

An Update on Medium-Term Determinants of Current Account Balances The “Savings Glut” Hypothesis Examined

By

Menzie D. Chinn*
University of Wisconsin

And

Hiro Ito**
Portland State University

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Abstract

This note updates the estimates reported in the study by Chinn and Prasad (2003), which provided an empirical investigation of the medium-term determinants of current accounts for a large sample of industrial and developing countries, and uses those estimates to assess recent hypotheses regarding the evolution of external imbalances, namely the “savings glut”. The focus is on results from panel regression techniques are used to characterize the variation of the current account across 117 countries and over 33 years. We find that current account balances are positively correlated with government budget balances and initial stocks of net foreign assets. Most other variables are not statistically significant in a consistent manner. One key finding we obtain is that in this extended sample, the government budget balance has a positive and statistically significant impact upon the current account for industrialized countries. In a fixed effects regression, this coefficient is as high as 0.38. We also find that, while developing country current account balances *are* underpredicted, **the U.S. current account balance is overpredicted by only 1.2 percentage points of GDP. This last result casts doubt on the overseas “savings glut” hypothesis as the key reason for the 4.4 deficit run over 2001-03.**

Keywords: Current account; net foreign assets; savings; investment; panel regressions; capital controls.

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* Chinn: Dept. of Economics, University of Wisconsin, 1180 Observatory Drive, Madison, WI 53711.
Email: mchinn@lafollette.wisc.edu

** Ito: Department of Economics, Portland State University, 1721 SW Broadway, Portland, OR 97201.
Email: ito@pdx.edu

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1. Introduction

The objective of this note is to update the analysis of Chinn and Prasad (2003), and cast those results in light of current debate on (1) the impact of budget deficits on the current account, and (2) quantitatively assess then extent to which current savings and investment rates are atypical, and if so (3) how long those patterns might be expected to persist.

The answers to these questions are important because they inform the debate regarding the options for current account adjustment. For instance, Greenspan (2005), Ferguson (2005) and others have argued that the scope for fiscal policy in adjusting the current account is small, extrapolating from the time series evidence in the United States. Of course, the precise size of these effects is hard to pin down for a specific country because persistent macroeconomic time series are relatively uninformative. We argue that appealing to cross-sectional variation may be helpful, so we extend Chinn and Prasad's analysis.

Bernanke (2005), Clarida (2005) and Hubbard (2005) argue that the collapse of investment and the rise of savings in East Asia and to a lesser extent Europe are the cause of the U.S. current account deficit. They view the U.S. external imbalance as a problem made overseas, and solvable only in the longer term, as better development of financial systems reduces this excess savings problem. The empirical framework we use is well suited to examining this issue of whether the 2000's are an atypical period, and furthermore, whether financial development will "solve" the U.S. external balance problem.

What exactly did Chinn and Prasad do? Their study provided a broad empirical characterization of the determinants of current account balances for a large sample of industrial and developing countries. Their approach viewed the current account from the perspective of longer-run saving-investment balances. Thus, the roles of the medium-term determinants of saving and investment levels were emphasized, rather than factors influencing the short-run dynamics of the current account. Using both cross-section and panel data estimation techniques and an extensive dataset that covers industrial and developing countries, they characterized the main empirical determinants of medium-term current account variation across countries and over time.

Although their paper did not directly address the question of current account sustainability, the analysis provided an indication of the levels of current accounts that may be considered "normal" for a country, based on a number of its macroeconomic attributes, including stage of development, demographic profile, the government budget balance etc.

In this note, we once again resort to a uniform framework in analyzing the determinants of current account balances for industrial and developing countries, while empirically allowing for differences in results across groups of countries. Our dataset covers a large and heterogeneous group of countries (65 countries) over a relatively long time span (1971-2003).

The main findings are as follows:

- The budget balance is an important determinant of the current account balance, almost all groups of countries.
- Using the baseline specification, the response of the current account to a one percentage point of GDP increase in the budget surplus is 0.18 in an industrial country. The impact can range up to 0.40 in a fixed effects regression.
- There is little evidence that financial deepening will decrease the current account balances of the developing countries.
- There is little evidence that increased financial openness will decrease the current account balances of the developing countries.
- **Over the 2001-03 period, the U.S. current account deficit is quite precisely in an out-of-sample (ex post) simulation; the deficit is underpredicted by only 1.2 percentage points, suggesting that the savings glut hypothesis does not apply to period** (events of 2004-05 cannot be directly evaluated since we do not have the relevant data).

The next section of the paper contains a discussion of some theoretical issues germane to the empirical modeling of current account dynamics. Section 2 discusses the variables, the characteristics of the dataset and some of the econometric issues. Results from panel estimation are presented in Section 3. Section 4 provides some out of sample evidence informing the issue of whether the recent period is atypical.

2. Variables of Interest, the Data Set and Some Econometric Issues

2.1 Variables

For a detailed set of motivations for the variables included in our analysis, see the discussion in Chinn and Prasad (2003).

- Net foreign assets to GDP ratio. From an intertemporal perspective, the stock of net

foreign assets (NFA) serves as an important initial condition, given that the current account is the sum of the trade balance and the return on a country's stock of NFA (or payment on its net foreign liabilities position).

- Government budget surplus to GDP ratio. A variety of models predict a positive relationship between government budget balances and current accounts over the medium term. In the absence of a full Ricardian offset via private saving, an increase in the government budget balance could lead to an increase in national saving. In developing economies, where more agents may be liquidity constrained, this relationship might be expected to be stronger.
- Relative income. The “stages of development” hypothesis for the balance of payments suggests that countries, as they move from a low to an intermediate stage of development, typically import capital and, therefore, run current account deficits. As they reach an advanced stage of development, countries run current account surpluses in order to pay off accumulated external liabilities and also to export capital to less advanced economies.
- Demographics. The literature on the determinants of national saving has pointed to a number of additional “structural” determinants such as demographics.
- Financial development/deepening. Another determinant of saving (emphasized by Edwards, 1995) is “financial deepening,” usually proxied by the ratio of a monetary aggregate such as M2 to GDP. The traditional interpretation of this variable as a measure of the depth and sophistication of the financial system suggests that financial deepening could induce more saving. Here we use (in contrast to Chinn and Prasad (2003)) private credit to GDP, rather than M2 to GDP, primarily for data availability reasons.
- Uncertainty. Terms of trade volatility is another potential determinant of medium-term fluctuations in current accounts. Agents in economies that face more volatile terms of trade might save more for precautionary reasons in order to smooth their consumption streams in the face of volatile income flows.
- Openness. Country characteristics that reflect macroeconomic policies could also be relevant for current account determination. The degree of openness to international trade could reflect policy choices, including tariff regimes. The introduction of capital controls might result from a desire to prevent capital flight triggered by past current

account deficits.

2.2 Data and Estimation Approach

The benchmark sample for our analysis covers both industrial and developing countries. The basic data set has annual data for 21 industrial and 96 developing countries and, for most countries in the sample, covers the period 1971-2003. Variable definitions and data sources, along with the list of countries in the sample and country groupings, are presented in the Appendix. The dependent variable in most of the analysis is the current account balance, expressed as a ratio to GDP. A negative value of the dependent variable represents a current account deficit.

One potential problem with developing country data is the possibility of significant measurement error in annual data. To mitigate these concerns, and since our interest is primarily in medium-term rather than short-term variations in current accounts, we construct a panel that contains non-overlapping 5-year averages of the data for each country. So, for instance, 30 annual observations for a particular country over the 1971-2000 period would be compressed into 6 observations. The 2001-03 period has been compressed into one observation, and so represents only 3 years instead of the standard 5. This procedure also has the advantage of abstracting from short-run variations in current accounts and related variables, which are of lesser interest for the purposes of the analysis in this paper.

To account for global macroeconomic shocks, we include time fixed effects. In our baseline specification, we do not include country fixed effects, because we want to exploit the cross-country variation to obtain more precise estimates of the effects. We do, however, discuss some results based on fixed effects regressions.

3. Panel Estimates

3.1 Baseline Results

Table 1 shows results from panel OLS regressions for different groupings of countries. Since we found some of these panel results also to be sensitive to the inclusion of the African countries, we report separate sets of results with and without the African countries included, both for the full sample and for the developing country sample. We also report results for an emerging market group. The details of these groupings are reported in the Data Appendix.

One of the striking results is the strong positive relationship between current account and government budget balances. In all instances (save the emerging markets case), the budget surplus is statistically significant, including the industrialized country case. This result differs both quantitatively and statistically from the results obtained in Chinn and Prasad (2003). The point estimate is statistically different from zero, and is closer to 0.20 than to 0.10. This indicates that arguments there is no effect from budget balances to current accounts do not pass the test, although in this particular specification, the effect is not particularly large (although a ± 2 standard error confidence interval encompasses values as high as 0.35).

The estimated coefficient for developing countries (column 4) suggests that a 1 percentage point increase in the government budget balance is associated with about a 0.16 percentage point increase in the current account to GDP ratio. While significant, this is substantially less than the estimate obtained by Chinn and Prasad. We attribute this result partly to the differing sample (the estimate is also lower in the 1971-1995 sample that corresponds to Chinn and Prasad's), but also to the difference in behavior of current accounts in recent years. Interestingly, the result does not seem to be driven by the East Asian countries, as one might have guessed from popular discussion. Rather, the ex-Africa LDC results are quite similar, both to the earlier Chinn and Prasad findings (0.25 vs. 0.26) and to our data sample, constrained to the 19971-95 period (0..24 vs. 0.26).

When we regress national saving on the same set of regressors, we find that the saving channel does indeed appear to be important in the sense that national saving and public saving are positively correlated. For comparison, we report below the relevant estimates from Table 3 and the coefficient on the government budget balance in a set of regressions with national saving as the dependent variable and the same set of regressors as in Table 3:

Estimated coefficients on the ratio of the government budget balance to GDP

Dependent variable:	All countries	All excl. Africa	Industrial	Developing	Developing excl. Africa
Current account	0.147	0.209	0.178	0.157	0.247
National saving	0.180	0.143	0.246	0.137	0.262

Ital. denotes not significant at the 10% level.

Interestingly, the correlation between public saving and national saving appears to be higher for industrial than for developing countries.

Next, we examine the relationship between current accounts and a key initial condition—the existing stock of net foreign assets (or liabilities). For the panel regressions, the initial stock of NFA refers to the NFA/GDP ratio in the first year of the 5-year period over which the dependent and independent variables are averaged. The results indicate a robust positive association between initial NFA to GDP ratios and current account balances. For the combined sample of industrial and developing countries, this result is as strong as in the cross-section regressions. In the sub-sample panel regressions, however, the result comes through strongly for the developing countries as well.

Relative income, financial deepening, terms of trade volatility, trade and financial openness, all fail to exhibit robust correlation with the current account balance. However, there are certain instances in which each of these variables matters.

As in Chinn and Prasad (2003), youth dependency does correlate with current account deficits, particularly when it involves developing countries. There is much less success with the old age dependency ratio.

In the panel regressions for the full sample, the financial deepening variable fails to exhibit any statistically significant association with current account balances. Interestingly, the only case in which it appears to be significant is in the case of the *industrialized* countries. Consequently, those who believe financial development – at least as proxied by the private lending measure – will reliably shrink current accounts in developing and emerging economies will be disappointed by these results. On the other hand, gross capital formation does seem to respond to financial deepening more strongly than national savings (in the LDC and emerging market groupings), so hope is not completely lost.

Terms of trade volatility is positively related to current account balances in the industrialized country sample. Average income growth, on the other hand, appears to bear little relationship to the current account. We did replicate the finding that, for developed economies, higher income growth is associated with large current account deficits.

We find in two cases that the degree of openness of an economy is negatively related to its current account position: the full ex Africa and the industrial country groups.

3.2 Fixed Effects

Many cross-country panel studies use fixed effects (FE) in order to soak up all country-specific effects. Our view is that, for understanding cross-country variation in current accounts, including fixed effects would detract from much of the economically meaningful parts of the analysis. Of great interest has been the impact of budget surpluses on current account balances in developed economies. We redid the estimate for this grouping including country fixed effects and dropping those regressors that, by construction, have no time variation—terms of trade volatility; average output growth; and the openness indicator. In this regression, the most interesting result is the finding that the coefficient on the government surplus rises to 0.38, and is significant at the 1% marginal significance level.

This is a finding that the proponents of fiscal ineffectiveness (regarding the current account) must contend with.

4. Out-of-sample prediction: Are the 2000's atypical?

The next question we ask here is whether the situation of current accounts for countries, especially the United States, is atypical in the 2000s. In order to explore this question, we conduct out-of-sample predictions for the 1995-2000 and 2001-03 periods using the estimation results from the regressions for the 1975-95 time periods. Since the time fixed effects for the post-1995 time periods are not available, we use the average of the time effects for the 1975-1995 period. This exercise allows us to observe how much the actual current account balances in the post-1995 period differ from what could be predicted using the relationships that obtained up to 1995. Because the estimation results are sensitive to inclusion of African countries, we rely upon the regressions excluding the African countries for out-of-sample prediction. Generally, when we examine the group of industrialized countries, the predicted values will be based on the regressions using the industrialized countries sample while the predictions for non-industrialized countries will be based on the estimation for ex-African LDC subsample.

Figure 1 depicts the predicted and actual values of current accounts as a ratio to GDP. Inspecting Figure 1-1, one can see that the actual U.S. current account deficits are larger in 2001-03 than what could be predicted using the pre-1995 estimation results, but only by 1.2 percentage points. Generally, the significant coefficient for the budget balances from Table 1 suggests that the decline in the predicted values of U.S. current accounts in the post-1995

period can be attributed to higher levels of U.S. budget deficits in the time period. However, the actual U.S. current account deficits are even larger than what is predicted by the 1975-1995 model. The deviation of the actual value from the out-of-sample prediction for the 2001-03 time period is about 1.2 percentage points. The other panels in Figure 1 show an interesting contrast from other industrialized countries; Germany, Japan, and high-income ex-Germany European countries experienced better current account balances than what is predicted by the model.

The results for the less developed countries ex-Africa are displayed in Figure 1-2. This group of countries also experienced better current account balances than what is predicted by the model. In particular, the emerging market countries in Asia ex-China experienced in the 1996-2000 and 2001-03 time periods much better current account balances than model predictions.

Given the result of exceptionally higher current account balances among emerging market Asian countries (even except for China), it is worthwhile repeating the same exercise for the national saving regression for this group of countries. Figure 2 shows that actual and fitted national savings (including out-of-sample predictions) for ex-China emerging market countries in Asia. We can see that the actual national savings for emerging Asia in the 1995-2000 and 2001-03 periods are actually not higher than what can be predicted. This result is more consistent with an investment drought than with the “saving glut” in Asia¹ (although the savings glut is an appropriate characterization for the world-ex Asia).

One take on these results is that the savings glut hypothesis as forwarded by Bernanke, Clarida, and Hubbard is correct. There is one problem with this interpretation of the results: in the 1996-00 period, the U.S. current account is predicted almost exactly, while the 2001-03 current account deficit is underpredicted by only 1.2 percentage points. Literally speaking, all the determinants that have been stressed in this macroeconomic approach, including budget deficits, *have* been important in driving the U.S. into external imbalance. In this sense, the “savings glut” hypothesis is found to be wanting.

¹ Inclusion of China does not alter the result.

Data Appendix

The data used in this paper were drawn from a number of different sources. We provide below a listing of the mnemonics for the variables used in the analysis, descriptions of these variables and the source(s) from which the primary data for constructing these variables were taken. A listing of the countries in the final sample, along with the country groupings used in the analysis, is also provided below. For most countries, data were available from 1971 through 2003.

Mnemonic	Source*	Variable description
CAGDP	WDI	Current account to GDP ratio
GOVBGDP	WDI, IFS	General government budget balance, ratio to GDP
NFAGDP	LM, Sinn	Stock of net foreign assets, ratio to GDP
RELY	WDI	Relative per capita income, adjusted by PPP exchange rates Measured relative to the U.S., range (0 to 1]
RELDEPY	WDI	Youth dependency ratio (relative to mean across all countries) Population under 15 / Population between 15 and 65
RELDEPO	WDI	Old dependency ratio (relative to mean across all countries) Population over 65 / Population between 15 and 65
YGRAVG	WDI	Average real GDP growth
YGRSD	WDI	Standard deviation of GDP growth
TOTSD	WDI	Standard deviation of terms of trade
OPEN	WDI	Openness indicator: ratio of exports plus imports of goods and nonfactor services to GDP
FDEEP	WDI	Financial deepening, ratio of private credit to GDP
KC2	GM	Capital controls on current account transactions
KC3	GM	Capital controls on capital account transactions
NSGDP	WDI	National saving, ratio to GDP

* These are sources for basic data used to construct the corresponding variables. WDI: World Development Indicators; IFS: IMF's International Financial Statistics; IMF: Other IMF databases; Sinn: Stefan Sinn (1990); GM: Gian Maria Milesi-Ferretti (1998); LM: Philip Lane and Gian Maria Milesi-Ferretti (2001).

	cn	Country name	ldc	emg	54	158	Japan	0	0
					55	439	Jordan	1	1
1	612	Algeria	1	0	56	664	Kenya	1	1
2	311	Antigua and Barbuda	1	0	57	542	Korea	1	1
3	213	Argentina	1	1	58	443	Kuwait	1	0
4	193	Australia	0	0	59	666	Lesotho	1	0
5	122	Austria	0	0	60	668	Liberia	1	0
6	313	Bahamas, The	1	0	61	674	Madagascar	1	0
7	419	Bahrain	1	0	62	676	Malawi	1	0
8	513	Bangladesh	1	1	63	548	Malaysia	1	1
9	316	Barbados	1	0	64	556	Maldives	1	0
10	638	Benin	1	0	65	678	Mali	1	0
11	218	Bolivia	1	0	66	181	Malta	1	0
12	616	Botswana	1	1	67	682	Mauritania	1	0
13	223	Brazil	1	1	68	684	Mauritius	1	1
14	748	Burkina Faso	1	0	69	273	Mexico	1	1
15	618	Burundi	1	0	70	686	Morocco	1	1
16	662	Cote d'Ivoire	1	1	71	558	Nepal	1	0
17	622	Cameroon	1	0	72	138	Netherlands	0	0
18	156	Canada	0	0	73	196	New Zealand	0	0
19	626	Central African Republic	1	0	74	278	Nicaragua	1	0
20	628	Chad	1	0	75	692	Niger	1	0
21	228	Chile	1	1	76	694	Nigeria	1	1
22	924	China	1	1	77	142	Norway	0	0
23	233	Colombia	1	1	78	449	Oman	1	0
24	634	Congo, Rep.	1	0	79	564	Pakistan	1	1
25	238	Costa Rica	1	0	80	283	Panama	1	0
26	423	Cyprus	1	0	81	853	Papua New Guinea	1	0
27	128	Denmark	0	0	82	288	Paraguay	1	0
28	321	Dominica	1	0	83	293	Peru	1	1
29	243	Dominican Rep.	1	0	84	566	Philippines	1	1
30	248	Ecuador	1	1	85	182	Portugal	0	1
31	469	Egypt	1	1	86	453	Qatar	1	0
32	253	El Salvador	1	0	87	714	Rwanda	1	0
33	819	Fiji	1	0	88	456	Saudi Arabia	1	0
34	172	Finland	0	0	89	722	Senegal	1	0
35	132	France	0	0	90	718	Seychelles	1	0
36	646	Gabon	1	0	91	724	Sierra Leone	1	0
37	648	Gambia, The	1	0	92	576	Singapore	1	1
38	134	Germany	0	0	93	813	Solomon Is.	1	0
39	652	Ghana	1	1	94	199	South Africa	1	1
40	174	Greece	0	1	95	184	Spain	0	0
41	328	Grenada	1	0	96	524	Sri Lanka	1	1
42	258	Guatemala	1	0	97	364	St. Vincent and the Grenadines	1	0
43	336	Guyana	1	0	98	732	Sudan	1	0
44	263	Haiti	1	0	99	366	Suriname	1	0
45	268	Honduras	1	0	100	734	Swaziland	1	0
46	944	Hungary	1	1	101	144	Sweden	0	0
47	176	Iceland	0	0	102	146	Switzerland	0	0
48	534	India	1	1	103	528	Taiwan	1	1
49	536	Indonesia	1	1	104	738	Tanzania	1	0
50	178	Ireland	0	0	105	578	Thailand	1	1
51	436	Israel	1	1	106	742	Togo	1	0
52	136	Italy	0	0	107	369	Trinidad and Tobago	1	1
53	343	Jamaica	1	1					

108	744	Tunisia	1	1
109	186	Turkey	1	1
110	746	Uganda	1	0
111	466	UAE	1	0
112	112	United Kingdom	0	0
113	111	United States	0	0
114	298	Uruguay	1	0
115	299	Venezuela	1	1
116	754	Zambia	1	0
117	698	Zimbabwe	1	1

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Table 1. Dependent variable: 5-yr average of current account (% of GDP): 1975 – 2003

	(1) Full	(2) w/o Africa	(3) IDC	(4) LDC	(5) LDC w/o Africa	(6) EMG
Gov't budget balance	0.1472 [0.0642]**	0.2089 [0.0540]***	0.1778 [0.0848]**	0.1572 [0.0795]**	0.2468 [0.0774]***	0.1253 [0.0858]
Lane's NFA (initial)	0.0516 [0.0099]***	0.0706 [0.0103]***	0.0929 [0.0158]***	0.041 [0.0127]***	0.0598 [0.0156]***	0.0553 [0.0162]***
Relative income	0.0141 [0.0366]	-0.0464 [0.0357]	-0.0672 [0.1837]	0.0525 [0.0760]	-0.0304 [0.0698]	-0.0675 [0.0876]
Relative income squared	0.0161 [0.0326]	0.0551 [0.0320]*	0.06 [0.1205]	-0.0254 [0.1263]	0.0344 [0.1109]	0.0615 [0.0645]
Rel. dependency ratio (young)	-0.0319 [0.0129]**	-0.0345 [0.0106]***	0.0177 [0.0271]	-0.0312 [0.0176]*	-0.0272 [0.0137]**	-0.0378 [0.0303]
Rel. dependency ratio (old)	-0.0218 [0.0112]*	-0.0126 [0.0101]	-0.006 [0.0193]	-0.0225 [0.0148]	-0.0071 [0.0122]	0.0041 [0.0227]
Fin. deepening (PCGDP)	-0.0131 [0.0081]	-0.0105 [0.0088]	-0.0187 [0.0106]*	-0.0176 [0.0141]	-0.0059 [0.0158]	-0.0128 [0.0102]
TOT volatility	-0.0258 [0.0248]	0.001 [0.0218]	0.1423 [0.0663]**	-0.0384 [0.0288]	-0.0122 [0.0272]	-0.0185 [0.0429]
Average GDP growth	0.1954 [0.1797]	0.1454 [0.1775]	-0.9728 [0.5505]*	0.2845 [0.2184]	0.2145 [0.2282]	0.4417 [0.2860]
Trade Openness	0.008 [0.0107]	0.0175 [0.0091]*	0.0364 [0.0117]***	-0.0009 [0.0135]	0.0108 [0.0129]	0.0151 [0.0151]
CA Openness dummy (k2)	-0.0004 [0.0060]	-0.0048 [0.0048]	0.0081 [0.0099]	0.0026 [0.0072]	-0.0029 [0.0062]	-0.0026 [0.0108]
KA Openness dummy (k3)	-0.0038 [0.0055]	-0.0054 [0.0049]	0.005 [0.0068]	-0.0045 [0.0085]	-0.0076 [0.0067]	0.0024 [0.0082]
oil exporting countries	0.0331 [0.0148]**	0.023 [0.0125]*	0 [0.0000]	0.0377 [0.0151]**	0.0308 [0.0142]**	0.0358 [0.0305]
Observations	420	326	126	294	200	229
Adjusted R-squared	0.36	0.51	0.51	0.33	0.49	0.35

Robust standard errors in brackets, * significant at 10%; ** significant at 5%; *** significant at 1%

TABLE 2. DEPENDENT VARIABLE: 5-YR AVERAGE OF NATIONAL SAVING (% OF GDP): 1975 – 2003

	(1)	(2)	(3)	(4)	(5)	(6)
	Full	Full w/out Africa	IDC	LDC	LDC w/out Africa	EMG
Gov't budget balance	0.1796 [0.0571]***	0.1427 [0.0569]**	0.2464 [0.0959]**	0.1372 [0.0700]*	0.0262 [0.0724]	0.0995 [0.0642]
Lane's NFA (initial)	0.0305 [0.0082]***	0.0368 [0.0099]***	0.0414 [0.0230]*	0.0266 [0.0101]***	0.0371 [0.0127]***	0.0319 [0.0096]***
Relative income	0.1386 [0.0596]**	-0.0287 [0.0607]	0.0219 [0.2651]	0.3133 [0.0969]***	0.1411 [0.1090]	0.1478 [0.1110]
Relative income squared	-0.107 [0.0499]**	0.0224 [0.0514]	-0.0108 [0.1702]	-0.4686 [0.1687]***	-0.3281 [0.1757]*	-0.0802 [0.0809]
Relative dependency ratio (young)	-0.1025 [0.0179]***	-0.1212 [0.0176]***	-0.0853 [0.0294]***	-0.0758 [0.0225]***	-0.0891 [0.0266]***	-0.0698 [0.0312]**
Relative dependency ratio (old)	-0.05 [0.0141]***	-0.0524 [0.0136]***	-0.0714 [0.0256]***	-0.029 [0.0200]	-0.0362 [0.0217]*	-0.0257 [0.0225]
Financial deepening (PCGDP)	0.0194 [0.0115]*	0.0327 [0.0113]***	0.0158 [0.0127]	0.0302 [0.0189]	0.0636 [0.0198]***	0.0166 [0.0163]
TOT volatility	-0.0197 [0.0279]	0.0081 [0.0373]	0.416 [0.0823]***	-0.0621 [0.0351]*	-0.0752 [0.0449]*	0.0886 [0.0392]**
Average GDP growth	1.9766 [0.2096]***	1.62 [0.2304]***	-0.3377 [0.6525]	2.0099 [0.2452]***	1.6913 [0.3286]***	1.2599 [0.3874]***
Trade Openness	0.0362 [0.0120]***	0.0289 [0.0116]**	0.0823 [0.0157]***	0.0318 [0.0153]**	0.0086 [0.0158]	0.0904 [0.0143]***
CA Openness dummy (k2)	0.0077 [0.0081]	0.0038 [0.0076]	-0.0229 [0.0127]*	0.0122 [0.0094]	0.0082 [0.0087]	0.0109 [0.0124]
KA Openness dummy (k3)	-0.0215 [0.0071]***	-0.0246 [0.0065]***	-0.0172 [0.0101]*	-0.0179 [0.0106]*	-0.0129 [0.0100]	-0.018 [0.0089]**
oil exporting countries	0.0894 [0.0232]***	0.0914 [0.0252]***	0 [0.0000]	0.0963 [0.0236]***	0.1026 [0.0275]***	0.1012 [0.0439]**
Observations	417	325	126	291	199	227
Adjusted R-squared	0.55	0.53	0.46	0.58	0.59	0.59

Robust standard errors in brackets, * significant at 10%; ** significant at 5%; *** significant at 1%; time fixed effects included

TABLE 3. DEPENDENT VARIABLE: 5-YR AVERAGE OF GROSS CAPITAL FORMATION (% OF GDP): 1975 – 2003

	(1) Full	(2) Full w/out Africa	(3) IDC	(4) LDC	(5) LDC w/out Africa	(6) EMG
Gov't budget balance	-0.0366 [0.0558]	0.0256 [0.0524]	0.2247 [0.0787]***	-0.1037 [0.0704]	-0.0919 [0.0628]	-0.0403 [0.0656]
Lane's NFA (initial)	-0.0275 [0.0074]***	-0.0197 [0.0090]**	-0.0142 [0.0142]	-0.0303 [0.0089]***	-0.0191 [0.0122]	-0.0211 [0.0094]**
Relative income	0.209 [0.0444]***	0.1335 [0.0462]***	-0.0197 [0.1610]	0.2972 [0.0760]***	0.1933 [0.0876]**	0.2544 [0.0931]***
Relative income squared	-0.1867 [0.0358]***	-0.1164 [0.0362]***	-0.0189 [0.1043]	-0.3736 [0.1427]***	-0.2219 [0.1555]	-0.1793 [0.0664]***
Relative dependency ratio (young)	-0.0493 [0.0162]***	-0.075 [0.0159]***	-0.1115 [0.0229]***	-0.0187 [0.0197]	-0.0497 [0.0233]**	-0.0457 [0.0270]*
Relative dependency ratio (old)	-0.0181 [0.0123]	-0.0389 [0.0122]***	-0.0665 [0.0183]***	0.0163 [0.0156]	-0.0209 [0.0177]	-0.0446 [0.0186]**
Financial deepening (PCGDP)	0.0386 [0.0090]***	0.04 [0.0088]***	0.0347 [0.0094]***	0.0506 [0.0160]***	0.0548 [0.0191]***	0.0284 [0.0109]***
TOT volatility	0.0184 [0.0220]	0.0509 [0.0275]*	0.1905 [0.0544]***	0.0015 [0.0249]	0.0067 [0.0315]	0.0553 [0.0373]
Average GDP growth	2.1017 [0.2056]***	1.6934 [0.2116]***	0.9436 [0.4905]*	2.1918 [0.2333]***	1.8316 [0.2610]***	1.3881 [0.3525]***
Trade Openness	0.0091 [0.0100]	0.0105 [0.0103]	0.0166 [0.0127]	0.0106 [0.0123]	0.0026 [0.0152]	0.0268 [0.0127]**
CA Openness dummy (k2)	0.0133 [0.0067]**	-0.0004 [0.0067]	-0.0251 [0.0112]**	0.0159 [0.0075]**	-0.0008 [0.0081]	0.025 [0.0105]**
KA Openness dummy (k3)	-0.0187 [0.0058]***	-0.0177 [0.0055]***	-0.0221 [0.0062]***	-0.0136 [0.0088]	-0.0005 [0.0088]	-0.0268 [0.0074]***
oil exporting countries	0.0758 [0.0143]***	0.0575 [0.0177]***	0 [0.0000]	0.0817 [0.0139]***	0.0665 [0.0183]***	0.1078 [0.0175]***
Observations	442	341	128	314	213	241
Adjusted R-squared	0.53	0.51	0.66	0.58	0.57	0.54

Robust standard errors in brackets, * significant at 10%; ** significant at 5%; *** significant at 1%; time fixed effects included

Table 3: Fixed effect estimation for IDC

	IDC
Gov't budget balance	0.3763 [0.0955]***
Lane's NFA (initial)	0.0475 [0.0196]**
Relative income	-0.4913 [0.2370]**
Relative income squared	0.3299 [0.1590]**
Relative dependency ratio (young)	0.0828 [0.0342]**
Relative dependency ratio (old)	-0.0367 [0.0306]
Financial deepening (PCGDP)	-0.0667 [0.0119]***
CA Openness dummy (k2)	-0.0038 [0.0112]
KA Openness dummy (k3)	0.0015 [0.0074]
oil exporting countries	0 [0.0000]
Observations	139
Number of countries	21
Adjusted R-squared	0.31
Standard errors in brackets, * significant at 10%; ** significant at 5%; *** significant at 1%	

**Figure 1-1: Actual, fitted current accounts
(Industrialized Countries)**

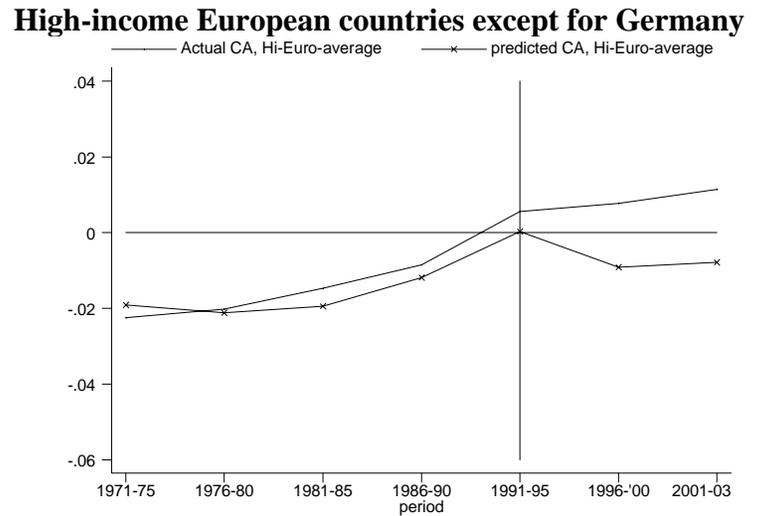
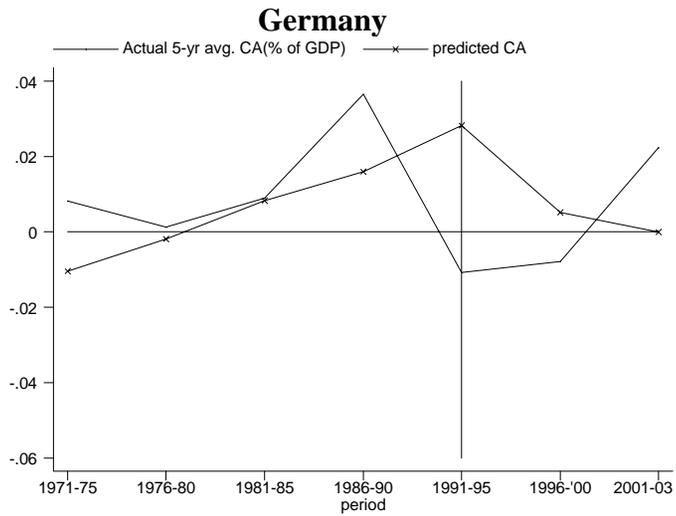
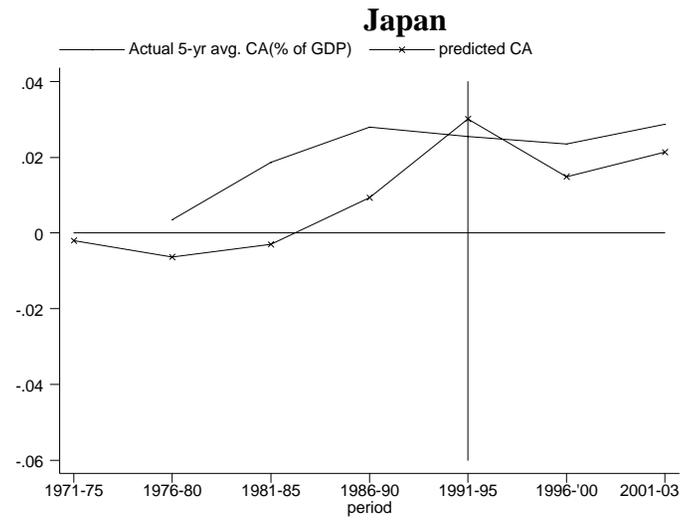
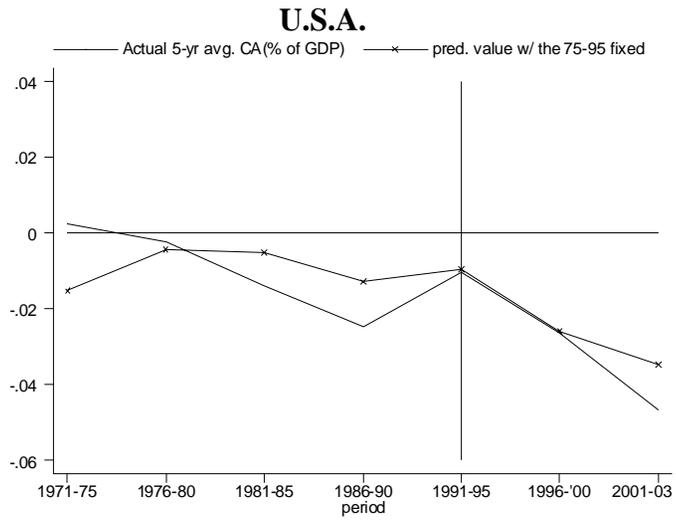
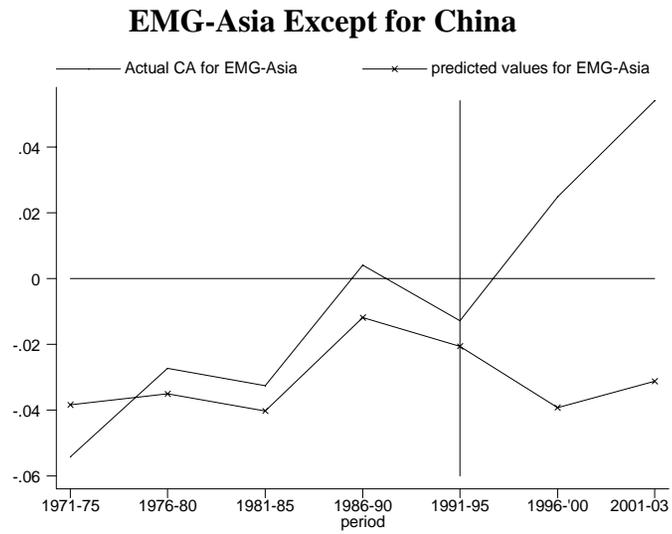
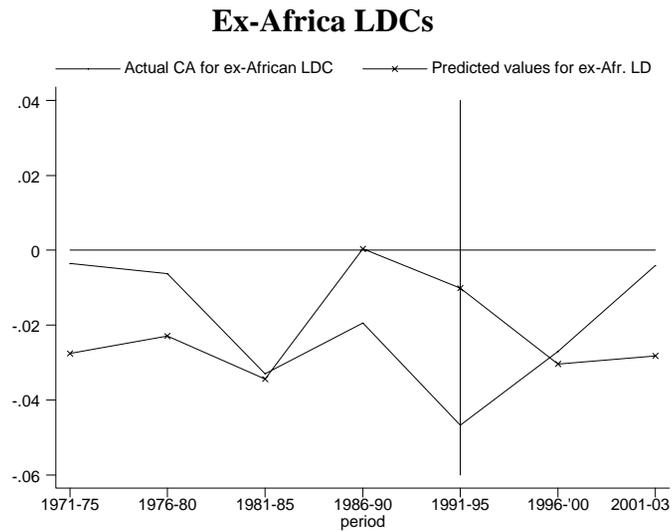


Figure 1-2: Actual, fitted current accounts (LDCs)



China

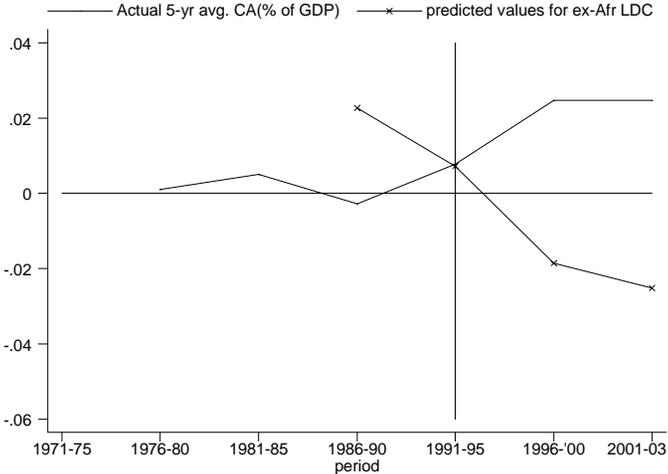


Figure 2: Actual, fitted national savings for ex-China EMG Asia

