most of the emerging market economy in 90s faced to grave crisis. After these crises, the monetary policies of emerging market economies gave up to use exchange rates as an anchor. For such markets inflation targeting became a new policy. Exchange rates' overshooting effects in the markets and consequential troubles are important causes of these political changes. The study aims at comparatively measuring the pass through impacts of exchange rates to the prices in Asia Pacific, Latin (South) America, and Turkey economies, which implement inflation targeting regime, but have the variable traits in dollarization and inflation experiences. For calculating of pass-through effects from exchange rates to domestic prices, the model that is used in the study has five variable factors. Analysis of model is base of VAR approach. Due to cross section series are used in addition to time series, Panel VAR model has been used. Upon obtained findings, it can be said that pass-through effect in Asia Pacific economies is lower than pass-through effect in Latin America and Turkey. This result also complies with the examined pass-through effect literature.[†]

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1. Introduction

There are two basic forms that are remarkable when crisis in Mexico (1994), South East Asia (1997), Russia (1998), Brazil (1999), Turkey (2000–2001), and Argentina (2001) are discussed. The first characteristic form is that exchange rate systems prior to crises are the mixed systems (Malaysia, Thailand) in form of crawling peg exchange rate system (Brazil, Indonesia, Mexico, Russia, and Turkey) or crawling band exchange rate system (Malaysia and Thailand). The second characteristic form is that all of these economies have poor control of financial liberties‡.

One of the biggest problems was the dollarization fact for these countries, especially Latin American economies and Turkey that, implemented mixed exchange rate system pursuant to aforesaid crises after. The inflation that could not be adjusted in defiance of nominal anchor reduced both the power of central bank and currency value in those countries. Overshooting effects of exchange rates due to financial crises caused economical and financial turmoil. Many of the emerging economies due to the problems such as financial credit facility, domestic-foreign borrowing and foreign trade deficit after this effect, gave up on exchange rate nominal anchoring and changed their policy to inflation targeting (Devereux, et al., 2006; Reinhart, 2006).

Two basic factors have the impacts on the policies that are carried out by these emerging market economies. The first factor is that foreign funds, which are used as the financing of economic growth, cause unbalance on assets and equities depending on possible fluctuations in domestic free interest rates. The “original sin” and “sudden stop” problems that are mentioned in Eichengreen & Hausmann (2003), Calvo and Reinhart (2002), and Calvo (1999) cause aforesaid balance sheet vulnerabilities. The second factor is the sensitivity of the prices to the changes in exchange rates. In the studies of Calvo & Reinhart (2002), Choudhri & Hakura (2003), prices’ upward trend in emerging markets are higher than industrialized economies’ markets after the exchange rate-oriented shocks. These findings show that pass-through effects from the exchange rate to the prices in the emerging markets is higher than developed markets.

On the other side, the existence of dollarization lead to strong pass-through effects, then, raises the vulnerabilities in economy and also prevents the price stabilizations. In the event of being financial systems not deep and having got importees high share in total consumption basket, transmission mechanism is indirectly and negatively affected by pass-through effect (Bhattacharya et al., 2011; Kandil & Morsy, 2009). When it is accepted that a strong and positive correlation is available between dollarization-pass-through effect and dollarization-inflation§, the success in inflation may cause to decline in dollarization and accordingly in pass-through effect (Taylor, 2000).

In this study, a comparison is carried out between the countries that have different experience about dollarization and inflation, represent the emerging market economies. In this way, this study aims at contributing the literature that analyzes the pass-through effect. Related literature is analyzed in the first part of study. Obtained findings are examined in third part while the applied model and data set are specified in the second part. The relation of the study with the literature is specified in the conclusion part where the results of analysis are evaluated.

2. Background

The examination of pass-through effect with regards to developing and developed countries economies has been carried out for especially nineties. McCarthy (2000) “whether a relation exists between inflation falling and changes in exchange rate” can be considered as a beginning of such researches in this scope.

‡ Frankel (1999), Fischer (2001), Calvo & Reinhart (2002), Hausmann and et al. (2002), Calvo et al. (2003), and resultant literature is the basic promoter of this point of view.

§ Goldfajn and Werlang (2000), Hausmann et al. (2000), Cabellero et al. (2004), Muinhos (2004) and following literature.

In recent studies, the pass-through effect is being examined in the scope of “international macroeconomics”. McCarthy (2000), Hunt & Isard (2003), Hahn (2003), Campa & Goldenberg (2006) and Ihrig, et al. (2006) are some of the studies. Those examine the pass-through effect in the way of developed economies. Mihaljek & Klau (2000), Frankel, et al. (2005), Choudhri & Hakura (2001), Hahn, et al. (2007) can be given as an example for the most important studies of developing economies in this scope.

Taylor (2000) said that, a strong and positive relation exists between inflation and pass-through effect. According to Taylor, decreasing the inflation rate means the decrease in pass-through effect. Honohan & Shi (2001) also, suggest that a strong and positive relation exists between dollarization and pass-through effect. The existence of dollarization prevents the running of monetary transmission mechanisms and brings to a halt the precautions against exchange rate shocks.

According to Mishkin (2008), the determination of beginning time and dimension of pass-through effect should be required for calculation of estimated inflation. Yet, this determination is required for performing monetary policy precautions against sudden exchange rate shocks. Hunt & Isard (2003) emphasize that inflation anticipation models should be restructured to calculate the size of this effect in the markets with high pass-through effect. In a sense, central banks should follow watchfully exchange rates and exchange rate volatility in the economies with high pass-through effect. This situation constitutes the one of the basic reasons behind “Fear of Floating Hypothesis”. Bhattacharya, et al. (2011) precipitated that pass-through effect has damaging influence on monetary transmission mechanism. That study, also discover some findings of decreasing in pass-through effect in economies, in low inflation.

According to Kara & Ögünç (2005), pass-through effect of exchange rates to the prices appeared in a time-lagged way from the middle of 90s to the beginning of 2000s. From the beginning to middle of 2000s this relation appeared in two and three time-lagged. Özçiçek (2007) specifies that the biggest reaction against exchange rates changes occurs in Wholesale (Producer) Price Index (WPI). Exchange rate changes less affect the Consumer Price Index (CPI) than Wholesale Price Index. Aldemir (2007) precipitated that the sensitivity of import price index to exchange rates considerably shows that, it would be decrease after disinflation policies. According to Peker & Görmüş (2008), the influence of crude oil prices on inflation are not strong. The influences of exchange rates on inflation are much more than monetary policies shocks and demand shocks. It is emphasized that 72% of improvements in inflation comes from exchange rate.

3. The Model and Data Set

In this study, the model in Leigh & Rossi (2002)’s study is taken as a reference. The model used in the estimation of pass-through effect from exchange rate to domestic prices depends on VAR approach with five variables. Our study includes two groups of country. The first of these groups are four Latin America and Europe-Asia countries, Brazil, Mexico, Chile, Peru and Turkey. The second group includes four Asia Pacific countries like Indonesia, Republic of (South) Korea, Philippines, and Thailand**.

The reason of selection these aforesaid countries is depends on if the flexible exchange rate application of them. The comparison reason of Asia-Pacific, South America countries and Turkey is about each of them having different inflation performance, suitable for testing the pass-through effects. In the study both time series and cross section

** In, Jongwanich & Park (2011), it has been emphasized that inflation increased in three of them (Korea, Indonesia and Thailand) was accompanied by an increase in output growth. However, except the Philippines from that, her growth rate was still above the 5 percent in the period of 2006-08Q1. The three of them have, also, had a different policy (inflation-responsive) from the Philippines’ policy –no inflation control but all of the four countries different from the other Asia Pacific Countries is officially operate flexible exchange rate regimes (Taguchi and Kato:2011:93; Gosh and Rajan:23).

series are available. Accordingly, in the determination of pass-through effect from exchange rates to the prices Panel VAR approach is used.

The research includes a period from 2002 to 2010. The data, used in the study is obtained from IMF-IFS and Moodys databank. For the analysis, STATA 9 and E-views 5.1 pocket programs are used. Complying with McCarthy (2000)'s, and Leigh & Rossi (2002)'s studies, the data used in this study is determined as MCI (Moody's Commodity Index), reel GSYİH, nominal exchange rates (as the prices of all countries currencies against USDollar), producer price index, and consumer price index. Using Cholesky's "decomposition structural shocks" in the model are obtained from VAR residuals. In this point, supply shock is obtained by MCI, demand shock is obtained by reel GSYİH, exchange rate shock is obtained by using nominal exchange rate. In obtaining the shocks, a system consisting of both variables is used. System is specified as following (Leigh & Rossi, 2002, pp: 5-6).

$$cp_t = \alpha_1 cp_{t-1} + \varepsilon_t^{cp} \quad (1)$$

$$\Delta y_t = \beta_1 \Delta y_{t-1} + \beta_2 \varepsilon_t^{cp} + \varepsilon_t^{\Delta y} \quad (2)$$

$$\Delta e_t = \gamma_1 \Delta e_{t-1} + \gamma_2 \varepsilon_t^{cp} + \gamma_3 \varepsilon_t^{\Delta y} + \varepsilon_t^{\Delta e} \quad (3)$$

$$\pi_t^{wpi} = \delta_1 \pi_{t-1}^{wpi} + \delta_2 \varepsilon_t^{cp} + \delta_3 \varepsilon_t^{\Delta y} + \delta_4 \varepsilon_t^{\Delta e} + \varepsilon_t^{\pi^{wpi}} \quad (4)$$

$$\pi_t^{cpi} = \theta_1 \pi_{t-1}^{cpi} + \theta_2 \varepsilon_t^{cp} + \theta_3 \varepsilon_t^{\Delta y} + \theta_4 \varepsilon_t^{\Delta e} + \theta_5 \varepsilon_t^{\pi^{wpi}} + \varepsilon_t^{\pi^{cpi}} \quad (5)$$

Here, cp symbolizes MCI commodity prices. Δy symbolizes the first order differences of real income logarithm. Δe symbolizes the first order differences of nominal exchange rate logarithm. π^{wsp} and π^{cpi} symbolize, respectively, wholesale (producer) and consumer price indexes.

For stationary test of the variables in the study, Augmented Dickey Fuller (individual root –Fischer ADF) test is used. In stationary test, it is put forward that unit root is not available in the variables that have been selected for both groups, and obtained results are shown in Table 1. It is approved that impulse-response functions depending on VAR model is appropriate for the assessment on influence of exchange rate movements on the domestic prices. ADF test shows, first order differences of the series should be used in the estimation of VAR model with first group countries (South American countries and Turkey) and the second group countries (Asia-Pacific countries). In the determination of lag length for model estimation of Akaike Information Criterion (AIC) is used. In the estimation of model according to obtained result the first order differences are used for each country in the first and second groups, and 5 time-lagged values are used.

Table 1: Unit Root Analyzes

Group 1 st . South American Countries and Turkey					
Method	Δcp	Δy	Δe	Δwsp	Δcpi
ADF, Fisher Chi-square	44.3553***	88.8290***	78.9878***	74.7438**	47.1404***
ADF, Choi Z-stat	-5.0535***	-7.7721***	-7.4928***	-7.2600***	-5.2351***
Group 2 nd . Asia Pacific Countries					
ADF, Fisher Chi-square	35.4428***	87.2242***	44.1340***	51.2076***	40.2182***
ADF, Choi Z-stat	-4.5200***	-8.1394***	-5.1551***	-5.6838***	-4.9452***

Note: *** shows that series are stable in accordance with 1 % significance level.

4. Findings

The main concerning of the study is to see the influence of exchange rate shocks on the prices by way of country samples and comparing the periodical differences. For this reason, no other impulse - response functions are required. From that point of view, pass-through coefficients are calculated from separately-estimated impulse-response functions for the each two groups. In the study, pass-through coefficients are attained by dividing response of each price index at the end of j months to exchange rate shocks into response of exchange rate at the end of j months to exchange rate shocks. The model of this expression logically like as (Leigh & Rossi, 2002).

$$PT_{t,t+j} = P_{t,t+j} + E_{t,t+j} \quad (6)$$

P_{t+j} with t show cumulative change between t+j months; $E_{t,t+j}$ with t show the cumulative change in nominal exchange rate between t+j months. Exchange rate pass-through coefficients in first group South American countries and Turkey and second group Asia-Pacific countries are seen in Table 2. Pass-through coefficients in Table have been estimated through impulse - response functions with VAR model.

Table 2. Pass-through Coefficients for the Groups

	Group 1 st S. America and Turkey	Group 2 nd . Asia Pacific
CPI	19.7	10.7
WPI	25.9	19.3

Source: Calculated by the authors.

In the estimation of pass-through coefficients, the reactions of producer (WPI) and consumer (CPI) price indexes to the shocks have been calculated for the four quarter of a year. According to pass-through coefficients achieved and shown in Table 2, the level of pass-through coefficients in relation to producer prices for both groups is a little higher than pass-through coefficients calculated for consumer prices. These findings show similarity to obtained results in Leigh & Rossi (2002) study for Turkey.

On the other side, when it is examined for country groups, pass-through coefficients in the first group (S. America and Turkey), they have high inflation problem in history. Their inflation is higher than the second group (Asia Pacific) The second group has fewer inflation problems. This result complies with the findings obtained in the studies by Leigh & Rossi, (2002), Kara & Ögünç (2005), and Honohan & Shi (2001). Moreover, these results obtained are related to positive relations between decrease in inflation rate and decrease of pass-through effect mentioned in Taylor (2000) study. Namely, in this scope, the lower pass-through effect in the second group countries with lower inflation than the first group countries complies with general economic thoughts.

To find the explanatory power of shocks from exchange rates about the changes in producer and consumer price indexes, Variance Decomposition Analysis in VAR Model is being used. In the estimations that shall be done by considering pass-through effect, the first 24-monthed observations (the first six quarters) of exchange rate shocks on Consumer Price Index (CPI) and Producer Price Index (WPI) are taken into account. In this scope, Variance Decomposition calculations in the study are shown in Tables 3 a -b. and 4 a- b.

Variance decomposition is important for exchange rate shocks in determined periods to show their explanatory power about fluctuation in CPI and WPI. In this study, to determine the extent of the exchange rate shocks and the other shocks calculated via the system created by Leigh & Rossi (2002)'s equations from 1 to 5, mentioned above, affect the changes in CPI and WPI, separately calculations in variance decomposition were made for both of the two groups

Table 3 a. CPI Variance Decomposition Results for Group 1st (S. America and Turkey)

Period	CPI	Commodity Prices	Growth	Exc. Rate	WPI
1	100.000	0.00000	0.00000	0.00000	0.00000
2	91.1029	2.62582	3.69053	1.42546	1.15526
3	85.8477	2.97310	4.71180	2.16936	4.29809
4	75.7993	5.77057	5.23806	3.69432	9.49778
5	71.6376	5.20600	5.13409	3.27667	14.7457
6	64.8099	9.76716	5.29088	4.20395	15.9281
7	63.7698	9.52364	5.64345	5.08784	15.9753
8	62.5958	9.49286	5.56108	6.57923	15.7710
9	61.3968	9.35575	5.45539	8.12513	15.6669
10	60.6685	9.19934	5.51313	9.08366	15.5354
11	59.6669	10.5383	5.49618	9.01497	15.2837
12	58.4267	12.0891	5.58391	8.92534	14.9749

Source: calculated by the authors.

Table 3 b. WPI Variance Decomposition Results for Group 1st (S. America and Turkey)

Period	WPI	Commodity Prices	Growth	Exc. Rate
1	100.000	0.00000	0.00000	0.00000
2	73.8377	19.6734	4.78629	1.70270
3	64.4987	29.9834	4.06885	1.44903
4	61.3884	26.9465	4.44540	7.21969
5	60.8290	26.6346	4.72286	7.81351
6	60.5627	26.3048	5.19937	7.93310
7	61.0921	25.1498	4.96864	8.78940
8	61.7345	24.5361	5.04696	8.68241
9	61.3832	24.5268	5.03425	9.05575
10	60.8626	24.3907	5.44780	9.29890
11	60.6822	24.3737	5.50561	9.43849
12	60.6855	24.3677	5.50973	9.43701

Source: calculated by the authors.

Table 4 a. CPI Variance Decomposition Results for Group 2nd(Asia Pacific)

Period	CPI	Commodity Prices	Growth	Exc. Rate	WPI
1	100.000	0.00000	0.00000	0.00000	0.00000
2	99.0245	0.44048	0.01985	0.51372	0.00146
3	96.7983	0.74371	1.42241	0.50004	0.53552
4	92.3350	3.11742	3.17571	0.50149	0.87044
5	90.1942	5.03351	2.79608	0.35339	1.62277
6	88.9351	4.98504	3.01031	0.61115	2.45837
7	82.9564	6.97689	3.36544	2.70904	3.99224
8	77.4687	9.27630	6.21166	2.73941	4.30395
9	73.7328	10.8832	8.59354	2.65325	4.13726
10	73.0196	11.0738	8.82231	2.69917	4.38507
11	71.3127	11.5673	8.64076	3.68080	4.79848
12	70.8141	11.1143	9.31682	3.60478	5.14998

Source: calculated by the authors.

Table 4 b. WPI Variance Decomposition Results for Group 2 (Asia Pacific)

Period	WPI	Commodity Prices	Growth	Exc. Rate
1	100.000	0.00000	0.00000	0.00000
2	91.6445	8.10387	3.8E-05	0.25155
3	91.0605	8.30378	0.25644	0.37927
4	82.7104	11.5206	5.40638	0.36265
5	81.8047	12.2545	5.51965	0.42123
6	80.7353	12.3480	5.72202	1.19466
7	76.7616	16.6160	5.48957	1.13282
8	74.5400	18.8772	5.48123	1.10154
9	75.1119	18.3591	5.28520	1.24389
10	72.8390	19.9315	5.55841	1.67115
11	71.9454	19.8729	5.64275	2.53899
12	71.4669	19.5594	6.04386	2.92991

Source: calculated by the authors.

Upon obtained findings, the explanatory power of exchange rate shocks in the period of the first eight quarters in the first group about CPI fluctuation is lower than explanatory power about WPI fluctuation for the same time frame. Such findings obtained comply with the pass-through coefficients in Table 2. In mentioned period of time, the shocks with the highest explanatory power for CPI fluctuation are CPI-based shocks. In terms of first group countries, secondary shocks with the highest explanatory power for CPI fluctuation are WPI-based shocks.

In terms of secondary group countries, explanatory power of exchange rate-based shocks in the period of the first 8 quarters about CPI and WPI is lower than the first group countries. This finding complies with Table 2. In the second group, as in the first group, CPI-based shocks are the shocks with the highest explanatory power for CPI fluctuation. Furthermore, as different from the first group, the influence of shocks from commodity prices on CPI is higher than the shocks from WPI. For both groups, the influence of commodity prices on WPI, except WPI shocks, is more prominent than other variables. The influence of shocks from commodity prices on WPI shows increase for each group as of periods. On the other side, the influence of commodity prices on WPI in first group (S. American countries and Turkey) is higher than second group (Asia Pacific countries).

5. Conclusions

In this study it is aimed at comparing the levels of pass-through effect between two groups of countries in emerging markets and analyzing whether obtained findings comply with aforesaid literature. In the study it is concluded that pass-through effect in second group Asia Pacific countries is lower than first group, S. American countries and Turkey. All of these findings show us that, exchange rate-based shocks and commodity price-based shocks (as the increases in gold or oil prices) may cause more effect on inflation rates of first group countries.

The lower pass-through effect of the second group depends on the lower historical inflation and dollarization problem of this group than the countries in the first group. If expressed correctly, obtained findings also comply with the literature which refers to a relation in positive between inflation and pass-through effect. The findings from variance decomposition analyses is that, the most relevant factor in the explanation of both CPI and WPI fluctuation in emerging market economies is the inflationist expectation, although pass-through effect decreases with inflation targeting. In addition, it is seen that commodity price based shocks for each two group has negative effect on inflation, especially producer price index (WPI).

References

- Aldemir, Şenkan (2007) “The Impacts of Exchange Rates on Import Prices in Turkish Economy: 1988- 2004” *International Economic and Foreign Trade Policies*, 1(2), 53- 57 (in Turkish).
- Bhattacharya, Rudrani, Ila Patnaik & Ajay, Shah (2011), “Monetary Policy Transmission in an Emerging Market Setting”, Working Paper, 11/5, January.
- Calvo, G. (1999). “On Dollarisation”, mimeo, University of Maryland.
- Calvo, G. & Reinhart C. M. (2002) “Fear of Floating”, *Quarterly Journal of Economics*, vol. 117(2), pp. 379–408.
- Campa & Goldberg (2006) “Pass-through of Exchange Rates to Consumption Prices: What has Changed and Why?” NBER Working Paper, 12547.
- Choudhri, E. U. & Hakura D. S. (2003) “Exchange Rate Pass-through to Domestic Prices: Does the Inflationary Environment Matter?”, *Journal of International Money and Finance*, forthcoming.
- Choudhri & Hakura (2001) “Exchange Rate Pass-Through to Domestic Prices: Does the Inflationary Environment Matter?” IMF Working Paper, 01/194.
- Devereux, Michael B., Philip R. Lane & Juanyi Xu (2006) “Exchange Rates and Monetary Policy in Emerging Market Economies”, *The Economic Journal*, 116, Royal Economic Society, 478-506.
- Dornbusch (1987) “Exchange Rates and Prices” *American Economic Review*, 77, 93- 106.
- Eichengreen, B. J. & Hausmann R. (2003) “Debt Denomination and Financial Instability in Emerging Market Economies”, mimeo, UC Berkeley.
- Frankel et al. (2005) “Slow Pass-Through around the World: A New Import for Developing Countries”, NBER Working Paper, 11199.
- Gosh, Amid & Rajan, Ramkishen S. (2007) “A Survey of Exchange Rate Pass-Through in Asia” *Asian-Pacific Economic Literature*, 21/2, November: 13-28.
- Hahn (2003) “Pass-through of External Shocks to Euro Area Inflation”, ECB, Working Paper, 243.
- Hahn et al. (2007) “Exchange Rate Pass-Through in Emerging Markets” ECB, Working Paper, 739.
- Honohan, Patrick, & Shi, Anqing (2001) “Deposit Dollarization and the Financial Sector in Emerging Economies”, Working Paper World Bank.
- Hunt, Benjamin, & Isard, Peter (2003) “Some Implications for Monetary Policy of Uncertain Exchange Rate Pass-Through” IMF Working Paper Series, 25.
- Ihrig et al. (2006) “Exchange Rate Pass-Through in G-7 Countries”, FED of Governors, International Finance Discussion Paper, 851.
- International Monetary Fund (2003), “World Economic Outlook in Chapter II: Three Current Policy Issues in Developing Countries” September 2003, pp.92-111 (Washington, International Monetary Fund, September 2003).
- Jongwanich, J. & Park, D. (2011), “Inflation in Developing Asia: Pass-Through from Global Food and Oil Price Shock”, *Asian-Pacific Economic Literature*, 25/1, May: 79-92.
- Kandil, Magda, & Hanan Morsy (2009), “Determinants of Inflation in GCC”, IMF Working Paper, 09/82, April.
- Kara H., H. Küçük et al. (2005) “Exchange Rate Pass-Through in Turkey: Has It Changed and to What Extent?” TCMB, RD Working Paper no: 5/4, February.
- Kara H. & F. Ögünç (2005) “Exchange Rate Pass-Through in Turkey: It is Slow, But is It Really Low?” TCMB, RD Working Paper no:15/10, April.
- Leidermann et al. (2006) “Inflation Targeting in Dollarized Economies”, IMF Working Paper, 06/157.
- Leigh, Daniel, & Marco Rossi (2002), “Exchange Rate Pass-Through in Turkey”, IMF Working Paper, 02/204, November.
- McCarthy (2000) “Pass-through of Exchange Rates and Import Prices to Domestic Inflation in Some Industrialized Economies” FED. of N.Y. Staff Report, 111.
- Mihaljek, & Klau (2000) “A Note on the Pass-Through from Exchange Rate and Foreign Price Changes to Inflation in Selected Emerging Market Economies” *BIS Papers*, 8:69- 81
- Mishkin, S., Frederic (2008) “Exchange Rate Pass-Through and Monetary Policy”, Conference on Monetary Policy “Jarle Berge Colloquium: Globalisation and Monetary Policy”, Oslo, 7 March 2008, BIS Review 27.
- Öçiçek, Ömer (2007) “Economic Crisis in Turkey and Exchange Rate-Inflation Relationship” *G.Ü. İ.İ.B.F. Journal*, 9(1), 71- 80 (in Turkish).
- Peker, O. & S.Görmüş (2008) “The Inflationary Effects of the Exchange Rate in Turkey” *Süleyman Demirel Uni. İ.İ.B.F. Journal*, 13(2): 187-202 (in Turkish).
- Stone, Mark, R. & Bhundia, Ashok (2004) “A New Taxonomy of Monetary Regimes”, IMF Working Paper, 191.
- Taguchi, H. & Kato, K. (2011), “Assessing the Performance of Inflation Targeting in East Asian Economies”, *Asian-Pacific Economic Literature*, pass-through25/1, May: 93-102.
- Taylor (2000) “Low Inflation Pass-Through, and the Pricing Power of Firms” *European Economic Review*, 44: 1389- 1408.