International Journal of Economics and Financial Issues

ISSN: 2146-4138

available at http: www.econjournals.com

International Journal of Economics and Financial Issues, 2016, 6(2), 782-785.

An Empirical Research on Fragile Eight Countries

Mustafa Mete[1]*, Mehmet Akif Destek[2]

[1]Faculty of Economics and Business Administration, Gaziantep University, Turkey, [2]Faculty of Economics and Business Administration, Gaziantep University, Turkey. *Email: mete@gantep.edu.tr

ABSTRACT

This study investigates the possible reasons of the financial fragility of 10 countries with examining the stability properties of current account balance, budget balance and unemployment rate. For this purpose, the stability process of current account balance of 10 countries is examined for the period from 2005 to 2014; the unemployment of 10 countries is investigated for the period from 2004 to 2013; the budget balance of 8 countries is searched for the period of 2004-2012. The stability properties are examined using with panel unit root test and it is concluded that the current account of Chile and Indonesia is found stationary. In case of unemployment, stationary process is confirmed in South Africa, India, Poland and Indonesia. Finally, the stationary of budget balance is only supported in Brazil.

Keywords: Fragile Eight, Current Balance, Budget Balance, Unemployment
JEL Classifications: F14, F37, G32

1. INTRODUCTION

Economic shocks depending on the mass media improvements in the 21st century show their impacts on the national economies more quickly. The level of the effects of these shocks is different on developed and developing countries. The "fragile 5 concept" proposed by Morgan (2013) still being discussed today and as a result it was grouped as "fragile 8." Fragile 8 concepts have been brought to the agenda by Gavyn (2014) and became the subject of the study. The countries constitute fragile 8 are the countries that mostly affected from financial developments in the world and USA monetary policies. In addition, the consideration of the these countries in terms of some properties such as higher current account deficits, inflation rates, deteriorating balance of payments, increasing external dept burden and slowing down of growth performance is very important for the constitution of fragile 8.

While the fragile countries were India, Indonesia, Brazil, Turkey and North Africa before, Argentina, Russia and Chine were added to this group. It is stated that these three countries added later are among the countries that affected by sudden shocks, in this context these countries should be considered as fragile. As a result of the research conducted by Schroders firm it has been determined that these 8 countries have significant risks in terms of short-term foreign dept payment ability. Craig Botham who is the economist of developing countries working in Schroders indicated that stopping or getting out the capital flowing to fragile 8 would be devastating for the firms that have external dept. When considered for meeting the external debts with current reserves it is stated that Turkey is the most vulnerable country within fragile 8. It is expressed that Turkey's reserve is 0.9 times of her debts (90%) while Chile has 1.0, Indonesia has 1.1, India and South Africa have 1.2, in Hungary it is 1.7, in Brazil it is 2.0 and in Poland it is 2.1. This indebtness seriously affect the fragility risk of those countries. In a study conducted on the issue that the investors may evaluate these countries at risky class due to the heavy monetary policies of the central banks, it is noted that giving up of the capital entry and leaving foreign investments make them more fragile. The common belief in the literature is that in a world where liquidity is decreasing, the capital entrance will not occur and also the current foreign capital will leave these countries. These situations make the economies even more fragile. Such as countries the banking system is also require a strong financial structure to reduce the fragility (İskenderoğlu and Tomak, 2013 p753). The financial structure of the countries can be compared to the financial structure of the banks. In this context countries may also develop precautions against fragility.

In this study the fragility of the countries called as fragile eight (Chile, Indonesia, Argentina, South Africa, Brazil, Turkey, Russia and India) and in addition to these countries Poland and Hungary have been analyzed based upon current balance, unemployment and budget balance.

2. LITERATURE REVIEW

Göçer (2012) tested the effects of 2008 global economic crises on selected countries with Augmented Dickey Fuller method. In this study unit root test, extended Phillips-Perron test Engle-Granger Cointegration method is used. As a result of the study it has been determined that the global economic crises have negative effects on all economies but the degree of importance and affect different between the countries. In this study it has also been determined that USA, Italy and Greece are the most affected countries by 2008 crises.

Çakmak (2013) conducted a study with the aim of taking a snap-shot of the changes occurred in the key macro variables of the Turkish economy in the past 2 decades. For this purpose a Financial Vulnerability Index was constructed using the selected 8 macroeconomic variables for the 1989-2011 periods. As a result of the study it has been found that the vulnerability index value exceeded the 0.40 threshold value. Conclusively, the researcher indicated the crises that cause economic contraction in 2009 is not due to Turkey's internal dynamics; conversely it may be occurred due to the reflection of international crises.

Erşin (2015) conducted a study on emerging economies and fragile 5. The researcher investigated credit default swap prim of fragile 5 countries except for India. As a result of the study it has been determined that Turkey is the most fragile country since it has the highest risk prim increment (66.1%) compared to other countries.

Karakurt et al. (2015) conducted a study with the purpose of comparing the fragilities of Turkey and Shanghai five and developing a policy for Turkey. For this purpose they have made comparisons using the main indicators of fragility. As a result of the comparisons it has been found that Shanghai five countries are not affected by global crises conditions significantly, therefore their macroeconomic fragilities are relatively lower. However, it was concluded that the fragility of Turkish economy increases under the influence of the financial changes in the world based on external growth model.

Uz (2015) conducted a study to test the sustainability of the current account deficit for the countries called as Fragile five. As a result of the study it has been found that the balance of the current operations in Brazil is not sustainable and is not include unit root test. However, the balance of the current operations has found sustainable in Indonesia, India, South Africa and Turkey.

Çeviş and Ceylan (2015) examined the validity of purchasing power parity hypothesis for emerging markets (Brazil, India, Indonesia, South Africa and Turkey) called fragile five by using co-integration method in the period of 2003:1-2013:8. As a result of the study a long term relationship between the nominal exchange rates and consumer price indices of India, Brazil, South Africa and Turkey and consumer price indices of the US has been found. In this context the linear integration of the series was stationary and strongly validity of purchasing power parity was current. But, results of the analysis pointed out an exception for Indonesia that the long-term relationship between the variables does not exist and series are not co-integrated. Therefore, the hypothesis of purchasing power parity is rejected for Indonesia.

Ünver and Doğru (2015) conducted a study on the determinants of economic fragility for fragile five countries. For this purpose they made an empirical investigation of the determinants of fragility in terms of long-term fiscal sustainability and sovereign ratings for Fragile five countries (Brazil, Indonesia, India, South Africa and Turkey). As a result of the study it has been found that an increase in the current account deficit causes a decrement in rating of Turkey and India, and decreases fiscal sustainability of Brazil but increases fiscal sustainability of India and South Africa.

Hayaloğlu (2015) investigated the effects of financial development on the economic growth in fragile five countries. For this purpose a dynamic panel data analysis method was used in the study for the period of 1990-2012. In the study two variables are used (domestic credits given to private sector and domestic credits given by the banks to private sector). As a result of the study it has been found that there is a positive relationship between fiscal development indicator and economic growth.

Briguglio (1995) conducted a study on economic fragility of small island countries. Fragility index components of small island countries were collected in three groups in this study: Openness to external economic conditions (riskiness), being an island country and distance, aptitude to natural disasters.

Guillaumont (1999) examined the relevance of the economic fragility concept for low income countries. In the study three fragility factors were distinguished: Shocks, exposure and resilience or capacity to react. As a result of the study it has been found that the effects of the global shocks on lower developed countries are higher than developed countries.

Briguglio and Galea (2003) have investigated the previous studies on small island countries in their study on updating and strengthening of economic fragility index. As a result of the study they have found that small island countries are fragile against several external shocks.

Johnson (2006) conducted a study on policy responses to economic fragility. Johnson reviewed policy efforts to advance growth and development in the least developed countries, especially those efforts aimed at promoting well-being by decreasing fragility to economic shocks. As a result of the study Johnson indicated that stabile real exchange rate, predictable financial flowing and macroeconomic stability depend on a well-functioning market mechanism and politic responsibility. The ability to craft successful response appears to depend on education. In this context, educational attainment included the development of the capacity go govern and make decisions that have an impact on future development for Mauritius, Cape Verde and Botswana.

Briguglio et al. (2008) have investigated economic fragility conceptually and methodologically. As a result of the study they have determined that while small island countries lose higher export rate, they depend highly on food import. They have reached the conclusion that food import dependency of small island countries increase the risk of fragility.

Read (2010) conducted a study on trade, economic fragility, resilience and the implications of climate change in small island and littoral developing economies. Read focused specifically on small island and littoral developing economies since these countries are especially vulnerable to similar effects of climate change on a similar range of economic activities. As a result of the study it has been found that these countries are vulnerable against climate changes.

3. METHODOLOGY

This study was conducted with the aim of testing current account deficit, unemployment and stability of budget balance of the countries considered as fragile 8 countries (Chile, Indonesia, Argentina, South Africa, Brazil, Turkey, Russia and India) in the literature and lately added Poland and Hungary that considered as having financial fragility. While stability testing had been made for 10 countries that we reached the data of current balance and unemployment, the stability of account balance testing had been made for 8 countries.

The share of current balance within gross domestic product (GDP) has used as a representative for current balance series and observation range has selected as 2005-1014. In the last, the share of budget balance within GDP as the representative for budget balance and the 2004-2012 observation range has been analyzed. The data used in the study were obtained from databases IMF, World Bank and Turkish Statistical Institute.

With testing of the series mentioned above, persistency of the shocks that could occur in current balance, budget balance and unemployment rates of these countries were aimed to examined in this study. If these series contain a stable process it is concluded that a shock will be temporary and the fragility in the countries having stable process series may be due to the series.

In this study panel IPS root test developed by Im et al. (2003) was used to test the stability of current balance, unemployment rate and budget balance. While the null hypothesis refers that the series have unit root, the alternative hypothesis refers the stability of the series. The IPS unit root test model is as follows;

$$\Delta y_{it} = \mu_t + p_i y_{it-1} + \sum_{j=1}^{k} a_j \Delta y_{it-j} + \delta_i + \theta_t + \varepsilon_{it}$$

The procedure of the test based on the grouped means of Augmented Dickey Fuller statistics. While $p_i = 0$ for null hypothesis, for at least one section $p < 0$ for alternative hypothesis.

4. EMPIRICAL RESULTS

In order to examine stability separately for all sections sequential panel selection method recommended by Chortareas and Kapetanios (2009) is used. While the stability of current balance and unemployment were tested for 10 countries, the stability of budget balance was tested for 8 countries.

As shown in Table 1 Chile has the lowest t-statistics. For this reason after excluding Chile, analyze repeated again for this country group. This process is being repeated until the admission of alternative hypothesis that refers unit root. As a result of the analyses it has been found that current balance is stable for Chile and Indonesia, the null hypothesis was not rejected for the other 8 countries. This result shows that the shocks that will occur in current balance are permanent and the shocks in current balance may cause fragility in all countries except for Chile and Indonesia.

As a result of the statistical analyses in order to test the stability of unemployment the results shown in Table 2 were obtained. As shown in Table 2, the unemployment rate is stable in South Africa and India, in this context null hypothesis is rejected. In addition, it is seen that unit root is present for other 8 countries. It is also found that the probable shocks occur in unemployment series are temporary shocks for Brazil, Hungary, Indonesia and Chile and the imbalances occurred in unemployment series will be eliminated in long-term. In this context the shocks occurred in unemployment series will be permanent and may lead fragility in Brazil, Turkey, Russia, Hungary, Argentina and Chile.

As a result of the analysis in order to determine the stability of budget balance the values shown in Table 3 were obtained.

Table 1: Stability of current account

Country	t-statistics	Probability
Chile	−4.3472**	0.0457
Indonesia	−3.8149*	0.0708
Argentina	−3.3951	0.1171
South Africa	−3.1933	0.1579
Brazil	−1.7864	0.6322
Turkey	−2.5954	0.2916
Hungary	−2.4455	0.3394
Russia	−2.3600	0.3708
Poland	−1.2980	0.8075
India	−1.2968	0.8162

*,**: Indicates statistically significance at 1%, 5% level respectively

Table 2: Stability of unemployment

Country	t-statistics	Probability
South Africa	−4.4416**	0.0410
India	−4.4173**	0.0421
Poland	−4.1048*	0.0589
Indonesia	−3.7628*	0.0756
Brazil	−2.5736	0.2989
Turkey	−2.1770	0.4406
Russia	−2.1293	0.4596
Hungary	−2.1277	0.4603
Argentina	−2.0802	0.4875
Chile	−1.7718	0.6325

*,**: Indicates statistically significance at 1%, 5% level respectively

Table 3: Stability of budget balance

Country	t-statistics	Probability
Brazil	−3.8871*	0.0741
Hungary	−3.6981	0.1032
Indonesia	−3.0309	0.2054
Chile	−2.9874	0.2157
Poland	−2.8230	0.2463
South Africa	−2.4297	0.3432
Turkey	−2.0198	0.4962
Russia	−1.7503	0.6358

*: Indicates statistically significance at 1%, 5% and 10% level respectively

As shown in Table 3, panel t statistics is significant and budget balance series contain a stable process. Since Brazil has the lowest t-statistics it is excluded from panel analysis and the analysis repeated. As a result of the repeated analysis alternative hypothesis has been accepted for budget balance series. When the fragility considered in terms of budged balance for the mentioned countries it is seen that the probable shock is temporary for Brazil. However, the imbalances that will occur in budget balance will not eliminated in long-term and may cause fragility in other 7 countries.

5. CONCLUSION

In this study the main causes of financial fragility for fragile eight countries (Chile, Indonesia, Argentina, South Africa, Brazil, Turkey, Russia and India) and Poland and Hungary added to these countries recently since they considered as having financial fragility were tried to determine. In this context for current balance and unemployment series data were obtained from 10 countries and for budget balance series data were obtained from 8 countries. For current balance series 2005-2014; for unemployment series 2004-2013 and for budget balance series 2004-2014 observation ranges were used. The stability of the series has been examined using IPS panel unit root test developed by Im et al. (2003).

According to results from the research, it has seen that the current account balance series of Chile and Indonesia are stable and current account balance is sustainable for these countries. For other 8 countries, it has been seen that they have unit root for current account balance, so it can be said that current deficit may cause financial fragility. For unemployment series, it has been obtained that there is stability in South Africa, India, Poland and Indonesia; for other 6 countries, unemployment series has unit root and it has been concluded that this situation is the reason of financial fragility. When the stability of budget balance series examined, it has been seen that budget stability is valid only for Brazil.

REFERENCES

Brıguglıo, L. (1995), Small Island developing states and their economic vulnerabılıtıes. World Development, 23(9), 1615-1632.

Brıguglıo, L., Galea, W. (2003), Updating the Economic Vulnerabılıty İndex. Islands and Small States Instıtute Occasıonal Paper No. 2003-4.

Brıguglıo, L., Cordına, G., Farrugıa., N., Vella, S. (2008), Economic Vulnerability and Resilience: Concepts and Measurements, Working Paper Series RP2008/55, World Institute for Development Economic Research (UNU-WIDER).

Chortareas, G., Ve Kapetanios, G. (2009), Getting PPP right: Identifying mean-reverting real exchange rates in panels. Journal of Banking & Finance, 33(2), 390-404.

Im, K.S., Pesaran, M.H., Ve Shin, Y. (2003), Testing for unit roots in heterogeneous panels. Journal of Econometrics, 115(1), 53-74.

Çakmak, U. (2013), Finansal Kırılganlık Endeksi (Türkiye 1989-2011) ve Yorumlar. Uludağ Journal of Economy and Society, XXXII(1), 239-260.

Çeviş, İ., Ceylan, R. (2015), Kırılgan Beşlide Satın Alma Güzü Paritesi (SAGP). Journal of Yasar University, 10(37), 6381-4477.

Erşin, F. (2015), Yükselen Ekonomiler ve Kırılgan Beşli: Türkiye Üzerinde Bir Değerlendirme. Bankacılık ve Finansal Araştırmalar Dergisi, 10(37), 6381-6477.

Göçer, İ. (2012), 2008 Küresel Ekonomik Krizin Nedenleri ve Seçilmiş Ülke Ekonomilerine Etkileri: Ekonometrik Bir Analiz. Yönetim ve Ekonomi Araştırmaları Dergisi Sayı, 17. Ss, 18-37.

Guıllaumont, P. (1999), On the economic vulnerability of low income countries. Etudes et Documents No 16, Centre d'Études et de Recherches sur le Développement International.

Hayaloğlu, P. (2015), Kırılgan Beşli Ülkelerinde Finansal Gelişme ve Ekonomik Büyüme İlişkisi: Dinamik Panel Veri Analizi. The International Journal of Economic and Social Research, 11(1), 131-144.

Iskenderoğlu, Ö., Tomak, S. (2013), Competition and stability: An analysis of the Turkish banking system. International Journal of Economics and Financial Issues, 3(3), 752-762.

Johnson, W. (2006), Policy Responses to Economic Vulnerability, CDP background Paper No. 9, Development Policy and Analysis Division, Department of Economic and Social Affairs, CDP Background Paper No. 9 ST/ESA/2006/CDP/9.

Karakurt, B., Şentürk, S.H., Ela, M. (2015), Makroekonomik Kırılganlık: Türkiye ve Şangay Beşlisi Karşılastırması. Yönetim ve Ekonomi Araştırmaları Dergisi, 13(1), 283-307.

Read, R. (2010), Trade, Economic Vulnerability,Resilience and the Implications of Climate Change in Small Island and Littoral Developing Economies. ICTSD Programme on Competitiveness and Sustainable Development, June 2010.

Uz, İ. (2015), Cari Açıkların Sürdürülebilirliği: Kırılgan Beşli Örneği. Yükseklisans Tezi. Pamukkale Üniversitesi.Sosyal Bilimler Enstitüsü. Denizli.Ss. p142.

Ünver, M., Dogru, B. (2015), The determinants of economic fragility: Case if the fragile five countries. Akdeniz İ.İ.B.F Dergisi, 15, 1-24.

Gavyn, D. Available from: http://www.blogs.ft.com/gavyndavies/2014/02/02/the-ems-fragile-8-must-save-themselves/.

Morgan, S. Available from: https://www.morganstanley.com/public/Tales_from_the_Emerging World_Fragile_Five.pdf.

Schorders. (2014), Available from: http://www.dunya.com/ekonomi/dis-ticaret/kirilgan-besli-kirilgan-sekizli-oldu-215625h.htm.