

Empirical Relation between Real Exchange Rate and Current Account Deficit J Curve Analyses for Turkey

The positive impacts of devaluation of national currency on current account deficit are one of the main arguments in international economic theory. Basic idea is that countries easily increase their exports and have current account surplus by simply reduce the international value of home currency. The success of this policy heavily depends upon response time process of export promotion and import reduction. Due to the shape of the curve for the relation between time and current account balance this analyses is called J curve. If the response of current account deficit is quite slow to the home currency devaluation in time process, the cure of this policy will be quite limited and the shape of the curve will be flat. Alternatively if the time response of current account balance is fast the success of the policy will be quite high. The notion of johansen method analyses would be very good method for the estimation of this relation between two macroeconomic variables. In this paper I do discuss the feasibility of J curve analyses under the framework of those models. That will enable policy makers about the success of devaluation policy of home currency for current account deficit problem of Turkish economy.

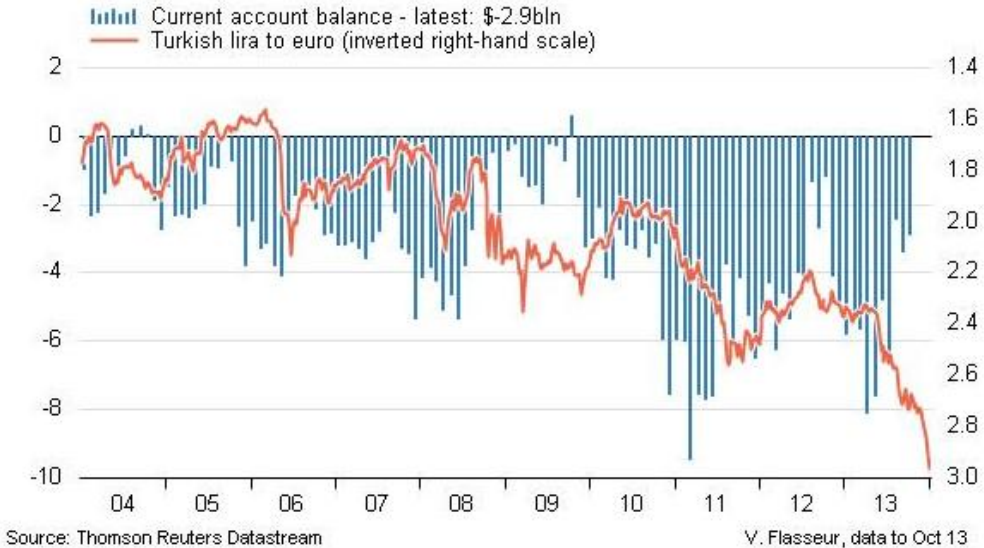
There are a lot of academic studies on current account deficit problem of Turkish economy. Main derive behind that is high current account deficits are accompanied by high growth rates which is basically unsustainable in long term. The high market interest rate and low exchange rate policy create fiscal problems during the economic crisis that foreign capital flows out from Turkey in a very short time period. Nominal exchange rates can be misleading in explaining those capital movements and their reasons. So some economists like Krugman proposed real exchange rate parity in order to get much more reliable explanations.

Current Account Deficit as Historical Phenomena

In today's world political decision makers aim to solve daily economic problems of their citizens problems in short term measures rather than taking long term measures under the framework of political science theory. In almost all parts of the world voting process based on short term macroeconomic variables mainly employment level. During the 17th Century western countries used mercantilist policies to remedy trade deficits. It was the beginning of intervention to forging trade policies in western world in order to stabilize international trade.

The millennium era also created economic crisis in world trade system. Most of the developing countries started to use exchange rate policy in order to cure trade deficits with other countries.

Turkey current account balance



Main Causes of Current Account Deficit

There are number of reasons behind current account deficits of Turkey.

- a. The volume of foreign trade in GDP.

If a country is not competitive in foreign markets the more open to international trade more possibility to have severe current account deficits. In some cases higher share of foreign trade in GDP would make vulnerable country to current account deficit problems.

- b. The volume of banking sector credits to households and private sector.

Increase in credit volume of banking sector has positive impacts on spending of households which in turn creates demand for imports.

- c. Growth rate

Especially countries importing semi-finished products and intermediary goods for industrial production purposes, an increase in exports with high growth rates also increases current account deficits.

d. Budget deficits.

Increase in public sector expenses via budget deficits would increase current account deficits via increasing imports.

e. Terms of trade.

If a term of trade for home country is declining the current account deficit will also badly affected.

f. Money supply.

According to monetary approach if money supply in a country is higher than economic growth in same period the outcome will be inflationary and increases imports. An Expansionary Central Bank monetary policy hampers current account deficits in some countries.

g. Real interest rates

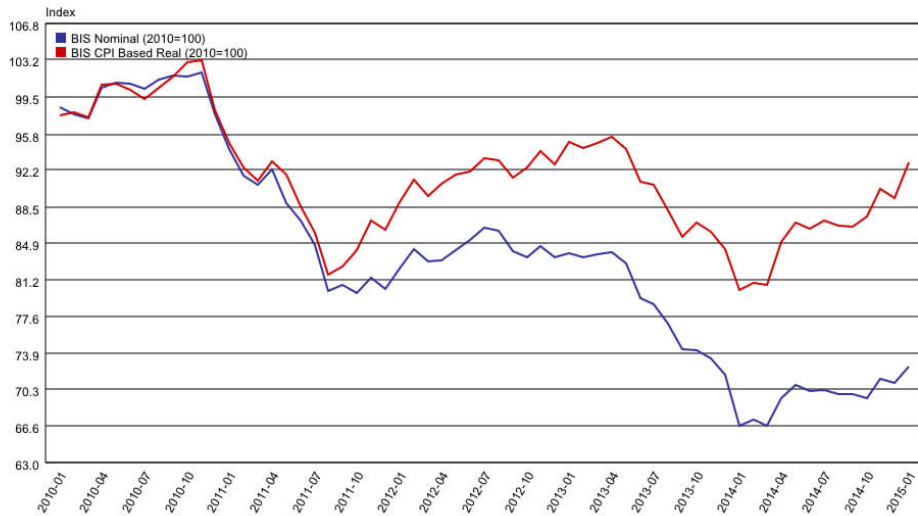
Hot money in international financial markets transferred between countries for speculative purposes mainly due to high interest rates. These movements improves short term capital inflow and repairs current account deficit in this period.

h. Energy prices.

A country with high energy imports are highly affected by the volatility of energy prices which is directly increases the volume of imports.

i. Real exchange rates

Declining real exchange rates cure current account deficits by promoting exports and punishing imports. That is income generating impact of this policy and called J curve effect.



Literature Review for Turkish Economy

There are number of studies to explore the impact of real exchange rate on current account deficits and exports and imports.

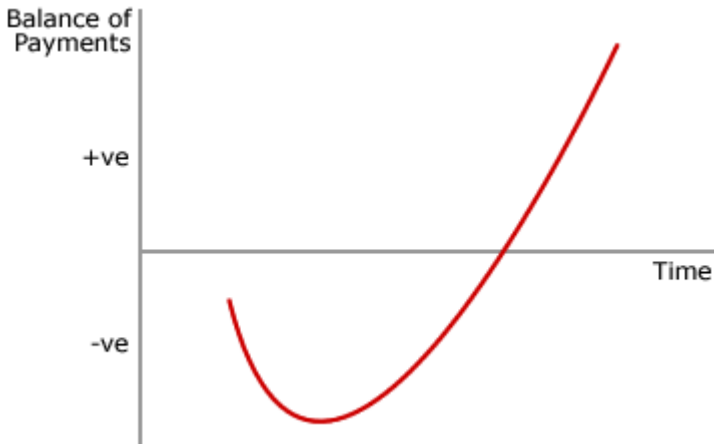
Table

| Author | Analyze | Result |
|----------------|---|---|
| Tapşın 2013 | Reel exchange rate export import relations ADF KPSS unit root test | Reel exchange rate has limited impact on exports and imports. |
| Öz 2011 | General trend | RER has few impacts on exports |
| Kızıldere 2014 | ADF unit root test and cointegration error correction model | Low RER is not affecting exports |
| Yapraklı 2008 | 2001 2007 RER foreign trade deficit relation regression and Philips Peron analyses. | No regression in long term. |
| Zengin 2001 | RER and foreign trade cointegration and VAR analyses | RER has limited capacity on foreign trade increase. |
| Göçer 2013 | VAR, Johansen and VEC models to understand derives of current account deficit | 37% of current account deficit is due to energy import. |
| Yanar 2011 | Time series analyses between 1979 2009 energy consumption and current account deficit ADF and Johansen tests. | Long run correlation between energy consumption and current account deficit |

| | | |
|-------------------------------|---|--|
| Telatar 2011 | Credits and current account deficit Granger causality test. | Banks consumer credits increases current account deficit. |
| Demir 2013 | Energy imports economic growth current account deficit regressed cointegration Johansen and VAR models. | Economic growth increases energy imports and current account deficits. |
| Çiftçi 2014 | RER current account deficit VAR model, Johansen cointegration test and Grengar causality test analyses. | RER directly effects current account deficit. |
| Soytaş and Hacıhasanoğlu 2012 | Oil price RER relation for 13 countries VAR analyses. | Oil prices increases devalue national currencies. |

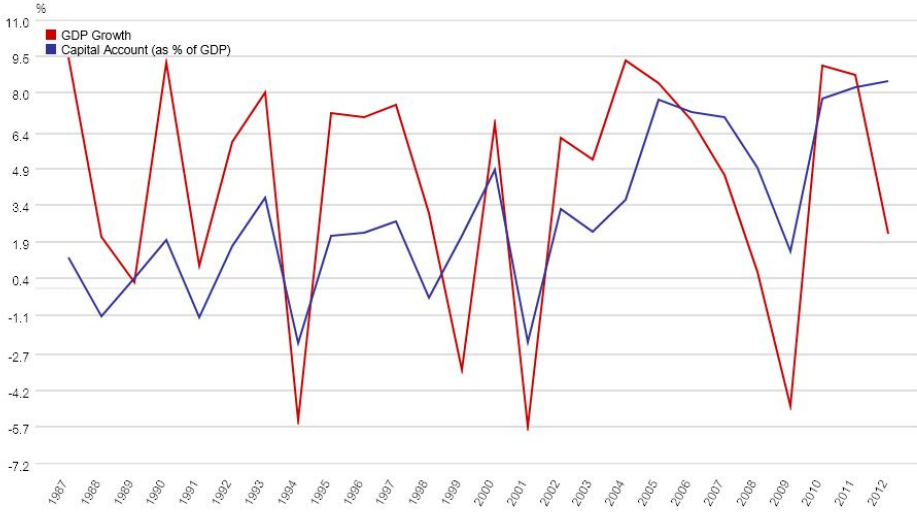
J Curve Analyses Theory

In order to validate the exchange rate policies as income generating mechanism J curve analyses used in international trade theory. According to the theory countries would increase their national income and GDP by devaluating national currency. Declining real exchange rates first decreases import and increases exports. Although export revenues decline with devaluation in a time period total yield from exports will increase and create multiplier effect for GDP level of a country. As long as high demand elasticity for export goods the benefits from this policy will be positive and the shape of the curve will be sharp J. The success of devaluating national currency for the sake of high growth rates is successful as long as elasticity approach variables are in favor of home country. Classical Marshall Lerner theory is a key element explaining whole process. If a country improves comparative advantage for its exports in foreign markets by devaluating its own currency it would have income generating effects. Otherwise the results will be harmful on countries macroeconomic variables. Since devaluation of currencies creates inflationary spiral in home with several side effects the income generation and GDP increase effects would have adverse implications. Countries with competitive export goods inventory may increase their GDP by J effect. Latest exchange rate depreciations by China and others is very good example of this policy.



Most of the developing countries have acute and severe current account deficit problem in their balance of payments. In order to have revenues from their exports they do attempt to use real exchange rate policy.

Turkey experiencing lowest real exchange rate level since 2003 that we started to create real exchange rate index. Depreciation of TL against convertible world currencies is quite high in last 6 months. However the impact on export revenues is almost none that Turkish exports to foreign world is declining. The idea of real exchange rate policy for export promotion in that case is not suitable for Turkey. This policy is much more suitable for countries with high tech exports. The innovative, high tech industrial production is the key factor promoting export oriented growth. Even though Turkey has following export promotion model since 1980's the impact on economic growth in last couple of years is significantly low. High interest rate and appreciated TL policy creates artificial short term capital movements for fiscal sector in banking and securities exchanges. FED policies of quantitative easing since 2008 for curing problems in US financial system also positively affected the volume of short term finance capital to developing country markets. That was what Turkey experienced for a period of time. Since most of the monetary inflow invested on short term construction sector for creating high employment the long term competitive industrial investments declined. The productivity of export competitive technological innovative is quite high in technology based investments compared to traditional construction sector. They are also helping to cure current account deficit, since Turkish exports are heavily depended on semi-finished and intermediary goods imports.



References

Beşer M. K. (2011), Türkiye dış ticaretinde j eğrisi ve S eğrisi dinamiklerinin etkisi, Bursa, Ekin yayınevi

Çiftçi N., (2014), Türkiye'de cari açık, reel döviz kuru ve ekonomik büyüme arasındaki ilişkiler: Eş bütünleşme analizi, Anadolu üniversitesi sosyal bilimler dergisi, 14(1) 129-142

Demir M.(2013), Enerji ithalatı cari açık ilişkisi, VAR analizi ile Türkiye üzerine bir inceleme, Akademik araştırmalar ve çalışmalar dergisi. 5(9) 2-27

Gacaner A., Saygılı F.(2014) Türkiye'de Cari açığın belirleyicilerinin ampirik analizi, Sosyoekonomi, 2014-1 140105, 87-104

Göçer İ. (2013), Türkiye'de cari açığın nedenleri, finansman kalitesi ve sürdürülebilirliği:Ekonometrik bir analiz, Eskişehir osmangazi üniversitesi iibf dergisi, 8(1) 213-242

Gür T. , Akbulut H., (2012), Gelişmekte olan ülkelerde politik istikrarın ekonomik büyüme üzerine etkisi, Sosyo ekonomi, 2012-1/120113, 281-299

Haydarođlu C., Bakırtař İ., Koyuncu C., (2013), Oylama g¼c¼ ve ekonomik b¼y¼me arasındaki iliřki, Eskiřehir osmangazi niversitesi iibf dergisi, 8(1) 295-317

Hacıhasanođlu E., Turhan İ., Soytař U., (2012) Oil prices and emerging market exchange rates, (paper no 36477), Munchen, MPRA

Kızıldere C.,Kabadayı B., Emsen S.(2014), Dıř ticaretin d¼viz kuru deđiřimlerine duyarlılıđı: T¼rkiye zerine bir inceleme, Uluslararası iktisadi ve idari incelemeler dergisi, 6(12), 39-54

Kibritiođlu A., (2001), T¼rkiye'de ekonomik krizler ve h¼k¼metler, 1969-2001, Yeni T¼rkiye, sayı 41, s. 174

Krugman P, (2013) End this depression now, New York, Norton

Krugman P. (1989), The J-curve, the fire sale, and the hard landing, The American economic review, 79(2) 31-35

Krugman P., Obsfeld M., Melitz M., (2015), International economics theory and policy, Essex England, Pearson

Miles M.A., (1979), The effects of devaluation on the trade balance and the balance of payments, some new results, Journal of political economy, 87(3), 600-620

z S., (2011), Reel d¼viz kuru ve dıř ticaret,(Politika notu 11-03), İstanbul, T¼SİAD EAF Ko niversitesi

Tapřın G., Karabulut T., (2013), Reel d¼viz kuru, ithalat ve ihracat arasında nedensellik iliřkisi: T¼rkiye rneđi, Akdeniz İ.İ.B.F. dergisi, (26), 190-205

Telatar E., (2011), T¼rkiye'de cari aık belirleyicileri ve cari aık krediler iliřkisi, Bankacılar dergisi, sayı 78 22-34

ngr M. Kalafatcılar K. (2014), Productivity, demographics and growth in Turkey: 2004-2012,

http://www.muratungor.com/uploads/5/8/9/2/589258/ungor_kalafatcilar_2014.pdf

Seyidođlu H, (1991), Uluslararası iktisat, Gizem yayınları.

řimřek M., Kutlar A.,(2001), T¼rkiye'de b¼te aıklarının dıř ticaret aıkları zerine etkileri, ekonometrik bir yaklařım 1984(4)- 2000 (2),D.E.. İ.İ.B.F. Dergisi, 16(1) 1-13

Yanar R, Kerimođlu G., (2011), Trkiye'de enerji tketimi, ekonomik byme ve cari aık iliřkisi, Ekonomi bilimleri dergisi, 3(2),191-201

Yapraklı S., (2008) Trkiye'de esnek dviz kuru rejimi altında dıř aıkların belirleyicileri:Sınır testi yaklařımı, (2. Ulusal iktisat kongresi), DE, İİBF İktisat blm, İzmir/Trkiye

Zengin A.(2001), Reel dviz kuru hareketleri ve dıř ticaret fiyatları (Trkiye ekonomisi zerine ampirik bulgular), C.. İktisadi ve idari bilimler dergisi,2(2), 27-41