Journal of Business and Economics, ISSN 2155-7950, USA
December 2015, Volume 6, No. 12, pp. 2008-2015
DOI: 10.15341/jbe(2155-7950)/12.06.2015/002

http://www.academicstar.us

The Relationship between U.S. Current Account Deficit and Performance of the Economy in a Globalized Context

Gail G. Fulgham, Jing Yuan
(College of Business, Jackson State University, USA)

Abstract: In international trade and commerce, global imbalance has been a normal occurrence. It is normal in the sense that some countries run trade surpluses while other countries deficits. In the 21st century, global imbalance has added a new dimension. It has become almost a solo show for the U.S. versus the rest of the world. The U.S. current account deficits now registers a magnitude up to trillions of dollars, far eclipsing the amount of all other deficit countries combined. Equally noticeable, there has been steady and huge capital inflows into the U.S. from the so-called "Savings-and-Glut" nations in the past decade. They are mostly from the emerging markets and oil-exporting countries. Global imbalance has become extreme in the era of globalization.

This research is largely an exploration of the relationship among the various factors in the U.S. external sector, including the trade account, international financial flows, and the exchange rate by using their proxy variables in respective segments. This research will further deepen the understanding of the relationship among all these variables and the U.S. current account deficit.

Key words: trade deficit; current account; capital flow; exchange rates; foreign direct investment
JEL codes: F62

1. Introduction

The U.S. trade deficit is at a historical high. According to the U. Department of Commerce, the current account deficit is currently over $410 billion, which is the largest annual deficit since 2012. It is generally believed that the trade deficit is harmful to the economy, blaming it losing competitiveness. China is now the largest contributor for the U.S. trade deficit. Data also showed that almost all of the U.S. major trading partners has invested heavily in the U.S. Therefore, the trade dollars flow back to the U.S. affecting its macroeconomic conditions. Further, these trade dollars that are flowing back to the U.S., lessens the negative impact that a huge trade deficit could make. Today, the trade issue is a fairly complex one, since there are so many players involved and multiple interests are in play. This is especially true because of globalization. The exchange rate mechanism is also a political issue for certain trading partners.

The U.S. current deficit is a dominate issue in the economic literature today. It is an issue of global proportion and economists are concerned about how long the current deficits of this magnitude can be sustained.

Gail G. Fulgham, Ph.D., Professor of Economics, College of Business, Jackson State University; research areas/interests: economics. E-mail: gail.g.fulgham@jsums.edu.
Jing Yuan, ABD, Economics, College of Business, Jackson State University; research areas/interests: economics.

This research looks at this issue from new perspectives by incorporating factors that will have an impact upon some of the major world economies and global demographic changes. This research also suggests that the U.S. current account deficit is an international issue that is of much concern to the global economy. Finally, this research will analyze the current account deficits and its impact on economic factors in the U.S.

2. Literature Review

The trade deficit peaked in the 80s, attracting much attention. It is now reached the forefront because of a much more globalized economy and the changed landscape of global trading. China is now taking much of the blame for U.S. trade deficit. China has purchased huge amounts from the U.S. treasury using its trade surplus with the U.S. The investments made in the US by its other major trading partners are equally large. In one aspect, the U.S. trade deficit is because of buying hugely from low-cost countries, reducing its domestic inflationary pressure.

The issue of trade deficit in the U.S. is both puzzling and persistent. The survey of the literature on the topic of trade deficit has shown a wide spectrum of research interests, debunking the myth of its persistence, exploring its origin and provenance, and prescribing solutions to the problem.

One of the main themes of research on the issue of trade deficit is its sustainability (Holman, 2003; Krugman et al., 1987). It is generally agreed by most economists that large current account deficit posed a threat to the U.S. economy. How did it happen? How could U.S. have accumulated such a large amount of current account deficit? The mounting trade deficit has been attributed to the increased productivity in the U.S. and a surge in household wealth driven by the booming stock market (Holman, 2003; Mann, 2000). The trade deficit stemmed from a favorable economic condition, leading to a worrisome situation. The trade deficit has been widening, compounded by the slow demand outside the U.S. (Morrison, 2011).

According to the data shown in the research literature, the U.S. net trade had been in deficit uninterruptedly for more than twenty-five years. The U.S. trade deficit had a magnitude of more than $700 billion in 2006, at the time the largest trade deficit ever in both the dollar term and as a share of GDP (Mann et al., 2007).

The issue of current account deficit is not new in the U.S. It became a notable and pressing issue as early as in the 70s in the midst of a mounting trade deficit. But the forces behind the U.S. current account deficits changed from time to time. Even the countries which had been blamed for causing the huge deficit didn't stay longer. China now replaced Japan for racking up the largest bilateral trade deficit with the U.S. The research literature dealt extensively on the issue of huge and steadily increasing deficit since the mid-1990s until the end of the first decade of the 21st century. Two main forces are believed to account for the large U.S. current account deficit in this period: first, an increase in the U.S. demand for foreign goods; second, an increase in the foreign demand for the U.S. assets (Blanchard et al., 2005). Not surprisingly, the resultant current deficits were accompanied by a real and noticeable depreciation of U.S. dollar until late 2001, entailing real dollar depreciation since then. The sought-for question was: how far would the trend of this dollar depreciation go? The China factor added new uncertainty world politics and economy. The weight of Chinese proportion the global trade has conferred strength for its currency, the renminbi. The research predicted a much gloomy prospect in the future, leading to a substantial depreciation of the U.S. currency.

The U.S. current account deficit serves as a double-edged sword: it can do both good and harm. According to Holman (2003), much of the rise in the current account deficit in the 90s had been the result of rising U.S. productivity and a surge in household wealth driven by the then strong stock market. Other researchers (Obstfeld

& Rogoff, 2005) shared the same conclusion. The research on U.S. current account deficit has eclipsed a range of issues since the 70s, focusing on its sustainability. The issue of current account deficit is a particularly complex one, involving a large number of variables. The U.S. external sector has been constantly affected by foreign trade policies in addition to the domestic policy adjustments. International trade is a multi-faceted issue. The U.S. current account deficit performance, dominated by the component of its trade account, is the net result of all the sides and issues involved.

A mounting current account deficit is alarming and it surely poses a threat to the economy. There's no clear answer to the time table for the large trade deficit-induced coming collapse of the global trade arrangement in which the U.S. is still the dominant player. However, mostly the research on the current account deficit raised the concern about its sustainability. Researchers have given no conclusive result on the ceiling of the current account deficit as a percentage of GDP.

The main findings in the literature conclude that trade generally reduces the likelihood of conflict, the relationship is weaker for commodities that are more easily appropriable by force, and the relationship is generally stronger for manufactured goods with the notable exceptions of chemical and metal industries and the high-tech sector. In other words, academic research showed that there's no inevitability of conflict among nation states if trades are promoted among them (Dorussen, 2004). Trade deficits reflect the trade imbalance, leading to policy change and even structural change for the global trade system. The U.S. trade deficit is particular noticeable because it is the de factor rule-setter of the global trade. The trade deficit has been the largest component of U.S. current account deficit. Switching to a closed economy is out of the question. The academic research didn't preclude the occurrence of the trade deficit. At the same time, it raised the concern for its magnitude and sustainability. The trade issue is always at the core of U.S. economy and its politics because of the size of its openness and its deep interrelationship with countries around the globe. More importantly, academic research has given credence to the free and broad trade policy. Literature showed that trade indeed reduced the propensity of nation states to engage in armed conflict, if there is conduit for trade among them (Russet & Oneal, 2001; Oneal, Russet, & Berbaum, 2003).

The mounting current account deficit will lead to its inevitable reversal, according to the literature. The research on this issue proposed different kinds of doomsday scenario for the eventual inevitability, including a global rebalancing, a possible collapse of U.S. dollar (Holman, 2001; Obstfeld & Rogoff, 2005). The depreciation of the U.S. dollar is particularly worrisome: the U.S. dollar now plays a central role in the global trade. But a cheaper dollar may not be a decisive element in bringing down the massive current account deficit, trade deficit in particular. Research showed the collective bias in switching to some foreign goods in the U.S. (Obstfeld & Rogoff 2005).

The research on the issue of trade deficit has been evolving because the environment of global trade changes constantly. Early research on the issue focused on the reason of its occurrence and possible solution, blaming largely the strong dollar for the provenance of already huge and rising trade deficit (Krugman & Baldwin, 1987). Based on their research, economists proposed different versions of explanation for the occurrence and persistence of the ever increasing trade deficit. Some of these differing explanations have been generally accepted, and some wouldn't hold as time move on (Krugman & Baldwin, 1990). Ultimately, the strength of U.S. demand and the weak foreign demand together ballooned the U.S. trade deficit to a new height.

The trade deficit has many policy implications. As the U.S. trade deficit is on the rise, the issue is now centered on its continuation: how long can the trade deficit continue to rise without disrupting the U.S. and world

economy? Overall, the literature gave no clear-cut answer to this question. The literature suggested that the huge trade imbalance was not caused by some misguided trade policies and trade distortions, rather than as a reflection of saving and investment behavior usually unrelated to trade policies (Sachs & Lawrence, 1988). Therefore, changes in trade policies will have limited impact on the trade balance. Considering these insights were raised in the late 80s, it had significant foresights. In retrospect, time has proved that these insights were largely correct and still tenable. Recent studies on trade deficit identified two possible factors mainly responsible for the U.S. current account deficit, trade deficit the major component, a surge in investment spending driven by accelerating U.S. productivity and the increased household wealth because of the booming stock market (Holman, 2007). These have been the mainstream explanations for the continuously widening deficit. This is in stark contrast to the early-day concern about the loss of U.S. competitiveness which led to the very large trade deficit (Feldstein et al., 1987).

The literature also raised the alarm of a global imbalance to result in the likely collapse of free trade and the erection of trade barriers. This doomsday scenario could include the large fall in the value of U.S. dollars, that is, a large depreciation due to the lost confidence on the dollar. Globalization has added a new dimension to the complexity of the trade deficit. This was a widely accepted doctrine that linked trade deficits to the federal budget deficit (Krugman & Baldwin, 1987). Thus, this budget deficit has been financed by foreigners and will likely continue. If foreigners become unwilling to lend, the U.S. interest rate would soar, causing the dollar to collapse, and pushing the U.S. into a recession (Sachs et al., 1988). Therefore, things could become much worse for the global market. Moreover, China is now a heavyweight in the global trade arena and it was nowhere to be found twenty years ago. The U.S. now registers a large magnitude of a trade deficit with China with no sign of slowdown. This is significantly larger than that with any other U.S. trading partners and several trade groups. For example, General Motors now sold more cars and trucks in China than it did in the U.S. domestic market (Morrison, 2011). China is the largest buyer of the U.S. treasury debt. The trade dollars flow back to the U.S. The trade deficit now can be explained to a large extent by one factor: China. The capital inflow to the U.S. played an important role in keeping the pressure of inflation low. Thus, the cheap goods purchased from low-cost countries, China in particular, has raised the purchasing power. However, the trade deficit should be viewed holistically. The U.S. external deficits have widened dramatically during a period in which the U.S. economy has been robust. A sudden depreciation of the dollar would be costly and such a policy change would not put the current account on a sustainable trajectory. What is really needed is a structural change in both policy and demand in the U.S. and with its trading partners. Productivity growth in other parts of the world would be a sure bet to improve this situation. Concerns were raised about the sustainability of this widening trade deficit and the disruption it may cause when the confluence of forces renders it unsustainable (Mann, 2000).

According to the literature, what all studies find — as expected — that an increase in domestic economic activity ("income") will raise the domestic demand for imports and that an increase in foreign economic activity ("income") will raise the foreign demand for domestic exports. A rise in the relative price of imports to the domestic substitute will reduce demand for imports and a rise in the relative price of a country's export good to the foreign competing good will dampen the demand for exports (Mann & Pluck, 2005).

The survey of the literature showed the economic models used in explaining these arguments is the "classic" workhorse model. The model used standard complement of income and relative prices, not taking into account of the effect that trading partners' supply or variety of exports have had on U.S. import prices and/or import demand (Mann & Pluck, 2005). Using conventional econometrics, models were built to test the proposed policies (Cline,

2010). China is under huge pressure to appreciate its currency. The model showed the policy did have an impact on the trade surplus.

In summary, the trade deficit has been a very important issue, not having an easy solution. It has attracted interest from both academic researchers and politicians alike. The academic literature explored the issue for years, contributing to a large body of knowledge. However, it is still a perplexing issue. The globalized economy in the 21st century made the issue even more complicated.

The literature has offered a body of fact-findings and scenario-hypotheses. There are some factors which are out of the reach for the policy-makers but important in the process: the trade policy of the foreign sovereign countries. This is why current account issues should be constantly monitored and analyzed. Reining in the mounting trade deficit is the right thing to do. Although, there is no simple solution, researchers are right in their suggestion: a well-balanced policy should be employed in an ever-changing global market.

Finally, the U.S. current account deficits have been going on since the 70s when the issue first attracted attention both politically and academically. Since then, academics have tried hard to find the inner mechanism of this seemingly unavoidable byproduct of broad trade engagement with the world market. The structural shifts are now blamed for the continued and seemingly irreversible trade deficit since the mid-1980s. In perspective, when President Reagan took office in early 80s, the U.S. current account was roughly in balance. The current account deficits have been in continual tailspin since then. This spectacular and unprecedented proportion of shift in U.S. external trade balance has generated considerable interest among trade economists. The complexity of international trade entails a big shift in trade policy. The U.S. is in no exception (Steven Husted, 2013).

3. Methodology and Data

The model is of the “classic workhorse” type for estimating the trade elasticity. The model results should shed light on the effect of trade balance on the economy. The data is obtained from various sources, including the National Income Accounts, U.S. International Transactions, Current Account Balance of the World Bank, the Trading Economies, and the Bureau of Economic Analysis. This research will be largely an exploration of the relationship among the various factors in the U.S. external sector, including the trade account, international financial flows, and the exchange rates.

3.1 Empirical Results and Analysis

3.1.1 Model Specification

This research employs a linear regression model and there are ten independent variables in the regression equation. The period of study extends from 1980 to 2013. The variables used in the study are described below:

CurreAcctBal = Current Account Balance

GNP = Gross Domestic Product

PerCaptialncome = Per Capita Income

PerCapitoutput = Per Capita Output

TechChange = Technological Change (Productivity)

UnemplyRat = Unemployment Rate

CPI = Consumer Price Index

InteresRat = Interest Rates

ExchRate = China-US exchange rate

ChinaExpo = China Exports

OilPrice = Oil Prices

The model is detailed below:

CurreAcctBal = β_0 + β_1*GDP + β_2*PerCapitalncome + β_3*PerCapitOutput + β_4*TechChang + β_5* UnempyRat + β_6*CPI + β_7*InteresRat + β_8*ExchRate + β_9*ChinaExpo + β_{10}*OilPrice + μ

3.1.2 Analysis of Regression Output

Five models (Model A through Model E) were employed in this research using the Ordinary Least Square (OLS) regression method. The results of this regression analysis is presented in Table 1 below. These models contained different numbers of independent variables. The first model, Model A, incorporated the explanatory variable, ChinaExpo, in the regression equation. As expected, the sign of the coefficient is negative. It is suggested that China is the country that makes the largest contribution toward the U.S. current account deficit due to its annual large export to the U.S.. The model shows an inverse relationship between the U.S. current account balances on China's export amount. In model B, one more explanatory variable was added, the China-US exchange rate. The regression result is enlightening: the sign of the coefficient is negative and statistically significant. The exchange rate used in the model is in term of the value of Chinese current per US dollar. So that the larger the exchange rate in the model, the cheaper the Chinese goods. Therefore, the US-China exchange rate did play a big role in making the Chinese goods competitive.

Table 1 Model Results for the U.S. Current Account Deficit

Dependent Variable: CurrAcctBal	Model A	Model B	Model C	Model D	Model E
GDP			-0.108 (-1.571)	-0.198** (-3.560)	-0.068** (-2.336)
PerCapitaIncome			-0.007 (-0.282)	-0.041* (-2.016)	-0.014 (-1.384)
PerCapitOutput			-2.920 (-0.646)	2.505 (0.698)	1.110 (0.797)
TechChang			96.404* (1.782)	74.173* (1.90)	0.777 (0.042)
UnempyRat			-7.635 (-0.598)	-37.383** (-2.973)	-9.368 (-1.504)
CPI			14.012* (2.104)	34.426** (4.519)	8.927** (2.095)
InteresRat			-18.984 (-1.238)	14.124 (0.968)	9.560 * (1.760)
ExchRate		-2.294** (-5.375)			-54.711** (-2.677)
ChinaExpo	-0.385* (-1.721)	-2.656** (-6.220)			0.001** (2.519)
OilPrice				-2.591** (-3.423)	-2.075** (-5.505)
Constant	-86.253 ** (-4.850)	1333.201** (5.063)	-834.228 (-1.402)	-2808.551** (-3.925)	-117.276 (-0.239)
R Square	0.148	0.735	0.865	0.938	0.995
Adjusted R Square	0.098	0.700	0.780	0.888	0.987
F Change	2.960	20.836	10.094	18.899	129.726

*Significant at the .05 level ** Significant at the .10 level

In Model C the major domestic variables were incorporated in order to identify the relationship between US current account balance and the contributing effects of these explanatory variables. The regression result showed that the economic growth tends to cause negative balance for current account. High GDP growth will likely to increase income, strengthening the purchasing power for Americans. Therefore, all the signs of the output and growth variables in the models had a negative sign.

Further, It's not certain what changes in technology will affect the current account balance. Rapid technological change will certainly have long-run effect on the economy: it may outpace the economy for its practical application. Technological innovation will make US products competitive. Thus, this will lead to more exports. The regression result of Model C had a negative sign for the coefficient of interest rate. Moreover, high interest rate will attract foreign investors to put their money in the US, leading to higher demand for US dollars. Thus, the US dollar will go stronger, buying more from abroad.

In Model D, the price of oil was added. Not surprisingly, the oil price had a negative impact on the current account balance. The U.S. is the largest oil consumer in the world. It buys oil from international markets. Higher oil price means it has to pay much more for the oil importing. The corresponding R square increased to about 94%. The model is statistically significant for the large F value. Notably, Model D is a closed economy at least for the time being.

The final model, Model E, in this research is an open economy. It incorporated the effect of an emerging market and the volatile oil which U.S. heavily depends upon. It is observed that China export had minimal impact on the US economy and the sign of the regression output is questionable. In this model, it had a positive sign for the impact Chinese exports had on the US economy. The effect of the exchange rate on current account balance becomes prominent. US-China exchange rates have much more explaining power than the annual total Chinese exports to the world. The amount of Chinese export used in the model is an aggregate one. But Chinese export to the US registers a big share in its total export.

4. Conclusion

The U.S. current account is an ongoing and complex issue. In light of a much more globalized economy, the US current account balance should be analyzed in an analytical framework in a global context. In this study, light is shed on the global impact by incorporating two non-domestic explanatory variables, Chinese export and world oil price. The results of this empirical study were quite promising because it had the expected signs for the coefficients for most of the independent variables used in the model and most of the variables in the model were significant. Finally, this research moves toward the journey to search for more knowledge about the phenomenon of the persistent deficits of the U.S. current account.

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