



**EEB--UNDERGRADUATE ECONOMICS JOURNAL**

# **EMPIRICAL ECONOMIC BULLETIN**



**THE CENTER FOR GLOBAL AND REGIONAL  
ECONOMIC STUDIES BRYANT UNIVERSITY**



# **U.S. Current Account: Why Is It Increasingly Negative?**

Joshua Champagne<sup>a</sup>

**Abstract:**

This paper investigates the reasons for the increasingly negative United States current account. The study incorporates information into a multivariate linear regression model to examine the influence of various economic indicators on the U.S. current account. The paper focuses more so on which variables create an increase in the current account and which variables cause deterioration and why the overall value of the current account is continually becoming more negative. The results show that the U.S. Current Account is negative because there is not enough government investment, savings, and private savings, along with a negative fiscal policy, combined with an increase in private investment and domestic GDP.

JEL Classification: E22, E60, E62

Keywords: Current Account, Account Deficit

<sup>a</sup> Bryant University, 1150 Douglas Pike, Smithfield, RI 02917. Phone: (401) 744-1153.

Email: [jchampag@bryant.edu](mailto:jchampag@bryant.edu)

---

The author thanks the BLS, BEA, GPO Access, and Misery Index for providing data and gratefully acknowledges the help/guidance from Professor Ramesh Mohan.

## 1.0 Introduction

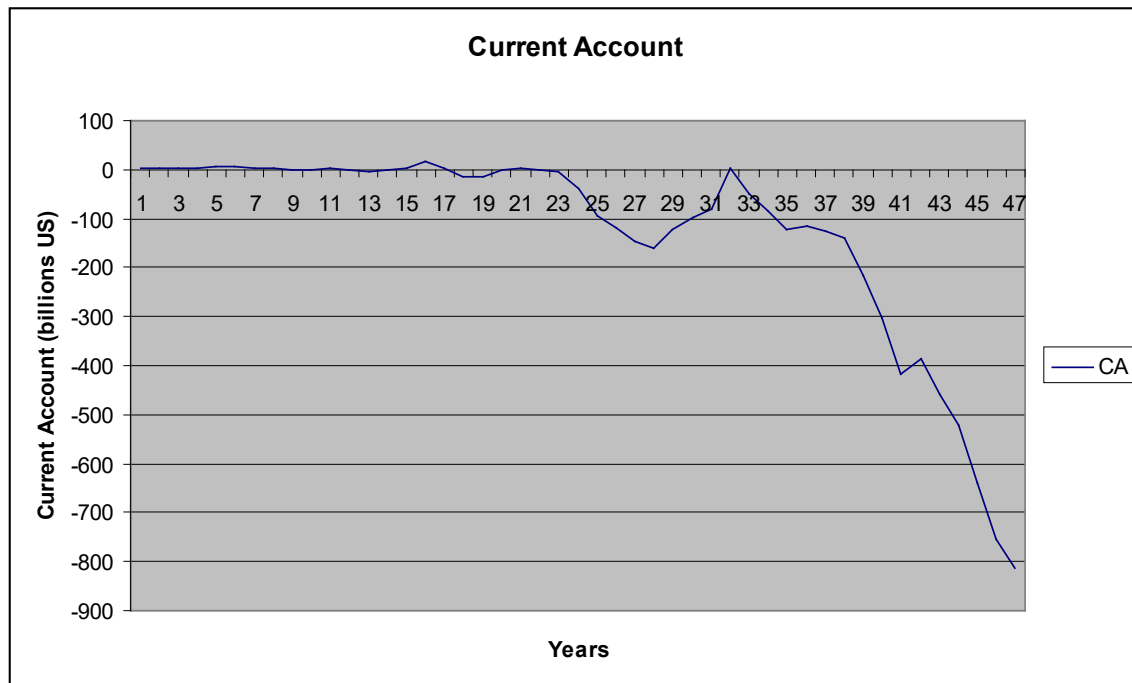
The U.S. current account is a major part of the economy and oftentimes dictates fiscal and monetary policy in order to create an overall surplus. The current account is made up of three parts: the balance of trade plus net factor income from abroad plus net unilateral transfers from abroad. The biggest part of the current account is the balance of trade, which is exports minus imports. Ever since the 1970s the balance of trade has become increasingly negative, yet the current account has been occasionally positive, mostly in the 1970s and 1980s, and also once in 1991. Therefore, there are many other factors that can have a strong impact on the current account.

The current account has been a hot topic as of late, especially since it has been in a deficit since 1992, setting new record lows every year since 1998. Recently, during the Bush administration, where the current account deficit ballooned to over \$811 billion, many economists and citizens alike have come to realize how important this deficit has become. With a slumping economy and high unemployment rate, among other things, economists have come to question how dangerous this deficit is to our economy in the long run.

Overall, there is very limited research that focuses on such a wide comprehension of variables and effects. Much of the research in the area focuses on the current account along with the budget deficit (known as the “twin deficits”) and whether the U.S. can sustain these deficits and continue to grow. This paper contributes to the literature on the subject in three respects. First, this paper is the first of its kind to include such a wide variety of variables over such a large time span. Second, this paper finally brings quantifiable results as to the affect of the tested variables on the current account. Lastly, this paper brings up to date the affects of the variables on the current account by using the most recent data available (2006).

The rest of the paper is organized as follows: Section two gives a brief literature review. Section three outlines the empirical model. Data and estimation methodology are discussed in section four. Finally, section five presents and discusses the empirical results. This is followed by a conclusion in section six

## 2.0 Current Account Trends



Source: Bureau of Economic Analysis

The graph above shows the current account since 1960 in billions of US dollars, with 1 being 1960, and 47 being 2006. The negativity of the account becomes quite clear, beginning in 1992, and dropping sharply until the present day, reaching a low deficit of \$811 billion. This has become quite problematic for the U.S. economy, as it has entered a slump in the last few years or so. Unemployment is high, the dollar is depreciating, and oil prices are skyrocketing. These are just a few problems on top of and/or related to the enormous current account deficit. The good news is that by the end of 2007, the current account deficit was only \$172.9 billion (BEA), a sign that the current account is heading in the right direction. However, that is still a large deficit, and definitely something that the U.S. has to attempt to control through various governmental policies in the near future.

### 3.0 Literature Review

One of the major areas of the current account that is researched is what is known as the “twin deficits.” Studies on the “twin deficits” which is the theoretical idea that the budget account and current account should fluctuate together have produced surprising results. In Kim and Roubini (2004), their results lend them to conclude that in the short run, a budget deficit can actually lead to an improvement in the current account. This can be seen in the divergence of the two accounts from 1987 to 2001.

In recent years, more research on changes in the fiscal policy and its effect on the trade balance and the current account have been conducted. In Baxter (2005) she finds that an increase of the budget deficit equal to about 1% of GDP leads to a decrease of the current account by about 0.5% GDP. Further research conducted by Erceg et al (2005) states that increased government spending and tax rate cuts do not drastically affect the trade balance and therefore the current account is relatively unchanged, meaning that the budget deficit has an even more modest affect on the current account than found in Baxter (2005).

All of the above papers were reviewed in Cavallo (2005) where she inserts her own research into the idea of “twin deficits.” Her research deals with government expenditure on nontraded labor services which include, “for example, general public service, national defense, public order and safety, health, education, and others.”<sup>1</sup> Her findings indicate that an increase in government expenditures equal to 1% of GDP lead to a mere 0.05% of GDP reduction in the current account. All of these papers combined lead to the idea that the current budget deficit is not affecting the current account as much as economists thought, and perhaps there are other causes for the increasing negativity of the current account.

Lastly, in Holman (2001), she concludes that much of the current account deficit is driven by two factors: a surge in U.S. productivity coupled with the stock market boom of the 1990s which led to an increase in consumer spending, both of which caused the deficit to widen further. However, since both productivity and the stock market (thus

<sup>1</sup> Quote taken from Cavallo’s 2005 FRBSF Economic Letter in which she talks about her research, showing how a large increase in expenditure on labor services leads to a very small deterioration in the current CA.

consumer spending) have decreased since the article was written there must be another factor that is drastically affecting the widening current account deficit.

#### 4.0 Definition of Variables

$$CA_t = \beta_0 + \beta_1 FP_t + \beta_2 NPS_t + \beta_3 NGS_t + \beta_4 PI_t + \beta_5 GI_t + \beta_6 PG_t + \beta_7 TMCUR_t + \beta_8 GDP_t + \beta_9 INF_t + \varepsilon \quad (1)$$

This is the overall model used within this paper. Other models included PG and consumer spending (Holman 2001), while others used FP (Erceg et al 2005). While many previous papers have used one or more of these variables in determining their effects on the current account, none of them have comprised such a comprehensive model to include numerous variables that, according to economic theory, should have a significant impact on the overall value on the current account.

$CA_t$  is the U.S. current account at year  $t$ . It is comprised of the balance of trade plus net factor income from abroad plus net unilateral transfers from abroad. The definition of the current account in this paper is consistent with the IMF which states that the CA is “The record of all transactions in the balance of payments covering the exports and imports of goods and services, payments of income, and current transfers between residents of a country and nonresidents” (IMF 2006). All CA figures were obtained from the Bureau of Economic Analysis (BEA) and are in billions of U.S. dollars.

Independent variables consist of nine variables obtained from various sources. Appendix A and B provide data source, acronyms, descriptions, expected signs, and justifications for using the variables. All variables were also obtained yearly, so each is listed at year  $t$ . The first variable,  $FP_t$ , is the fiscal policy of the government, which is government expenditure plus tax revenue. The second variable,  $NPS_t$ , is the net private savings of the citizens in the United States. The next variable is  $NGS_t$ , which is the net government savings. These two savings combined produce the overall net savings of the U.S.

The fourth variable is  $PI_t$ , which is the private investment, followed by the next variable  $GI_t$ , which is the government investment. These two variables also combine to produce net investment in the U.S. All five of these variables were obtained from the 2008 Economic Report of the President and are in billions of U.S. dollars.

The sixth variable is productivity growth,  $PG_t$ , which is the overall growth in productivity of the U.S. economy. This data was obtained from the Bureau of Labor Statistics (BLS) and is listed as a percent (%). The next variable is total manufacturing capacity utilization rate,  $TMCUR_t$ . This is the capacity at which the manufacturing firms in the United States are operating. This data was also obtained from the 2008 Economic Report of the President and is listed as a percent (%).

The eighth variable is gross domestic product or  $GDP_t$  for short. This is the total market value of all final goods and services produced within a given country in a given period of time (usually a calendar year). This data was obtained through the 2008 Economic Report of the President and is listed in billions of U.S. dollars. Lastly, the ninth variable is  $INF_t$ , which is the annual inflation rate in the United States. Data was obtained from the Misery Index, an online database, and is listed as a percent (%).

## 5.0 Data

The study uses annual data from 1960 to 2006. Data were obtained from the Bureau of Economic Analysis (BEA), Bureau of Labor Statistic (BLS), the 2008 Economic Report of the President (GPO Access), and the Misery Index websites. Summary statistics for the data are provided in Table 1 on the next page.

**Table 1: Summary Statistics**

<b>Variable</b>	<b>Obs.</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
Current Account	47	-127.1762	30.39713	-811.477	18.116
Fiscal Policy	47	-94.82766	19.35204	-412.7	236.2
Net Private Savings	47	292.7085	24.25811	44.3	551.1
Net Government Savings	47	-80.82341	19.0658	-392.5	239.4
Private Investment	47	451.5851	57.45935	40.5	1357
Government Investment	47	99.3766	11.02342	15	267.7
Productivity Growth	47	2.255319	.2117022	-1.6	4.6
Total Manufacturing Capacity Utilization Rate	47	80.8234	.6445976	71	91.1
Gross Domestic Product	47	4607.56	550.567	526.4	13194.7
Inflation	47	4.241064	.4203198	1.07	13.58

## 6.0 Empirical Results

The primary objective of this study was to find the determinants of the current account deficit. The means and standard deviations, as well as the maximums and minimums, of the variables used in this study are given in Table 1. The results of the nine different variables' effects on the U.S. current account are shown in table 2. In this regression, using a multivariate linear model, the current account in billions of U.S. dollars was regressed against various independent variables. After running a correlation test, different variables which were highly correlated were dropped in different regressions, so as to produce accurate and unbiased results. Of the nine variables, five were statistically significant at a 1% level, two were statistically significant at the 5% level, one was statistically significant at the 10% level, and one was statistically insignificant.



One of the most surprising finds was the fact that productivity growth and TMCUR were both relatively insignificant, with PG only being significant at the 10% level in one regression, which contradicts the theory and results of Holman (2001). In two of the regressions the results were negative, and in the other regression PG was positive and barely significant. One of the two reasons she believed that the CA deficit was widening was PG. However, she focused her data on the economic boom of the 1990s, and while it is true that in the short run PG will serve to widen the CA deficit, in the long run, or at least the in the 47 years of data used in this study, PG becomes statistically insignificant as a factor in the increasingly negative CA. Strangely enough, the sign of the coefficient in front of PG is positive in some cases, which would indicate that as PG increased, the CA would increase, which goes against Holman (2001) and economic theory in general. Even more interesting is the fact that the one time PG was statistically significant was the regression in which it had a positive value. Unfortunately, while this variable is statistically insignificant, the results may hint that while in the short run, PG widens the CA deficit, in the long run PG may help increase CA in some indirect way. This may be a case similar to the “twin deficit” divergence, where oppositely, in the short run, an increased budget deficit actually helps to increase the CA. More research into the matter is most likely needed on the long-run vs. short-run affects of PG on the current account.

Directly related to this is the TMCUR, whose negative coefficient, while expected in accordance with economic theory, contradicts the above results. As firms use more of their capacity, they produce more, which could suggest an increase in productivity. This increase in productivity should increase the value of working capital, thus private investment, thus decreasing the CA. This would tend to agree with economic theory as well as Holman (2001). However, due to the extremely low *t*-statistic (-0.18), the results of this variable are better off being ignored.

Of the two variables that were statistically significant at the 5% level, both agreed with the expected sign, but not in every regression due to various correlations. First, inflation, which produced a positive coefficient in only one of the three regressions (but when negative only slightly negative, and when positive, it was statistically significant), as expected, because one way to decrease a CA deficit is to increase inflation, which can

be done by decreasing interest rates, which in turn would vary the exchange rates, making domestic products cheaper to foreign buyers, increasing exports and the balance of trade. This ultimately would serve to increase the CA, although not as much as previously thought according to the research of Erceg et al (2005). Next is PI, which as expected was also negative, and serves to widen the CA deficit.

NGS was produced a positive coefficient because as NGS goes up, net savings should increase, and subsequently so should the CA. Overall, this was one of the more statistically significant variables and indicates that the government should not spend money foolishly, such as on unnecessary wars in Iraq, which do not provide a measurable net benefit to the people of the U.S, and should save this money.

These results correlate directly with the fiscal policy, where if the government spends less than the tax revenues that it raises (ultimately causing NGS to increase) then the CA would also increase. In line with this is GI, which was the most significant variable with the highest coefficient, indicating that government investment, in this study, appears to be the leading determinant in the CA. This shows that as government investment increases, the CA should drastically increase overall. This seems most obvious, especially in the long run, because government investments should lead to interest and income receipts, causing exponential benefits. Second to GI was NPS, which was just as significant, showing that as net private savings increases, so should the CA. As Dick Cooper claims in his article, as reviewed in the Journal of Policy Modeling (2006) “Americans save too little,”<sup>2</sup> which is definitely true in that every year since 1960, NPS has been decreasing, yet since 1992 the CA has been decreasing. Lastly, GDP, which produced a negative coefficient as expected in two out of the three regressions (the positive value was insignificant) because a decrease in domestic GDP reduces domestic demand for foreign goods, lowering imports without affecting exports. Since GDP has also been increasing every year since 1960, just the opposite holds true.

<sup>2</sup> “Americans save too little” is one of the three propositions Dick Cooper uses in his article “Living with global imbalances: A contrarian view” as reviewed by the Journal of Policy Modeling

**Table 2: Regression Results for the Current Account**

Variables	Reg I (Coefficient)	Reg II (Coefficient)	Reg III (Coefficient)
Fiscal Policy	0.339***		0.036
Net Private Savings	0.823***		
Net Government Savings		0.324***	
Private Investment	-1.310**		
Government Investment		12.59***	
Productivity Growth	-3.309	14.276*	-14.113
Total Manufacturing Capacity Utilization Rate	-3.034	-0.831	-1.280
Gross Domestic Product	0.060	-0.394***	-0.049***
Inflation	-0.091	8.492**	-0.364
R <sup>2</sup>	0.9427	0.9275	0.7919
Adjusted R <sup>2</sup>	0.9325	0.9166	0.7665
F-Value	91.72***	85.28***	31.21***
No. of obs.	47	47	47

Note \*\*\*, \*\*, and \* denotes significance at the 1%, 5%, and 10% respectively

## 7.0 Conclusions

This paper contributes to the literature of the U.S. Current Accounts. Using existing data for the 1960-2006 period for the current account, a multivariate linear model was used to empirically estimate the regression. The regression estimates indicate that an increase in the CA is associated with an increase in fiscal policy, net private savings, government investment, net government savings and inflation rates. A decrease in the CA is associated with an increase in private investment and gross domestic product.

Overall, given that PG has curtailed in recent years, and that FP does not drastically affect the trade balance (which is the largest part of the CA), the real economic indicators that affect the CA have to be NPS and GI, followed up with an overall improvement in the FP and NGS. First and foremost, the government needs to drastically increase their investment expenditures, as it pales in comparison to private investment (GI is roughly 1/5<sup>th</sup> of what PI is). Secondly, we as Americans need to improve our savings levels, possibly through reducing consumer spending. Third, the government needs to stop spending, and increase their savings immensely. Lastly, while FP has little

effect on the trade balance, it also has little effect on the deterioration of the CA if spent in the *right* areas, such as nontraded labor services. Obviously, it is better if the government can spend less than the tax revenues it raises, and create a positive FP, which it has not had since 2001. However, if the government must spend its money, then spend it wisely and efficiently, and in places that provide a high return and net benefit to the U.S. as a whole. In the end, while the 2007 U.S. Current Account deficit decreased drastically from 2006 (\$811.5 billion) to \$172.9 billion, indicating that the U.S. is heading in the right direction, many more improvements to American policies are needed to bring the country back into a positive current account.



**A: Variable Description and Data Source**

<b>Acronym</b>	<b>Description</b>	<b>Data source</b>
CA	Current Account in billions of dollars	Bureau of Economic Analysis
FP	Fiscal Policy in billions of dollars	Economic Report of the President 2008
NPS	Net Private Savings in billions of dollars	Economic Report of the President 2008
NGS	Net Government Savings in billions of dollars	Economic Report of the President 2008
PI	Private Investment in billions of dollars	Economic Report of the President 2008
GI	Government Investment in billions of dollars	Economic Report of the President 2008
PG	Productivity Growth as a percent (%)	Bureau of Labor Statistics
TMCUR	Total Manufacturing Capacity Utilization Rate as a percent out of 100%	Economic Report of the President 2008
GPD	Gross Domestic Product in billions of dollars	Economic Report of the President 2008
INF	Annual Inflation Rate as a percent (%)	Miseryindex.com

**Appendix B: Variables and Expected Signs**

<b>Acronym</b>	<b>Variable Description</b>	<b>What it captures</b>	<b>Expected sign</b>
FP	Fiscal policy	Government spending plus tax revenues	+
NPS	Net private savings	The overall savings of people in the U.S.	+
NGS	Net government savings	The overall savings of the government	+
PI	Private investment	The amount of money people in the U.S. invest	—
GI	Government investment	The amount of money the government invests	+
PG	Productivity growth	Overall growth in productivity of the U.S. economy	—
TMCUR	Total manufacturing capacity utilization rate	The capacity rate at which manufacturing firms are operating	—
GDP	Gross domestic product	The total market value of all goods and services produced in the U.S.	—
INF	Annual inflation rate	The annual rate of inflation in the U.S.	+

## Bibliography

Baxter, Marianne. 1995. "International Trade and Business Cycles." In *Handbook of International Economics* Vol. 3, eds. Gene M. Grossman and Kenneth Rogoff, pp. 1801–1864. Amsterdam: North-Holland.

Bureau of Economic Analysis, [online data file],  
<http://www.bea.doc.gov/bea/di/home/directinv.htm>.

Bureau of Labor Statistics, [online data file],  
<http://www.bls.gov/>.

Cavallo, Michele. 2005. "Government Consumption Expenditures and the Current Account." FRBSF Working Paper 2005-03.  
<http://www.frbsf.org/publications/economics/papers/2005/wp05-03bk.pdf>.

Cavallo, Michele. 2005. "Understanding the Twin Deficits: New Approaches, New Results." FRBSF Working Paper 2005-16.  
<http://www.frbsf.org/publications/economics/letter/2005/el2005-16.pdf>.

Economic Report of the President 2008, [online data file],  
[http://www.gpoaccess.gov/eop/2008/2008\\_erp.pdf](http://www.gpoaccess.gov/eop/2008/2008_erp.pdf).

Erceg, Christopher J., Luca Guerrieri, and Christopher Gust. 2005. "Expansionary Fiscal Shocks and the Trade Deficit." International Finance Discussion Paper 825, Federal Reserve Board.  
<http://www.federalreserve.gov/pubs/ifdp/2005/825/ifdp825.pdf>.

Holman, Jill A. 2001. "Is The Large U.S. Current Account Deficit Sustainable?" *Economic Review First Quarter 2001*, pp. 5-23. Federal Reserve Bank of Kansas City.  
<http://www.kansascityfed.org/publicat/econrev/PDF/1q01holm.pdf>.

International Monetary Fund, [online data file],  
<http://www.imf.org/external/>.

Kim, Soyoung, and Nouriel Roubini. 2004. "Twin Deficits or Twin Divergence? Fiscal Policy, Current Account and Real Exchange Rate in the U.S." Mimeo, Korea University and New York University.  
<http://econ.korea.ac.kr/prof/sykim/files/fiscalus9.pdf>.

Misery Index, [online data file],  
<http://www.miseryindex.us/iRbyyear.asp?StartYear=1960&EndYear=2006>.

Salvatore, Dominick. 2006. "Twin deficits, growth and stability of the US economy: Editor's Introduction." *Journal of Policy Modeling* Vol. 28-6, pp. 603-604.  
<http://ideas.repec.org/a/eee/jpolmo/v28y2006i6p603-604.html>.

