The Necessity of a Lower Dollar and the Route There

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Introduction

Debates over economic policy tend to be enormously confused. It is often the case that even high-level officials and well-known economists seem ignorant of basic accounting identities. This leads them to make claims that literally do not add up. This seems to be especially common in the case of debates on trade policy. This paper is intended to clarify some of the key issues.

The first part is a simple accounting exercise showing that a large trade deficit implies that a country *must* either have a large budget deficit, negative private savings, or some combination of the two. Since both large budget deficits and negative private savings are generally viewed as undesirable, this means that a lower trade deficit should be a top policy priority. Furthermore, as a practical matter, a lower-valued dollar is the only plausible mechanism for getting the trade deficit closer to balanced.

The second section shows the implications of a lower trade deficit for the economy in terms of the sectors that will expand. While some analysts have implied that in the future the United States will no longer be engaged in manufacturing, this is not a plausible economic scenario. If the United States will continue to consume manufactured goods then it will have to produce the bulk of these goods itself. There is no sector of the economy where exports can reasonably be expected to expand enough to pay for the country's consumption of manufactured goods.

The final section discusses mechanisms for lowering the value of the dollar. In public debates, the value of the dollar is often treated as being beyond the control of the U.S. government. This is not true. The government certainly has the ability to influence the value of the dollar; however it may be necessary to sacrifice other policy goals to achieve a desired exchange rate for the dollar.

The Arithmetic of Trade Deficits, Budget Deficits, and Private Savings

We know that we can add up GDP on the output side by summing its components: consumption (C), investment (I), government (G), and net exports (X-M). This must be equal to the incomes (Y) generated in production, since every dollar spent ultimately goes to someone as income, whether it be profits, interest, wages, or rent. This gives us a basic identity that:

1) C+I+G+(X-M) = Y

This identity must always hold; it is true by definition.

We can then break up Y into disposable income (YD), which is total income minus taxes, and taxes (T) to get:

2) Y = YD+T

We can then divide disposable income into savings (S) and consumption (C), since by definition any income that is not consumed is saved. This gives us:

3) YD = C+S

Since we know that Y = C+S+T, we can rewrite equation 1 as:

4) C+I+G+(X-M) = C+S+T

We then eliminate consumption from both sides and we get:

5) I+G+(X-M) = S+T

And rearranging terms gives:

6) X-M = (S-I) + (T-G)

Equation 6 has a clear meaning. X-M is exports minus imports, or the trade balance, S-I is private savings minus private investment, and T-G is taxes minus government spending, or the government budget balance. The identity shown in equation 6 means that:

trade balance = (private savings – investment) + government budget balance

Remember, this is an accounting identity; it must be true.

If X-M is a negative number – meaning that we have a trade deficit – then we must have either a budget deficit or negative private savings, or both. There is no way around this situation. At the moment, the United States has a trade deficit of around 4 percent of GDP or $600 billion a year. This means that we must have either a budget deficit of $600 billion, or there must be a deficit of private savings, meaning that investment must exceed private savings by $600 billion. Alternatively, we could have a combination of the two deficits that sums to $600 billion.

We have had large trade deficits since the late 1990s. In the years just before the recession, budget deficits were actually fairly small. We balanced our accounts through a large deficit on the private savings part of the identity. The housing bubble led to a construction boom, which meant that investment was higher than normal. In addition, the run-up in house prices led to a surge in consumption, as people spent based on the bubble-generated equity in their homes. With consumption soaring, savings plummeted, with the saving rate hovering near zero over the years 2004-2007.[1] The construction boom coupled with near-zero household savings meant that there was negative private savings throughout this period.

The low rate of household saving of the bubble years is at least as undesirable as the large public deficits that have been at the center of policy debates. The low saving rates mean that people will enter old age having put aside very little to support themselves in retirement. This is the situation

1 The saving rate was likely lower than the official data show. There was a large negative statistical discrepancy in the peak bubble years, meaning that measured income exceeded measured output, reversing the normal pattern. Rosnick and Baker (2011) show that capital gains are highly correlated with movements towards a negative statistical discrepancy, implying that capital gains are appearing as normal income in the national accounts. Insofar as this is true, the implication is that income is overstated and therefore saving is overstated.

that we are seeing today, where the median baby boomer will have roughly enough money to pay off the mortgage on their home, and then nothing other than their Social Security to support them in retirement.[2] It is difficult to see the benefit to the economy or the country if a reduction in the government deficit simply led to a loss of private savings.[3] (Given the current weakness in the economy, a reduction in the government deficit in the near future is likely to lead to a reduction in private savings primarily by throwing people out of work. As a result, people who had intended to be saving would find that they instead had to dip into past savings to support themselves through a period of unemployment.)

While many of the most vocal advocates of lower budget deficits talk about this as route to reducing the trade deficit, the only plausible mechanism through which lower budget deficits can lead to lower trade deficits is if the lower budget deficit reduces the value of the dollar. In theory, this is supposed to work through interest rates, with lower U.S. interest rates making dollar-denominated assets such as government bonds less attractive to investors both here and abroad. As a result, investors will sell dollar assets and buy foreign assets, thereby reducing the demand for dollars and increasing the demand for foreign currency. This should cause the dollar to fall in price relative to other currencies.

As a practical matter, this adjustment mechanism has worked very poorly. The interest rate is just one factor affecting capital flows. In recent years foreign capital has gone into dollar-denominated assets as investors have sought a safe haven for their wealth. Also, many governments have pursued policies of deliberately propping up the dollar relative to their currency. This has been both to accumulate reserves as a cushion against financial instability and to sustain net exports as an engine of growth.

If the dollar does not fall, there is no plausible macro adjustment that will move the trade deficit closer to balance. Some smaller countries, such as Latvia, have gone the path of "internal devaluation" to improve their trade balance. This involves a process of deflation, with falling wages and prices, which leads to a real depreciation in the value of the currency even if the nominal value does not change. In the case of Latvia, this process has led to a sustained period of nearly 20 percent unemployment.[4] One implication of this path is that the real debt burden on homeowners and students would become even larger as the value of outstanding debt rises relative to wages.[5] Few would seriously propose that the United States follow the Latvian path of deflation to bring our trade deficit closer to balance.

Alternatively, many people have advocated "competitiveness" policies that are intended to improve the attractiveness of U.S. goods and services relative to those of our trading partners. These policies usually include better education and training for workers, improved infrastructure, and increased public support for research and development. While such policies can be helpful in promoting

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2 Rosnick and Baker (2010).

3 It is possible that a reduction in the budget deficit will lead to lower interest rates and thereby spur investment, but the effect of lower interest rates in boosting investment is limited even in good times (Chirinko, 1993); it is likely to be almost invisible in the depressed economy of 2012.

4 See Weisbrot and Ray (2011).

5 A real devaluation can also occur if the inflation rate in the United States is held below the inflation rate of our trading partners. The rate at which this can be achieved is limited by the rate of inflation that our trading partners are willing to tolerate.

growth when well-designed, it is difficult to envision a scenario in which they could reverse large trade deficits in the foreseeable future.

Implicitly, what these policies are intended to do is to increase the productivity of sectors where it is hoped that the United States will outcompete its trading partners.[6] In this respect, it is important to note that productivity growth in United States is already doing very well. Overall productivity growth averaged 2.4 percent over the last 15 years, compared to 1.5 percent over the preceding 22 years. Productivity growth in manufacturing, which accounts for the vast majority of trade, averaged 3.7 percent. So our competitiveness policies would have to improve on a performance that is already quite strong.

Suppose that the return on investment in competitiveness policies was 20 percent annually – a very high rate of return. Suppose that we focused these policies on sectors that were either export-oriented or import-competing, which produced $3 trillion annually in goods and services. If we were to spend $300 billion a year on competitiveness policies (about 2 percent of GDP), it would lead to an additional increase in the productivity of these sectors of 2 percent a year, if all the benefits were realized in the targeted sectors. That would have the same effect on trade in these sectors as a 2 percent real decline in the value of the dollar.

While that may seem a reasonable path to getting our trade deficit down – after 5 years, quality-adjusted prices in the targeted sector will have dropped 10 percent in price relative to the baseline scenario – the assumptions behind this arithmetic are hugely optimistic. First, it is unlikely that the average return on policies would be close to 20 percent. We would need very few mistakes (e.g. Solyndra) in this story or many homeruns to have an average return of 20 percent.

Second, not all of the benefits from most policies would be so narrowly targeted. If we were to improve our transportation or communications systems, much of the benefit would inevitably flow to other sectors of the economy, not just those most open to trade. The same would apply to education and training. If we could succeed in constructing policies where even half of the benefits would go to the targeted sectors, then it would be a major accomplishment. In that case, the 5-year productivity gain in these sectors would be a much less impressive 5 percent.

Finally, it is worth noting that 2 percent of GDP is not a trivial sum. Currently, spending on the domestic discretionary portion of the budget, which includes most investment spending, is just over 4 percent of GDP. This competitiveness policy would require raising spending in this category by 50 percent. That would not be a simple task. Even in a very different political environment, securing half of this amount for a competitiveness policy would be a major achievement. That would leave 5-year productivity gains of 5 percent, assuming that we could manage solid enough policies to sustain a 20 percent return in the targeted sectors. This would buy as much in improving our trade balance as a decline in the real value of the dollar of 1 percent a year.

In short, we should certainly be looking for better policies to foster productivity and growth. Many of these policies, such as improved education, should be pursued as ends in themselves. However, it is not realistic to envision large reductions in the United States trade deficit as a result. There is no

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6 Productivity could be measured in quality of output, for example producing better cars and computers, as opposed to a pure quantity measure.

alternative to a large decline in the value of the dollar as the mechanism to quickly bring trade closer to balance.

The Impact of the Dollar on Trade

A lower-valued dollar has the same effect as imposing a tariff on all imports and providing a subsidy to exports. If the real value of the dollar falls by 10 percent against the currencies of our trading partners, then the initial impact is to make imports 10 percent more expensive for people in the United States and to make our exports 10 percent cheaper for consumers in other countries.[7] This could have a dramatic impact on the country's trade balance and employment in the United States.

Table 1A shows the change in exports and **Table 1B** shows the change in imports that would be implied by a 10 percent decline in the value of the dollar, assuming that the change is fully passed on in prices. The calculations are based on 2010 trade data (in 2010 dollars) and assume an elasticity for both exports and imports of 2. (This means that the percentage change in quantities is twice as large as the percentage change in price.)

TABLE 1A
Change in Exports in Response to a 10 Percent Drop in the Value of the Dollar

		With 10 Percent Drop in the Dollar	
	Billions $	Billions $	Change
Exports of goods and services	1,839.8	2,250.0	410.2
Exports of goods	1,277.8	1,562.7	284.9
Foods, feeds, and beverages	107.7	131.7	24.0
Industrial supplies and materials	388.7	475.4	86.7
Capital goods, except automotive	446.6	546.2	99.6
Automotive vehicles, engines, and parts	112.0	137.0	25.0
Consumer goods, except automotive	165.9	202.9	37.0
Exports of services	562.0	687.3	125.3
Transfers under U.S. military agency sales contracts	15.5	19.0	3.5
Travel	103.5	126.6	23.1
Passenger fares	30.9	37.8	6.9
Other transportation	39.9	48.8	8.9
Royalties and license fees	105.6	129.1	23.5
Other private services	250.3	306.1	55.8
Other	16.2	19.8	3.6

Source: Author's analysis of data from the Bureau of Economic Affairs.

7 As a practical matter, changes in currency values would not be passed on one-to-one in prices since firms will offset part of the change in lower or higher profit margins.

TABLE 1B
Change in Imports in Response to a 10 Percent Drop in the Value of the Dollar

		With 10 Percent Drop in the Dollar	
	Billions $	Billions $	Change
Imports of goods and services	2,356.7	1,940.0	-416.7
Imports of goods	1,947.3	1,603.0	-344.3
Foods, feeds, and beverages	92.5	76.1	-16.4
Industrial supplies and materials, except petroleum and	250.4	206.1	-44.3
Petroleum and products	353.7	291.2	-62.5
Capital goods, except automotive	450	370.4	-79.6
Consumer goods, except automotive	486.6	400.6	-86.0
Imports of services	409.4	337.0	-72.4
Direct defense expenditures	30.4	25.0	-5.4
Travel	75.5	62.2	-13.3
Passenger fares	27.3	22.5	-4.8
Other transportation	51.2	42.1	-9.1
Royalties and license fees	33.5	27.6	-5.9
Other private services	180.6	148.7	-31.9
Other	11	9.1	-1.9

Source: Author's analysis of data from the Bureau of Economic Affairs.

Using this set of assumptions, trade would be roughly brought into balance by this fall in the value of the dollar. (Imports would cost 10 percent more in actual dollars – the data shown holds prices fixed so as to measure the real effect). While the assumption of a uniform elasticity of 2 is a serious over-simplification (especially in the case of imported oil and agricultural exports, where the elasticities are likely to be less than 1), this exercise can give a reasonable picture of how a lower dollar and balanced trade would affect the economy. The combined increase in the export of non-agricultural goods and decrease in the imports of non-petroleum goods is more than $540 billion. By comparison, manufacturing output in 2010 was $1,229.2 billion.[8] This implies that a movement toward balanced trade would increase manufacturing output by 43.9 percent. If manufacturing employment increased proportionately, it would imply a gain of more than five million manufacturing jobs, as shown in **Table 2**. While this is clearly a very rough number, the basic assumptions behind this calculation are likely to hold.

8 Bureau of Economic Analysis, National Income and Product Accounts, Table 6.1D, Line 8.

TABLE 2
Increase in Manufacturing Employment with Balanced Trade

	Dec 2011	Increase with balanced trade
Manufacturing	11,790	5,176
Durable goods	7,365	3,233
Wood products	332	146
Nonmetallic mineral products	368	161
Primary metals	394	173
Fabricated metal products	1,377	604
Machinery	1,070	470
Computer and electronic products	1,124	494
Electrical equipment and appliances	373	164
Transportation equipment	1,409	618
Motor vehicles and parts	724	318
Furniture and related products	346	152
Miscellaneous manufacturing	573	251
Nondurable goods	4,425	1,943
Food manufacturing	1,439	632
Beverages and tobacco products	187	82
Textile mills	121	53
Textile product mills	112	49
Apparel	154	68
Leather and allied products	31	13
Paper and paper products	400	176
Printing and related support activities	460	202
Petroleum and coal products	110	48
Chemicals	783	344
Plastics and rubber products	628	276

Source: Author's calculation based on data from Bureau of Labor Statistics, Table B-1 of December 2011 Employment Situation.

The United States has been able to run large trade deficits over the last 15 years both because foreign governments felt the need to accumulate dollars as a reserve currency and also because many countries considered it desirable to have an export-led growth strategy. Both factors are likely to be reduced in importance in the years ahead. As a result, the United States is likely to move toward more balanced trade over the next decade regardless of whether or not it is done as conscious policy.

The developing world hugely increased its ratio of foreign reserves to GDP since the East Asian financial crisis.[9] It is unlikely to feel the need to increase this ratio further and in many cases may opt to reduce it, assuming that the world economy settles into a more stable growth path. In addition, countries that have experienced rapid growth, most importantly China, are likely to redirect their focus toward more inward-looking development in order to improve the standard of living of their populations. This will cause trade surpluses to dwindle in the years ahead. For these reasons, it is less

9 See Baker and Walentin (2001) and Rodrik (2006).

likely that countries will want to continue to buy U.S. assets in future years, which have propped up the dollar and led to the U.S. trade deficit.

It is possible that a growth in a surplus in services will allow for the persistence of a larger deficit in goods. However, a closer examination of service exports suggests that this is unlikely. To start, services only account for a bit more than 20 percent of all trade, so it would require extraordinary growth in service exports to make up for a large deficit in goods.

Furthermore, many areas of services are not likely to lend themselves to rapid expansion. For example, tourism and passenger fares account for almost a quarter of service exports. These are well-developed industries that are not likely to expand especially rapidly in the future. Royalties and licensing fees account for another 20 percent of service exports. The ability to collect these fees depends largely on our ability to impose U.S.-type patent and copyright rules on other countries, in exchange for access to the U.S. export market. While this is a requirement of international agreements (mostly importantly TRIPs), enforcement in many developing countries of these rules is very limited. If the U.S. export market becomes relatively less important to other countries in the future, then they are less likely to agree to impose the huge economic losses on their own economies associated with protecting the intellectual property claims of U.S. corporations. While these fees will undoubtedly increase in the years ahead, it is unlikely that they will rise as rapidly as they had in prior decades.

The other large category of services includes a wide range of professional and managerial services. The United States currently has a substantial surplus in this category, but this surplus is more likely to shrink than grow in the decade ahead. This is due to the growth of developing countries, such as China and India, in these areas. In the case of India, the United States already has a large deficit in computer services, which has been growing rapidly in recent years. As the number and quality of workers with college and advanced degrees in technical areas increases in these countries, they are likely to increasingly undercut highly paid workers in the United States, unless the government erects protectionist barriers.

Getting the Dollar Down

Contrary to what is often asserted in political debates, where it is often implied that the United States is uniquely unable to affect the value of its currency, the United States government actually has substantial power to determine the value of the dollar relative to other currencies. However, setting a value of the dollar against other currencies may compete with other goals that it may also be pursuing.

This tradeoff may be true for both political and economic reasons. For example, if the government is negotiating a lower value of the dollar with another country, then it may come at the expense of other objectives. This is quite apparent in the case of China, where there are numerous economic and political disputes between the two countries. If China were to accept a lower-valued dollar, which would mean a higher-valued renminbi (RMB), the United States may have to give ground on other demands, such as respecting Microsoft's copyrights or Pfizer's drug patents. Negotiations

inevitably involve compromise and if the United States was to get China to make concessions on the value of the RMB, then it would certainly have to offer something else in return.[10]

However there would be economic tradeoffs even if there were no political obstacles to lowering the value of the dollar. A lower-valued dollar will raise the price of imported goods. This is deliberate, since it is necessary to restore the competitiveness of U.S.-made products. But higher-priced imports will lead to modestly higher inflation. While this effect can be exaggerated, it is nonetheless real. If a fall in the dollar were to lead to a rise in the price of all imported goods by 10 percent, this would lead an increase in the overall inflation rate of roughly 1.5 percentage points if it were fully passed on in the price of final products.

As a practical matter, costs would not be fully passed on. Also any price increases associated with a decline in the value of the dollar are likely to take place over a period of years, not all at once, so any inflationary impact could be mitigated by productivity growth through time. But there is no doubt that a lower-valued dollar would lead to some increase in inflationary pressures. This means that any administration that was committed to reducing the value of the dollar to move toward more balanced trade must be prepared to accept some rise in the rate of inflation.

If an administration is prepared to pursue a policy of lowering the value of the dollar, including against currencies with exchange rates that are fixed against the dollar, there are at least three routes that it can pursue:

1) penalize the dollar holdings of countries that are buying up dollar assets in order to prop up the value of the dollar against their currencies,
2) buy futures of the currency in question, and/or
3) offer to directly buy the currency in question at a higher value than the exchange rate fixed by the other country.

The first route was developed by former Federal Reserve economist Joe Gagnon. In a co-authored *Foreign Affairs* article, Gagnon suggested imposing punitive taxes on the interest earnings on China's holdings of U.S. government debt.[11] He suggested an initial rate of 30 percent, with the possibility of raising the rate to 40 percent, 50 percent, or even higher, if this did not discourage China from continuing to buy and hold large amounts of U.S. financial assets. Gagnon claims that this tax is consistent with WTO rules and would not violate any other trade agreements.

A second path potentially available to the United States would be to intervene in futures markets. For example, while the RMB is not an openly traded currency, there is a substantial market in RMB futures. The U.S. Treasury Department and the Federal Reserve could intervene on a large scale in the futures market buying up large volumes of RMB futures, thereby driving up the price. If the price of RMB futures substantially exceeds the spot price of RMB, then holders of RMB would be reluctant to exchange them for dollars at the current rate. They would have an enormous incentive to find ways to sell them instead on the futures market, where they could make a guaranteed profit.

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10 There are many developing countries that officially or unofficially peg their currency against the dollar. They are likely to follow movements of the yuan, so a reduction in the value of the dollar against the yuan is likely to lead to a fall of the dollar against a wide range of developing country currencies.

11 Gagnon and Hufbauer (2011).

This might lead them to violate China's laws on capital flows, but given the potential for enormous gains, it is likely that many people with access to large amounts of RMB would take advantage of this opportunity and evade the law. A large enough volume of purchases of futures should raise the RMB to whatever level is desired.

The last route to lowering the value of the dollar follows the same path. The current value of the RMB is just under 16 cents. The U.S. Treasury could announce a plan to buy RMB at a price of 20 cents, approximately 25 percent above the value being maintained by China. This would give holders of RMB an enormous incentive to circumvent China's restrictions and trade their RMB directly with the U.S. Treasury. This could make the effective price of the RMB something close to the level set by the U.S. Treasury, since anyone with large holdings of RMB would try to find an avenue to directly or indirectly take advantage of the much higher price available from the U.S. Treasury rather than the Chinese government.

The U.S. Treasury would have some ability to buy RMB simply by shuffling funds already under its control. In other words, instead of keeping its reserves in dollars, it could keep them in RMB. However, this would likely have a limited impact on the market. To be able to make large enough purchases to move the market, it would be necessary to have funds appropriated explicitly for this purpose or to have the Federal Reserve intervene and offer to buy RMB at the rate set by the U.S. Treasury. It is important to recognize that this is likely to be a costless exercise since the issue here is that the current exchange rate does not reflect the market value of the RMB. The goal is to purchase RMB at something close to the market exchange rate. This means that eventually it should be possible to see the RMB at roughly the price that they were purchased.

These paths to reducing the value of the dollar against the RMB are clearly confrontational. Ideally the United States would avoid resorting to these measures and instead negotiate a path to a lower-valued dollar. This would inevitably require concessions in other areas where there are conflicts with China's government. If the U.S. government actually were committed to lowering the value of the dollar against the RMB, it likely could be accomplished through negotiations, but it is wrong to imagine that the United States has no options to unilaterally lower the value of the dollar.

Conclusion

The major imbalance in the United States economy at present is the large trade deficit. This implies either large budget deficits and/or negative private savings. The only plausible route for reducing the trade deficit is lowering the value of the dollar. The value of the dollar is the main determinant of the relative price of foreign and domestically produced goods and services. If the real value of the dollar can be reduced by 10 percent, it would likely be sufficient to eliminate the trade deficit.

A reduction of this magnitude in the real value of the dollar would lead to a boom in manufacturing, potentially increasing output in the sector by more than 40 percent and creating more than five million manufacturing jobs. This increase in output and employment would likely have a substantial impact on the labor market, likely boosting the relative wages of non-college-educated workers.

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