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Global imbalances and the International monetary system

What is the scale of current global financial and trade imbalances, how did they arise, and what are their implications? Net global imbalances in relation to underlying national and global GDP rose erratically from the end of World War II, hit about 2 percent of global GDP in 1980, peaked at roughly 6 percent of global GDP in 2006, and then, consequent to the global financial crisis, receded to a still unsustainable 4 percent of global GDP in 2012. Peak imbalances were roughly on the order of those present just before the First World War, at the height of the first period of post-industrial revolution globalization. These net imbalances conceal even larger gross flows of dubious economic utility. Because imbalances are ultimately recorded as assets and liabilities, growing net imbalances can and have cumulated, from roughly 50 percent of global GDP in 1995 to about 150 percent of global GDP in 2011 and absolutely from \$15 to \$150 trillion.¹

Specific constellations of domestic power rather than ‘natural’ economic outcomes drove the sustained and substantial global imbalances of the 2000s. These imbalances reflect the structure of political power globally and domestically in a few key countries as much as they reflect underlying economic activity in those countries. Put simply, the US dollar’s role as an international reserve currency interacts with politically generated weak domestic demand in China, Germany and Japan to produce global and intra-European Union imbalances. Weak domestic demand in China, Germany and Japan makes them reliant on exports for growth. These exports find their market in the United States, which is one of the few major economies that has a domestic political economy oriented towards consumption. Current account data from 2006 show this relationship. Japan could not have attained a current account surplus of 3.7 percent of its GDP, nor China at 7.2 percent and Germany at 6.3 percent, without a corresponding US current account deficit of 6.9 percent of GDP.

But what then explains those US current account deficits and surpluses elsewhere? In the surplus countries elites have shifted income out of the hands of ordinary households, dampening consumption. In the United States, domestic politics has similarly steadily shifted income towards the upper decile over the past two decades. Normally this would tend to dampen consumption there as well, but the United States is able to generate and sell assets to the rest of the world. This closes the loop with the dollar’s status as international reserve currency. Export surplus countries are willing to accept US dollar denominated assets when they supply excess US consumption. The long-term sustainability of these imbalances thus rests on two factors: the ability of

¹ Stephen Cecchetti, *Global Imbalances: Current Accounts and Financial Flows*, Myron Scholes Global Markets Forum University of Chicago 27 September 2011, p. 4.

the US economy to generate and validate assets other countries are willing to hold, and political acquiescence to a world in which more and more wealth is controlled by a narrow set of elites in the United States and the three main exporters. By the same token, an unwinding of these imbalances requires shifts in the distribution of income that hurt those political elites.

The first section of this chapter describes the nature and scale of global imbalances. The second section looks at alternative explanations for those imbalances. The third section advances a domestic political argument for imbalance. The final section concludes that the real action around global imbalances and the monetary system occurs at the highest and lowest levels of the world economy, in the way that the US global empire binds together disparate domestic distributions of income. Imbalances are an outcome, a dependent variable, of these other processes.

Imbalances across four periods

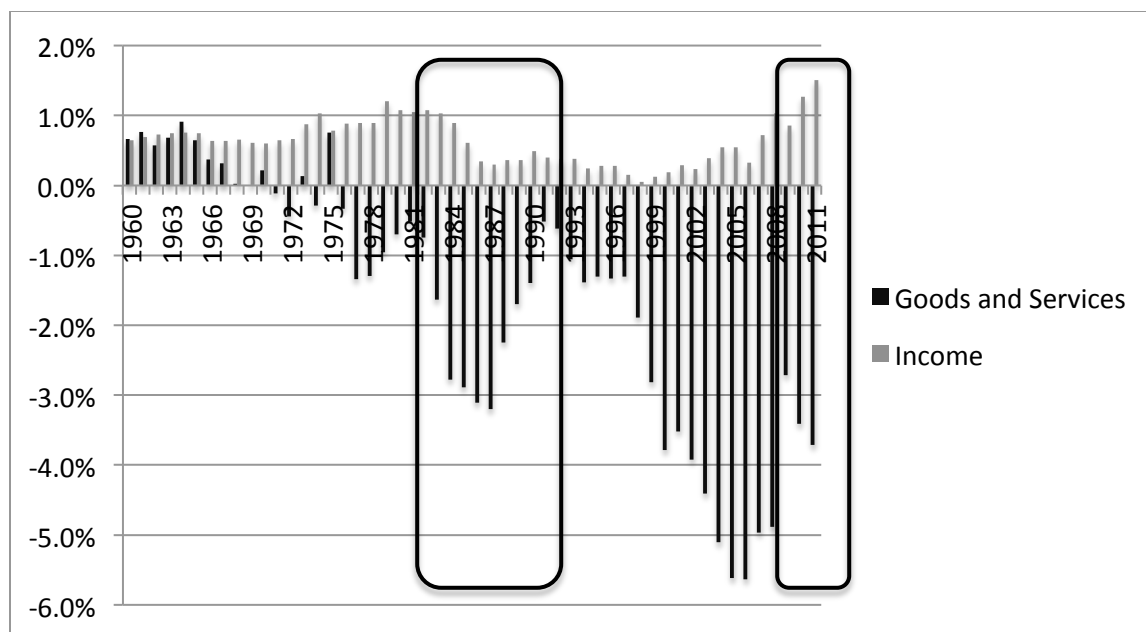
Global trade and financial imbalances are at root the same thing. From a technical accounting perspective, trade imbalances cannot arise unless there is a counterpart financial flow. Current account deficits are financed by capital account surpluses. Interest payments on foreign debt necessarily take the form of physical exports (or service and tourism ‘exports’) even if those are made through third parties and not made directly to the creditor country. Thus we can discuss both trade and financial imbalances at the same time even though they have slightly different implications.

Imbalances after 1945 fall into four distinct periods defined by who borrowed/loaned and for what purpose. 1950-1970 saw low levels of market based imbalances, with government-to-government transfers dominating capital flows. On the deficit side of major imbalances were the European countries, which were undergoing post-war reconstruction and, to a much lesser extent, developing countries that were borrowing to create modern infrastructure. At the end of this period, the United States had ceased to be a surplus country in terms of trade in goods and services, but its international income more than offset this emerging deficit. This income was mostly recycled as purchases of assets in Western Europe, as US multinational firms created, consolidated or expanded their operations there. All told, the United States ran consistent, small surpluses averaging less than one-half percent of US GDP in the 1960s. (Figure 1 shows US deficits or surpluses on trade in goods and services and on international income as a percentage of US GDP.) Nonetheless, a discourse of panic over the US balance of payments emerged in the 1960s and facilitated an end to the Bretton Woods system of fixed exchange rates.

The end of Bretton Woods saw a shift towards private-to-government and private-to-private transfers 1970-2000. Direct investment by multinational firms became a major source of lending but was quickly overshadowed by bank lending to sovereigns. Developing country borrowing increased rapidly (and unsustainably) as they financed more infrastructure and productive investment, as well as oil-shock driven trade imbalances. The counterpart here was the emergence of large scale lending by (some) oil exporters, albeit intermediated through US and European Banks. In the 1970s, the United States was essentially in balance despite some year-to-year volatility. But all this changed decisively in the 1980s, with the on-set of the Latin American debt crisis. The United States assumed a new role as the importer of last resort, and thus as the primary deficit country. In the 1950s and 1960s the United States had supplied liquidity to the world through unilateral transfers. But now it supplied liquidity by allowing indebted countries to run surpluses. These US deficits on goods and services are clearly visible in the first shadowed section of Figure 1. Politically, US deficits represented a choice to save banks

Figure 1: US trade balance on goods and services and international income as percentage of US GDP, 1960-2011

Source: Author’s construction of data from US Bureau of Economic Analysis online database, <http://www.bea.gov>

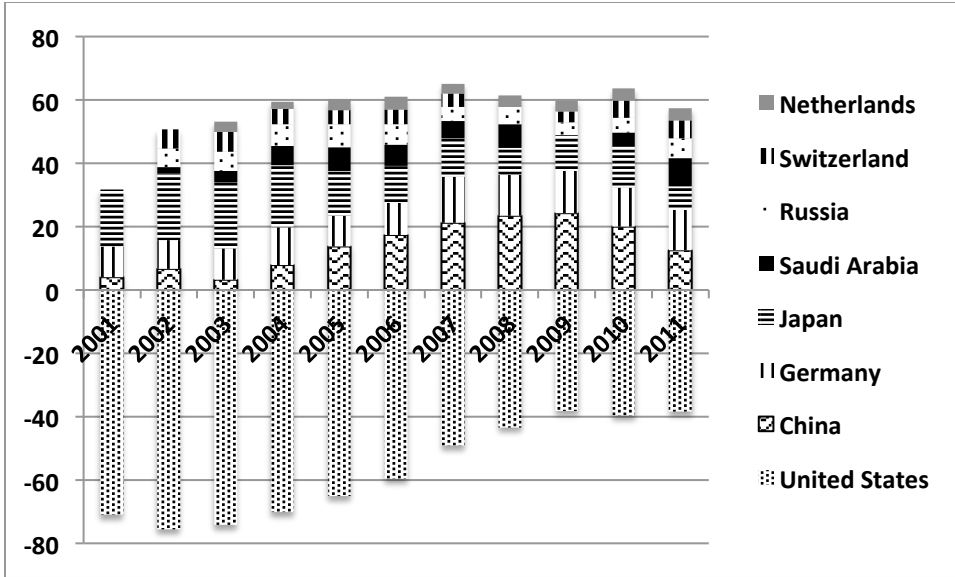


rather than the real economy in either Latin America or the United States. US bank exposures to emerging market debtors exceeded their capital; an immediate write down of debt would have bankrupted those banks. Emerging market trade surpluses permitted interest payments that in turn permitted banks to maintain the fiction that outstanding loans were good. Meanwhile investment collapsed in Latin America, driving down their counterpart US exports of capital goods. With the waning of the Latin American crises, American deficits also shrank. But each subsequent developing world crisis saw the same pattern. The 1994 Mexican crisis and the 1997 Asian Financial Crisis each bumped up US deficits as the US government opted to protect banks and creditors at the expense of debtors and its own traded sector.

Despite this, a sea change occurred in reaction to the 1997-98 Asian crisis. Emerging market economies opted to protect themselves by accumulating large foreign exchange reserves. This caused a massive reversal in the direction of transfers. Before 1997 developing countries, with the exception of oil exporters, were net borrowers. But by 2000, developing countries were net lenders on a large scale to developed countries, and moreover in the form of government-to-government transfers. That said, this reversal did not occur across the board. Most of the lending by developing countries to rich countries occurred as flows into the US, and within that by Asian countries to the US, and within that by China to the US. Figure 2 shows that over half of capital inflows in the 2000s went to the US, with China and Japan generating about one-third of all outflows. Germany and the oil exporters accounted for another third. Figure 2 is slightly deceptive, in that it seems to show a shrinking of US reliance on global capital flows from 2003 forward. This reflects its construction in percentage terms; absolutely, US claims on global capital rose continuously through 2007.

Figure 2: Share of global capital exports (+) and imports (-) as percentage of all net global capital flows, 2001-2011

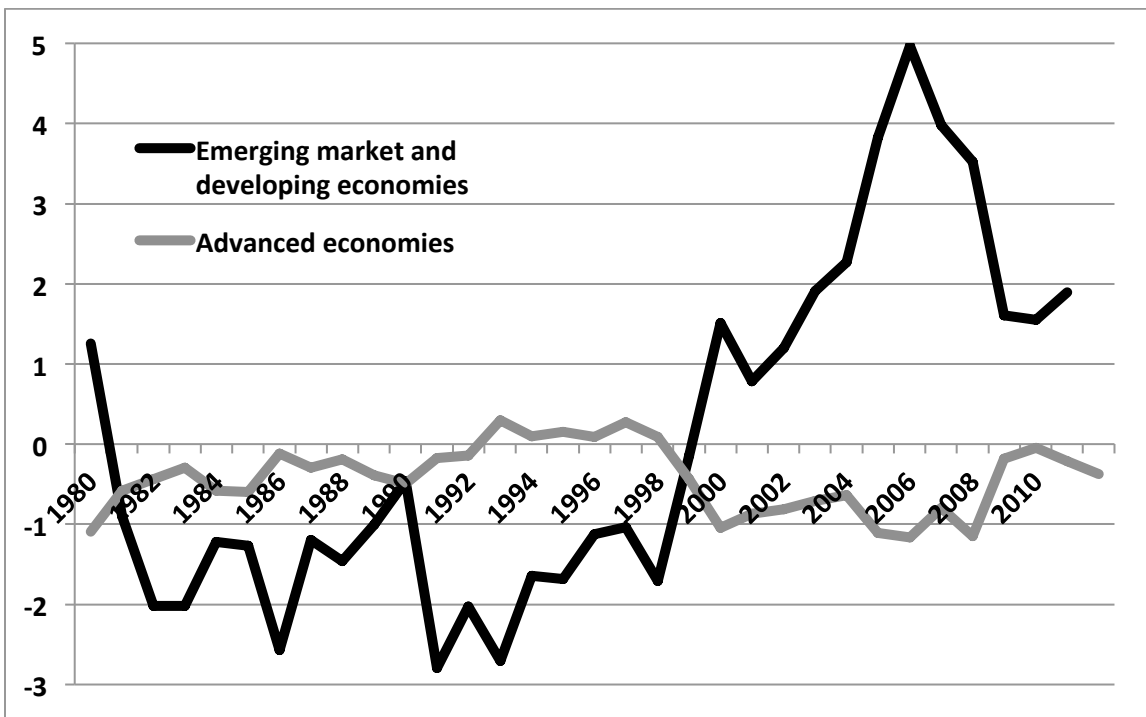
Source: Author's compilation from IMF, *Global Financial Stability Report*, various years.



By contrast, intra-European lending retained the traditional core-to-periphery pattern, with Germany, the Netherlands and, to a lesser extent, France lending to southern and eastern Europe. Similarly, Japanese lending retained a traditional core-to-core and core-to-periphery pattern. Figure 3 shows the evolution of current account balances in the advanced and emerging market economies. The post 1997-98 reversal is marked, with the peak corresponding to the contemporaneous peak of the US business cycle (and housing bubble) in 2006.

Figure 3: Current account balance as a percentage of GDP, advanced and emerging market economies

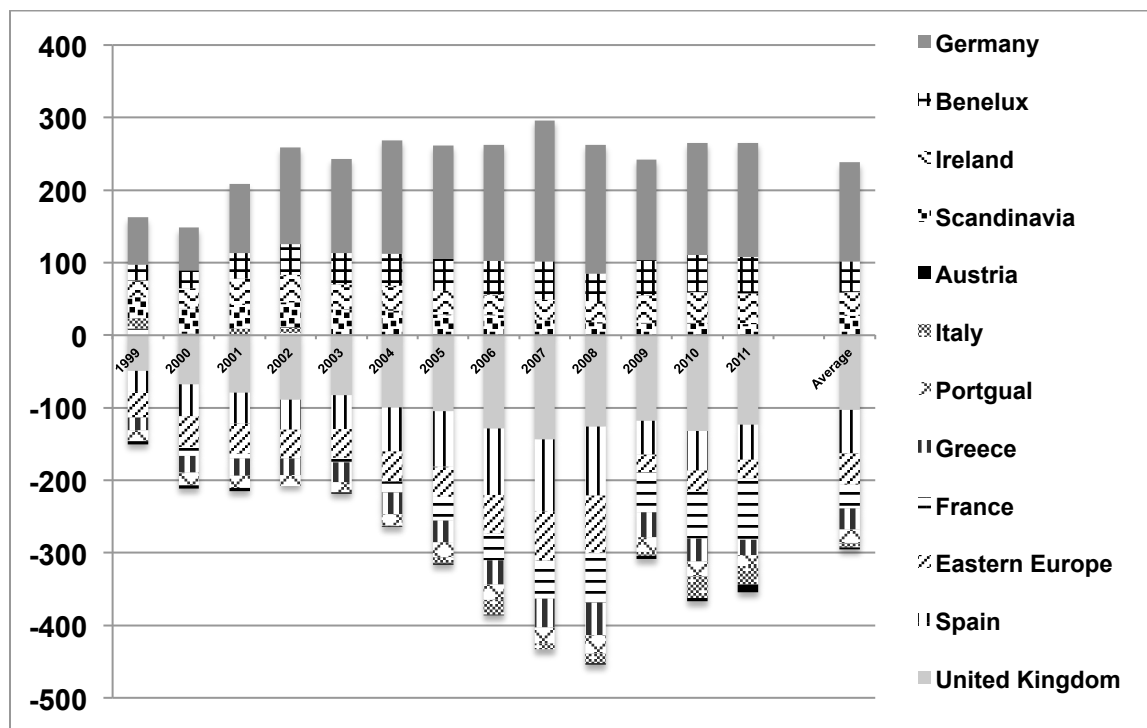
Source: IMF WEO database, October 2012



The major exception to the reversal of capital flows occurred in Europe, where, as noted, traditional core-to-periphery lending not only prevailed, but expanded. Figure 4 shows the ballooning of trade deficits by the south, France, and Britain as well as the counterpart surpluses in northern Europe. [do aggregated or internal vs external?] These deficits expanded most rapidly from 2003 to 2008 under the combined impact of excessively low European Central Bank interest rates relative to what the southern economies probably needed, and excessively large US demand for imports, which helped make the southern and English speaking economies look rosier than they actually were. Roughly speaking we can divide the EU countries into four groups based on whether their internal or external position is in surplus or deficit (Figure 5). We will discuss the significance of these positions later, except to note here that crisis countries are mostly, but not exclusively, found in the double deficit box.

Figure 4: European Union trade (goods and services) deficits, by country or country group, 1999-2011, € bil.

Source: Author's construction from Eurostat data



Finally, a new period began after 2008, as Asian lending to rich countries began declining. China increasingly priced itself out of global markets and political coalitions began adjusting the growth strategies that had created the imbalances and crises of the 1990s/2000s. Despite this rescission in these imbalances, they remain considerably higher than those of the 1960s and 1970s. What explains these imbalances, and particularly the dynamics driving US deficits on the one side, and European and Chinese surpluses on the other?²

Figure 5: Four different positions of EU economies based on cumulative trade deficit or surplus, 1999-2011.

Source: Author's construction from Eurostat data

² Some oil exporters also run large surpluses, but these are easier to explain given their small populations and the large fluctuations in oil prices.

Countries ordered by size of deficit / surplus Countries in Bold are in overall surplus		External (Non-EU)	
		Surplus	Deficit
Intra-EU	Surplus	Germany, Ireland, Scandinavia	Netherlands, Belgium, Italy
	Deficit	France, Austria	Britain, Spain, Eastern Europe, Greece, Portugal

Existing explanations

Roughly speaking there are five ways to explain these imbalances. Of these, three rely on economic or demographic factors and thus could be understood as normatively neutral and relatively resistant to policy changes. The last two are more political, implying that struggles for power matter in the evolution of imbalances and that imbalances are an outcome of deliberate policy choices including those that affect the domestic distribution of income. Our explanation falls into the last category.

Economists offer up three reasons why global imbalances might exist and persist over time. Ultimately all of these are based on the aggregation of individual behaviors in the face of heterogeneous distributions of incomes, growth and the working age population, or presumed differences in time preferences around consumption. We can neither expect that all economies will grow at the same speed nor be able to produce the full range of goods they desire to consume. Differences in growth rates would produce trade deficits in rapidly growing economies and surpluses in slower growing ones, pulling in exports and thus financial flows from the slower growing economies. Three different scenarios flow from this argument.

First, standard economic theory expects that differences in growth rates and in the composition of production will produce small and transient imbalances. This explanation is not consistent with the sequence of periods described above. Both nominal and real growth rates were more disparate in the Bretton Woods period, which was a time of relatively small imbalances. Granted, this was also a period of significant capital controls in which financial transfers were dominated by government-to-government flows. But the equilibration of rich country growth rates in the second and third periods also coincides with large and persistent imbalances. While these flows are not on the scale of nineteenth century flows, nineteenth century flows were dominated by the historically unusual phenomena of mass migration to lightly populated areas in the new world and southern hemisphere temperate zones, as well as to various frontier zones in Asia. This gave rise to huge capital flows to finance construction. Even so, FDI flows alone have amounted to as much as 3 or 4 % of global GDP at time in the past two decades, rivaling the levels of the C19.

Second, standard economic theory expects that capital will flow from capital rich countries (which are almost always also income rich) to capital poor developing countries. Physically, developing countries run trade deficits in order to import the capital goods needed to bring their economies closer to the global production technology frontier. The counterpart to this flow is an increase in their external debt. This argument would predict that developing countries would be net debtors, developed countries would be net creditors, and that over time as countries 'graduated' out of backwardness they would extinguish their debts via exports back to rich countries. We do see this pattern in the first two time periods listed above. On the other hand, this explanation is not at all consistent with the third period and to a lesser extent the fourth. In the third period capital flowed "uphill" from

many developing economies, and in particular Asia. Moreover, this uphill flow accounted for between one-third and one-half of global capital flows, a non-trivial share.

The weakness of these two standard economic explanations called forward a third economic explanation intended to deal with the anomalies that these flows, in particular the “uphill” flow of capital, presented for existing theories. This third explanation for global macro-economic imbalance focuses on demography, which is also an apolitical source of disequilibrium. Put simply, these arguments claim that excess savings arise from the relatively older demographic structures of the countries that finance relatively the young United States.³ Countries with aging populations will tend to save more than countries with younger populations, as personal decisions to prepare for retirement cumulate into a general decline in domestic consumption. Excess production thus gets sold overseas, creating claims that will return imported consumption goods for future retirees. These arguments look specifically at Northern Europe and Japan, which have populations that in the aggregate have a higher median age than that in the United States, and which will age even more rapidly over the medium term. These countries also have relatively high levels of public debt. Thus, plausibly their populations make rational decisions to save in anticipation not only of impending retirement, but also a relatively weak public capacity to deliver pensions and healthcare. China is not as old as Europe but will age considerably more rapidly than the United States because of its one-child policy. Moreover, its social welfare system is far from comprehensive. Here too, individuals have an incentive to save in anticipation of old age. On the other side, a relatively young America might rationally borrow now, shifting consumption into the present and working harder later to supply regions full of old people. Politics plays no role in this analysis.

This explanation leaves much to be desired however. While Japan has one of the largest current account surpluses absolutely and as a percentage of GDP, the Japanese have been saving less and less of their income over the past decade even as the pension system got less and less financially robust. Meanwhile Japan lends disproportionately to the US rather than to its less developed and much younger neighbors. This is true even of Japanese investment in China, which, while non-trivial by any absolute measure, is fairly small relative to China’s economic weight. In Europe, the correlation of population growth and aging with aggregate national savings is also weak, despite the obvious anecdotal example of gray, trade surplus Germany. Equally grey and more indebted Italy is roughly in balance with respect to trade. As an aggregate, Europe does not run a large current account surplus. The EU27, the EU25 and the Euroland 17 each run a slight deficit. Moreover, the counterpart economies for Germany also have relatively old and aging populations too; Germany invests disproportionately in European economies with an age structure similar to itself rather than in the relatively young US or even younger developing countries.

Finally, America is not the only demographically young country, so demography alone does not fully explain flows out of proportion to its share of the global economy. Moreover, it is very hard for standard economic theory (and common sense) to explain why developing countries, which by definition are short of human, physical and infrastructural capital, would find it rational to invest in low yielding passive assets abroad rather than exploiting domestic investment opportunities. Borio and Disyatat successfully dismiss part of this argument by noting that gross flows were all out of proportion to the accumulation of net reserves in Asia, but they do so in pursuit of an argument that says that global imbalances didn’t matter at all.⁴

What about the political arguments? Two complementary and essentially power political argument explain the uphill flow of capital as the consequence of the Asian financial crisis. Battered Asian economies took away an

³ Bernanke, B (2005): “The global saving glut and the U.S. current account deficit,” speech at the Sandridge Lecture, Richmond, March 10. See also the prior FED research paper by Feroli, 2003.

⁴Borio and Disyatat BIS 2011

important lesson from the 1997/98 crises: without substantial reserves they were vulnerable to attacks by actors in the financial markets. They thus ran trade surpluses in order to accumulate substantial reserves, which they then parked in the most secure and most liquid assets available, US Treasury Bonds. Dooley, Folkerts-Landau and Garber make the strongest argument for a politically driven imbalance.⁵ They argue that the current imbalance reflects a new *political* deal akin to that which underpinned the 1944-1971 Bretton Woods arrangement. They argue that the system they call Bretton Woods 2 largely links the US and developing Asia in a deal whose basic structure of political exchange resembles the original one. On the one side, a set of developing countries willingly undervalues their currencies and ties them to the dollar to enjoy development generating export surpluses that provide the current account surpluses needed to credibly back up their peg against the dollar. On the other side, the US enjoys an overvalued dollar and the additional consumption this makes possible, but at the cost of some hollowing out of the manufacturing sector and a build up of future claims on the US economy as US current account deficits cumulate as foreign debt. Dooley, Folkerts-Landau and Garber's argument has two limitations that are not errors. First, it is limited to Asia and, in some ways, China. Given the centrality of China in uphill capital flows during the 2000s, this is understandable. Second, it does not explain the centrality of housing finance markets for politics in the United States.

Brender and Pisani resolve these issues by looking at imbalances at a global level. They note that actors in a closed system cannot eliminate financial risk.⁶ If a substantial number of actors seek to reduce risk (as, e.g., in Asia's case, the risk of an externally created financial crisis), someone in the system will have to absorb that risk, and the United States in the 2000s became that someone. As with Dooley, *et al.*, this is implicitly a political argument about currency manipulation, because, as Brender and Pisani note,⁷

[e]xporting savings in these conditions is extremely difficult. For such exports to take place, the value of exports of goods and services must exceed that of imports. However, when such a situation starts to take shape, equilibrium on the currency markets implies a rise in the exchange rate. Such a rise, by reducing exporters' earnings in national currency, immediately reduces the country's income while at the same time making it less competitive. Left to itself, the currency market is therefore the source of a powerful force opposing the formation of a savings surplus, a force that will be all the more powerful in that the emerging country's take-off is highly likely to attract foreign capital... [increasing] upward pressure on the exchange rate.

Brender and Pisani thus locate the origin of global imbalances in export of savings from emerging markets that manipulated their currencies. But this export could have gone to many developing countries.

Why did so much go to the United States? Brender and Pisani also hope to account for Europe's internal imbalances, which arose without overt currency manipulation. To do this, they take a half step towards our final political explanation, which is the distribution of income. They note that the degree to which developing countries absorbed these savings varied. Differences in financial systems among the rich countries meant that imported poor country savings had different effects on consumption in different rich countries: "The configuration of current-account balances across developed countries underlying the 'global imbalances' has

⁵ Michael P. Dooley, David Folkerts-Landau, and Peter Garber, "An Essay on the Revived Bretton Woods System," NBER Working Paper 9971, Cambridge, MA: National Bureau of Economic Research, 2003; Michael P. Dooley, David Folkerts-Landau, and Peter Garber, "The Revived Bretton Woods System: The Effects of Periphery Intervention and Reserve Management on Interest Rates and Exchange Rates Center Countries," NBER Working Paper 10332, Cambridge, MA: National Bureau of Economic Research, 2004.

⁶ Anton Brender and Florence Pisani, "Global Imbalances and the Collapse of Globalised Finance," Brussels: Centre for European Policy Studies, 2010.

⁷ Brender and Pisani, 2010: 33-34 (original); 58 (CEPR).

largely reflected the disparities in [the] compartment of their financial systems” translating savings inflows into additional consumption of housing.⁸

The problem with this explanation is that it does not fully explain the intra-European imbalances that also emerged in the 2000s. While Europe did not export savings to the world, some parts of the European core also experienced housing booms. At the same time, while the global financial crisis of 2007/08 and the consequent on-going Eurozone crisis had complicated origins, the weakest peripheral economies did not have Anglo-style financial systems and core financial institutions were not directly connected to peripheral housing markets. By contrast, Asian flows to the United States were directly connected to housing via purchases of conventional (‘Agency’) mortgage backed securities. This suggests that the Brender and Pisani argument needs to be located in a broader argument.

This broader argument focuses on how the intersection of domestic decisions about the distribution of income with the global power political considerations of states generates the scale and shape of global imbalances. Distinct constellations of power inside states drive external state policy aiming at greater economic and political power. In particular, current imbalances largely reflect the intersection of Chinese and US policies and preferences during the 2000s. Secondly, but of more importance looking backward, they reflect a continuing preference for mercantilist policies on the part of Japan and Germany. Put simply and briefly – because the subsequent sections go into detail for each country – all of the macro-economically important countries have a domestic constellation of power that has been shifting income away from the bottom and towards either firms or elites, understanding elites as Occupy Wall Street’s ‘1%.’ In all but the United States, this upwards redistribution has motivated a reliance on external demand for growth. In the United States, the greater availability of consumer credit, and in particular the easy ability to tap into home equity (the difference between the mortgage debt on the house and its market value) allowed US consumers to maintain a socially acceptable lifestyle in the face of stagnant or declining wages. This is what allowed the global economy to avoid a rerun of the 1930s situation in which everyone was trying to export and no one was willing to import.

Unlike the automatic transfer of risk implicit in Brender and Pisani, both the Clinton and G. W. Bush administrations made explicit decisions to keep the United States respectively as an importer of last and first resort. For the Clinton administration, a US trade deficit was the economic price for bailing out investors at risk in the Mexican and Asian financial crises. For the Bush administration, cheaper imports helped quiet dissent in conservative voting districts hit hardest by the upward shift of income, and also made it possible to finance military adventurism in Iraq and Afghanistan.

Each of the purely economic scenarios has trouble explaining global imbalances in their entirety. The power political explanations below provide the additional leverage needed to explain what the standard economic explanations can not explain. A power political perspective on imbalances starts with domestic power blocs and their domestic and foreign interests around trade and capital flows. It looks at the growth strategies pursued by major powers and the distribution of the benefits of that growth. Like the economic explanations, a power political explanation of global imbalances is incomplete on its own. But it is certainly complementary and arguably explains the majority of what we observe. Domestic power blocs emerge out of and shape local production structures and income distributions. These in turn determine the quantity and quality of domestic demand. Symbiotic strategies by import surplus desiring elites and export surplus desiring elites in different countries are what generate outsized global imbalances when those countries account for large shares of the global economy.

Three inter-locked political economies

⁸ Brender and Pisani, 2010: 95.

From the mid-1990s until the mid-2000s the United States and China each had symbiotic growth models that generated the huge imbalances of the 2000s. These imbalances produced outsized growth in the US and China, as well as inducing growth for third parties. China and the United States together accounted for 45 percent of total world growth on a purchasing power parity basis, and their combined share of global GDP increased from 32 percent to 36 percent, 1995-2006.⁹ At the same time, Japan and Germany basically relied on American and Chinese demand to fuel their growth, and Germany additionally relied on southern European growth. How did each growth model work? How are these models breaking down in the aftermath of the on-going financial crisis?

The US growth model

The US growth model had two key features that overcame a secular rise in income inequality. After 1990, rising income inequality steadily shifted purchasing power out of the bottom 80 percent of households and mostly into the top 1 percent. How could the United States generate growth, given that the top 1 percent could not spend money as fast as it was accumulating in their hands? The US housing market helped solve the problem. For the top 1 percent to save their excess income – to make it into an asset – they needed to find a corresponding liability. They found those liabilities domestically in a rapid rise in housing debt, and externally in a rapid rise in US foreign direct investment abroad. Each of these created a functional substitute for the shortfall in demand in the bottom 80 percent of households.

First, a housing based keynesian demand stimulus operated through the refinance of mortgages and equity cash-out.¹⁰ Second, ever cheaper Asian and especially Chinese imports helped drive the disinflation supporting this housing based keynesianism as well as keeping the bottom half of the income distribution from becoming politically restive. These generated two interlocked virtuous cycles running through the housing finance system. (See Figure 6.) The peculiarities of the US housing finance system translated falling nominal interest rates in the 1990s into additional consumption and growth much more effectively than the housing finance systems of continental Europe and Japan. The 1990s were a period of profound disinflation everywhere in the OECD. Unlike the 1970s and 1980s, long-term *nominal* interest rates fell. Euro-area long-term interest rates fell from 11.2 percent in 1990 to 3.5 percent by 2005. US long-term rates similarly fell from 8.7 percent to 4.0 percent 1990-2003.¹¹ While real interest rates did not fall, studies show that housing prices are much more sensitive to nominal rates than real rates.¹²

Figure 6: The US Growth Cycle, 1991-2005

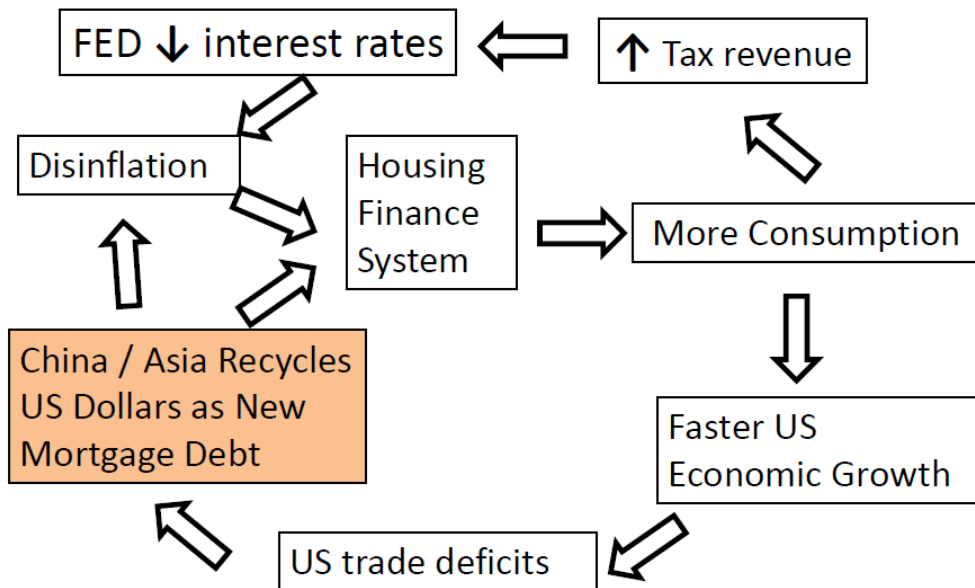
Source: Adapted from Schwartz, *Subprime Nation*, figure 1.1

⁹ International Monetary Fund, *World Economic Outlook Database*, accessed 15 September 2011, <http://www.imf.org/external/pubs/ft/weo/2011/01/weodata/download.aspx>.

¹⁰ Schwartz, *Subprime Nation*; Crouch, Colin (2008), 'What will Follow the Demise of Privatised Keynesianism?' *The Political Quarterly*, 79:4, 476-87.

¹¹ OECD, *OECD Factbook, 2005*, <http://www.sourceOECD.org>.

¹² Richard Green and Susan Wachter, "The Housing Finance Revolution," Federal Reserve Bank 31st Economic Policy Symposium, Jackson Hole, WY, August 2007, 9.



The United States has relatively high levels of private, individual homeownership financed through mortgages, and a very liquid housing financial system that permits cheap and easy refinance of those mortgages. By replacing high interest rate mortgages for lower interest ones, American consumers freed up considerable purchasing power in the 1990s and 2000s. Moreover, American homeowners can easily ‘cash out’ and spend their home equity – the positive difference between the home’s market value and the mortgage debt. In the 1990s, refinance and home equity extraction contributed a large portion of US GDP growth; from 2000 through 2007 they accounted for almost all US growth.¹³

The expansion of mortgage debt is directly and indirectly connected to the emergence of global imbalances. China (and Japan) enabled the operation of the housing based keynesian stimulus by recycling their trade surpluses with the US into Treasury bonds and debt issued by Fannie Mae and Freddie Mac, America’s giant mortgage agencies. The 10 year Treasury bond rate sets the reference rate for mortgages, so Asian recycling helped push down mortgage rates and enable the refinancing-into-growth feedback loop to operate.

A second feedback loop also connected disinflation to US growth in ways that created domestic political acquiescence to a growth model that eroded low end manufacturing employment. China’s and Hong Kong’s share of US imports rose from 5.7 percent to 15 percent of total US imports, 1991 to 2005. China’s low wage labor provided an increasingly larger volume of low cost, imported consumer non-durable consumption in the United States. This magnified disinflationary pressures. By contrast, the share of US imports from high wage Japan shrank by almost the same 10 percentage points.¹⁴ Finally, the Federal Reserve Bank (FED) reinforced both trends by steadily lowering short-term interest rates after 1995 as growth narrowed and then eliminated the fiscal deficit.

Politically, strong US growth, falling interest rates and cheaper imports helped paper over the worsening distribution of income in the United States during this period.¹⁵ Roughly speaking, to the extent that personal income increased, the top 20 percent of the income distribution, and within that the top 20 percent of the top

¹³ Alan Greenspan and James Kennedy, “Sources and Uses of Equity Extracted from Homes,” Federal Reserve Bank, FEDS Research Paper 2007-20, 2007, 43, 26, plus author’s calculations.

¹⁴ Bureau of Economic Analysis data at <http://www.bea.gov>, “Table 2b: US Trade in goods.”

¹⁵ Raghuram Rajan, *Fault Lines* (Princeton: Princeton University Press, 2010).

20 percent (i.e. the top 4 percent), captured most income gains. Ever lower interest rates allowed homeownership rates among the middle 30 percent of the income distribution to rise despite stagnant income, while cheaper consumer non-durables eased the burden for the bottom 30 percent of the income distribution. This debt fueled prosperity proved unsustainable, but in the medium run it prevented a loss of legitimacy in the face of absolute income declines for the average male in the bottom quarter of the US labor force.

Globally, an expanding US trade deficit helped drive growth for China, directly, and thus Germany and Japan, indirectly. For both countries, net exports account for all GDP growth from 2000 to 2008. In the second half of the 2000s, Germany was running trade surpluses equal to 5.7 percent of GDP, and Japan had surpluses averaging 1.15 percent. These surpluses had as their counterpart massive flows of lending to southern Europe and America, respectively. But these flows indirectly relied on US deficits with China, as Germany and Japan supplied China with the capital goods used to generate its surplus with the United States.

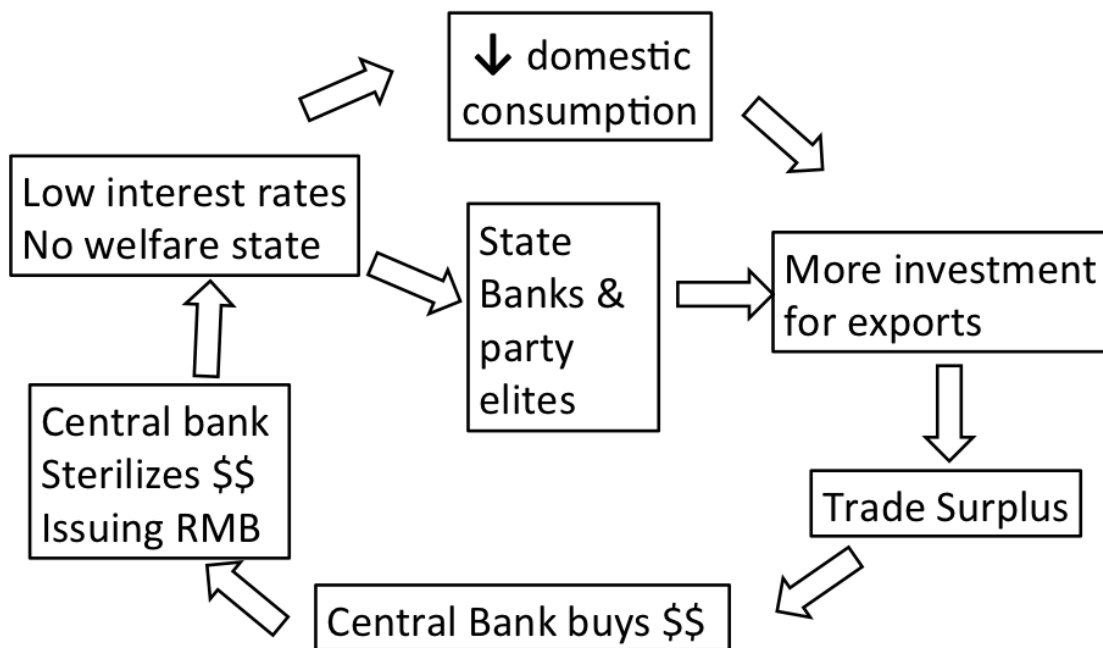
China's growth model

What about China? Chinese growth also had two strong feedback loops driving growth. These intersected with those promoting US growth. Figure 7 highlights the intersection points. The two key features of the Chinese model were financial repression to keep interest rates low, and an undervalued currency to keep exports high. Low interest rates motivate increased saving among consumers, thus providing a steady stream of domestic capital for infrastructure investment supporting export flows as well as direct financing of export production. Most export production in China, however, is financed by foreign inflows and disguised capital flights. An undervalued exchange rate obviously induces a strong export orientation. Weak domestic demand from very high saving rates further incentivizes an export orientation.

China's fundamental geo-political and domestic political problems both intersect around GDP growth. Absent robust GDP growth, China would have been unable to transform roughly a billion poor peasants into moderate income city-dwellers. Particularly after the 1989 Tiananmen crackdown, the Communist Party's legitimacy became dependent on delivering growth to urban areas. Equally so, China's external security (and any hope of recovering Taiwan Province) rests on transforming a backward economy into an industrial powerhouse. Similarly, accumulating large foreign currency reserves would limit potential vulnerabilities to dependence on external raw materials. Finally efforts to privatize the many small state owned enterprises in pursuit of greater efficiency and fewer political claims on state resources eventually put roughly 50 million additional workers back into the labor market from 1995 to 2004.¹⁶ While exports did not drive all Chinese growth, they did provide roughly one-fifth to one-quarter of GDP growth in the 2000s. This in turn provided a margin of safety with respect to employment growth and also the quality of goods production.

¹⁶ Yang Yao, "China Model and its Future," in *China: The Next 20 Years of Reform and Development*, ed. Ross Garnaut, Jane Golley and Ligang Song (Canberra: Australian National University E-Press, 2010), 45.

Figure 4: China's growth cycle
Source: Author's construction



Chinese growth began and remains largely domestically driven. The smashing of the iron rice bowl – the rudimentary welfare state that provided China's citizens with pensions, health, education and housing – created a huge surge in personal saving. Individuals and families had to rely on their own savings rather than their enterprise or municipality. Because China has a tightly controlled, state-owned financial system, politically unconnected households had only one option for those savings – bank accounts yielding low real and nominal interest rates. Low rates induced extremely high rates of saving to compensate for the slow accumulation of savings via compounding. Politically connected elites and state firms could tap into the state owned banking system to finance massive investments in export capacity. China's structure of political power – a state owned and regulated financial system that channels savings to oligopolistic state owned enterprises – produces lower domestic consumption than a more free market economy would produce. Households receive too little income for their savings, and pay too high prices for basic services.

Instead of consuming, Chinese households support investment in infrastructure to promote exports. Chinese economic growth relied heavily on exports to provide more than a margin of error in employment generation and to drive industrial upgrading. China needed to generate about 20 to 24 million jobs per year after 1995 to keep employment steady. This required GDP growth exceeding 7 to 8 percent per year. While China's internal economy was quite dynamic, only a robust export economy could guarantee rates this high, and that meant exporting to the United States. By the 2000s, the United States was absorbing between 30 and 40 percent of China's exports, and a 1 percent increase in US GDP predictably created a 1 percent increase in Chinese GDP.¹⁷ The Peoples Bank of China, the central bank, played a critical role in assuring that exports continued to push

¹⁷ Chetan Ahya, "The Decoupling Debate," Morgan Stanley Global Economic Forum, September 04, 2007, <http://www.morganstanley.com/views/gef/archive/2007/20070904-Tue.html#anchor5449>. Citibank analysts come to a similar conclusions, noting a 0.7 correlation between US GDP growth and Asian (ex-Japan) export growth and more narrowly elasticities of GDP of 1.3 to 1.7 in Southeast Asia to US GDP growth; Markus Rosgen, Elaine Chu, Chris W Leung, "Myth: Decoupling; Busted, for Now," October 24, 2007.

growth up to politically necessary levels by keeping the renminbi-dollar exchange rate stable even as Chinese productivity grew strongly.

China's initial advantage in world markets was simply extremely low wages. Consider clothing, where China's share of world exports doubled from roughly 15 percent in 1992 to 27 percent in 2005.¹⁸ In garment assembly, there was simply no way that a US worker earning the minimum wage (in 1999 roughly \$9 per hour including the employer's non-wage costs) could compete with a Chinese worker earning roughly \$0.50 per hour. US productivity was at best 2 times the Chinese level in this sector, not the 20 times needed.¹⁹ So a shift of assembly of commoditized garments out of the United States (and Europe) was a certainty. But it was not a certainty that Chinese workers, rather than Bengali, Indonesian or Vietnamese workers would be the primary beneficiaries of this shift. Moreover, going forward, the Chinese government wanted to use export surpluses to upgrade from low skill products like garments to medium technology products like machinery.

Yet success exporting garments might generate self-defeating outcomes. A durable export surplus would exert upward pressure on the renminbi's exchange rate relative to both the dollar and the currencies of rival Asian exporters. If the renminbi rose relative to the dollar while competitor countries' currencies did not, then the giant retail firms organizing garment commodity chains would shift production elsewhere. If the renminbi rose relative to the dollar, then the much larger productivity differential with the United States in medium technology goods would make it pointless to extend a production chain across the Pacific and would thus truncate China's development at the level of low value, labor intense assembly.

So China made a political decision to hold its exchange rate steady against the dollar to assure continued surpluses and easier upgrading. The PBoC created stability by buying dollars from exporters with renminbi, and then mopping up the new liquidity by issuing RMB denominated bonds.²⁰ (This is how the PBoC ends up with a balance sheet composed of renminbi bonds as liabilities, and US Treasury bonds as assets.) China's highly regulated financial system made sterilization easier – banks could be forced to buy PBoC bonds. But even with efforts at sterilization, the decision to keep the renminbi fixed against the dollar reinforced the feedback loop favoring continued investment (indeed, over-investment) in exports.

First, even with sterilization, the liquidity from continued export surpluses pushed down nominal and real interest rates in China. Economic and political imperatives favored low nominal and real interest rates. Economically, low rates enabled higher rates of investment, and thus faster industrialization. Politically, only state owned firms or those connected to party elites had access to formal credit (and thus low, subsidized interest rates).²¹ Indeed, one consequence of Tiananmen was a policy shift favoring urban areas and large firms at the expense of small and particularly rural enterprise.²² Cheap capital thus enabled excessive investment in export production capacity, which was then validated by sales to the United States. And a fixed exchange rate made those sales possible, closing the loop by forcing the PBoC to continue to accumulate dollar denominated assets on its balance sheet to prevent a rise in the renminbi. This strategy helped boost. China's share of global exports from 2.9 to 7.3 percent, 1995 to 2005.²³ At the same time this also helped drive up the US trade deficit to unprecedented levels.

¹⁸ Prema-Chandra Athukorala, "The Rise of China and East Asian Export Performance: Is the Crowding-Out Fear Warranted?" *World Economy* (2009): 234-266, at 240.

¹⁹ China Textile University and Harvard Center of Textile and Apparel Research, *The Development of the China Apparel Industry*, November 1999, p. 22.

²⁰ Ronald MacKinnon, *Exchange Rates under the East Asian- Dollar Standard* (Cambridge, MA: MIT University Press, 2006).

²¹ Kellee Tsai, *Back Alley Banking* (Ithaca, NY: Cornell University Press, 2004).

²² Yasheng Huang, *Capitalism with Chinese Characteristics* (New York: Cambridge University Press, 2008).

²³ WTO World Trade Database, <http://www.wto.org>.

Second, a fixed renminbi slowed Chinese household consumption growth, which also reinforced the feedback loop favoring investment in exports. While Chinese household income rose absolutely, household income growth and thus consumption lagged production growth by a consistent 2-3 percentage points each year.²⁴ Faced with low interest rates, Chinese households continued to save. Meanwhile state firms channeled their increasing income into continued investment rather than distributing profits as dividends. Household consumption declined from a more or less normal 50 plus percent in the 1980s to 35 percent in 2009. The macro-economic counterparts to declining consumption were burgeoning domestic investment and capital exports to the United States. The US and Chinese feedback loops intersect in this transfer of Chinese households' deferred consumption (manifested as trade surpluses) to US households for immediate consumption.

The German growth model

The German model is characterized by collectively bargained wage repression and a reliance on capital goods exports to other, more rapidly growing economies. As with China, the deliberate suppression of domestic demand orients firms and production towards the external market. Weak domestic demand also reduces imports. These combine to produce trade surpluses that are then recycled as flows to finance German exports of capital goods to deficit economies.

Collectively bargained wage restraint in the export industries dampens Germany's domestic demand. But it also creates a self-sustaining dynamic of ever greater unemployment. Wage restraint lowers domestic demand, which reduces the incentive to hire new workers. Weak hiring leads to higher wage based taxes to fund social assistance for the unemployed. In turn this makes it harder for employers to hire new workers. Low domestic demand also induces firms to export savings into more rapidly growing economies. This too is self-sustaining, as the relatively lower level of domestic investment decreases domestic growth, spurring further export of savings.

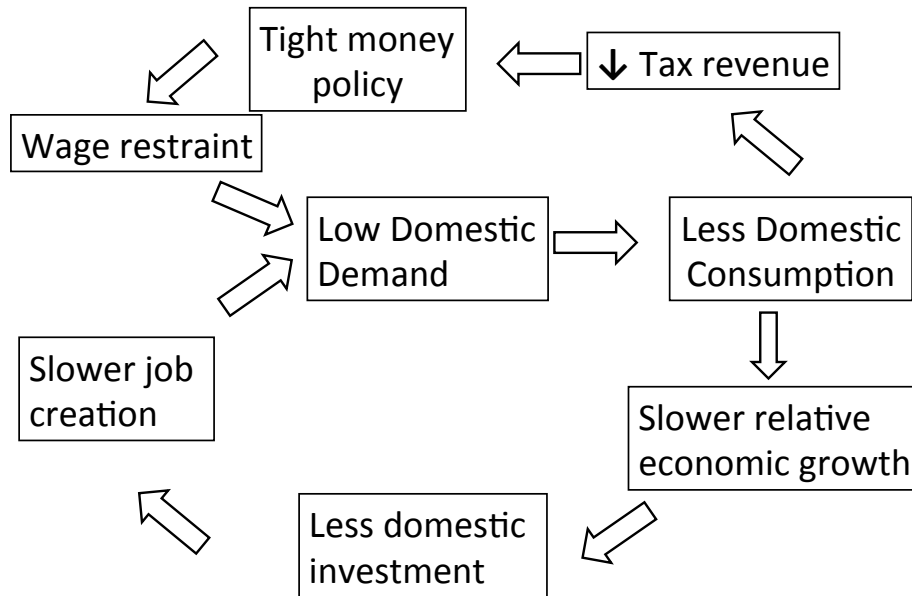
German wage restraint in the late 1990s and 2000s kept the growth of German consumption well below that of its European neighbors. Relative to German consumption growth, 2001 to 2008, Irish consumption grew twice as fast, Spanish, Portuguese and Greek consumption grew 60 percent faster, and Italian consumption 30 percent faster. This disparity in consumption growth produced a smaller and inverted version of the US-China dynamic inside Europe. Germany relies on a faster growing periphery to help drive its economy. But because that periphery is not as developed or powerful as the US, and in particular because the periphery cannot print any currency, let alone the international reserve currency, this imbalance can only be resolved through exports to third parties. In the late 1990s and early 2000s, peripheral Europe was able to finance its debts to Germany by running a small surplus with the US. But the US crash produced, as a secondary effect, a European trade deficit with the US, implying a need for even greater financing from Germany.

Yet this increased demand for financing occurred at precisely the moment when German and other northern European banks needed to shore up their balance sheets in response to the global financial crisis. Part of northern banks' problem was their losses from speculating in the US mortgage market. But the fear of Greek default also made southern European public debt look like a problem for bank balance sheets. Bank's individual rationality led them to dump southern debt. Collectively this produced a sharp spike in interest rates for the south, worsening the fiscal deficits that emerged after the crisis and making it harder to finance those deficits. Far from finding accommodating finance, southern states confronted capital flight. This created a self-fulfilling downward spiral in peripheral economies and the crisis of the euro.

²⁴ Michael Pettis, *China Financial Markets Blog*, October 16th, 2009, "China's September Data Suggest that the Long-term Overcapacity Problem is Only Intensifying," <http://mpettis.com/2009/10/china%e2%80%99s-september-data-suggest-that-the-long-term-overcapacity-problem-is-only-intensifying/>.

German domestic and intra-EU policy responses to this crisis magnified the problem. Rather than expanding domestic consumption, which would have reduced the intra-EU imbalances, Germany adopted an austerity budget and pressed austerity on southern economies.

Figure 5: The 1990-2000s German Growth Cycle



The Japanese growth model

The Japanese growth model was much the same as Germany's. Even more so than Germany, Japan relied on external demand for growth over the past decade. Where Germany collectively bargained wage restraint, Japanese firms were able to impose wage restraint on their workers by withholding annual bonuses, continuously offshoring employment, and relying every more heavily on contingent and part time workers. Employee compensation fell most years in the two decades after 1990.²⁵ Although relatively low, official unemployment more than doubled in Japan from 1990 to 2005. Unlike most OECD countries, Japan saw a gentle decline in the employment to population ratio for 15-64 year olds from the mid-1990s forward. And, finally, the rate of part time employment in Japan for both men and women is double for the OECD average, suggesting significant under-employment.²⁶

Demand restraint also differed in Japan relative to Germany. Significant protectionist barriers – particularly for food – limited consumption power for the average Japanese person. Tellingly, an open exchange rate conversion of Japanese incomes into dollars gave them a per capita income of nearly \$43,000 in 2010. But a purchasing power parity conversion – which measures the actual volume of goods a nominal income can buy, thus accounting for divergent costs of living across countries – dropped that dollar based income to under \$34,000. (Changing base years doesn't change this calculation much.) Equally telling, import penetration for Japan in 2010 was just under 10 per cent of total final expenditure, versus 14 percent for the US and nearly 30 percent for Germany.

²⁵ OECD, *Economic Outlook 2011*, December 2011, annex table 11, p. 233.

²⁶ OECD, *Employment Outlook database*.

Thus in Japan, protected markets soaked up consumer purchasing power, motivating domestic firms to invest and sell offshore, perpetuating the lack of local purchasing power. Firms exited rather than lobbying for a change in the domestic political economy.²⁷ The domestic political economy thus created almost continuous trade surpluses, and thus a rising foreign investment position, largely in the form of US Treasury bonds and equities.

Conclusion

All four societies considered here saw declining shares of national income for the bottom of the income distribution. While income disparities were worst in China, they also rose in the United States, Japan and Germany. The gini coefficient for wages rose from .31 to .39 in Germany from the mid-1980s to the mid-2000s, while that for the United States rose from .38 to .434.²⁸ Both shifts exceeded the OECD-14 average. Though comparable data for Japan and China are not available, estimates suggest a Chinese gini in excess of .5 and possibly as high as .6. Put simply, there is not enough money at the bottom of the income distribution to absorb the steadily increasing volume of global production.

These income disparities rest on equally imbalanced distributions of political power. This essay cannot do more than sketch out these political realities. In the United States, one whole political party has essentially become a tool of a small group of billionaires who finance its grass roots organizations and political advertising. The other political party is overly influenced by the financial sector.²⁹ Neither party thus has much interest in disturbing the distribution of income, and instead fights over whether the existing state should have an adequate revenue base. In China, the Communist party has transformed itself and its children into a new bourgeoisie. Revelations that former Premier Wen Jiabao's family had amassed \$2.7 billion in wealth surprised no one in China. This wealth rested on control over enterprises financed by state own banks that had engrossed the savings of the masses. And the export sector has dominated German politics since the 1960s.³⁰

With political elites unwilling to disturb the distribution of income, global trade and financial imbalances emerged out of the interaction of dynamics generated by the four big economies, and in particular by the interlocks between the US and Chinese growth models. In Europe the basic imbalance was between Germany and the periphery. Finally, Japan was parasitic on the US-Chinese dance of the millions. The current situation thus resembles the 1920s as Keynes understood it rather than the Bretton Woods period. In the 1920s, like today, imbalances are not resolved through normal economic mechanisms. Instead, political elites use the recycling of trade surpluses as debt to sustain their flow of exports. This inevitably leads to currency crises and a collapse of exports when debt becomes unsustainable. The 2000s saw this turn into a global financial crisis rather than a currency crisis because central banks basically created trillions of dollars worth of currency and government debt. The main point would be that trade imbalances that cumulate into rising debt because of political barriers to equilibration always lead to debt and currency crises.]

Three scenarios seem possible going forward. First, the US-China imbalance could slowly unwind. On the Chinese side, the state could shift resources away from mammoth infrastructure projects and into a broader social safety net. This would shift resources away from exports and induce more domestic consumption. On the other side of the imbalance, this would probably redistribute US import away from China and towards other low wage suppliers. While this would not directly reduce the US trade deficit, it would do so indirectly, because most

²⁷ Leonard Schoppa, *Race for the Exits*, Ithaca NY: Cornell University Press, 2008.

²⁸ OECD, *Divided We Stand*, p. 235.

²⁹ Simon Johnson and James Kwak, *13 Bankers*, New York, NY: Vintage, 2010; Nolan McCarty, Keith T. Poole, Thomas Romer and Howard Rosenthal, "Political Fortunes: On Finance and Its Regulation," *Daedalus* Fall 2010.

³⁰ Christian Deubner, "Change and Internationalization in Industry," *International Organization* 38:3, Summer 1984, pp. 501- 535.

of the likely substitute suppliers have a higher propensity to import US goods than China does. Consider Mexico. Secondly, the United States might fix its incredibly inefficient health care system, lowering the cost of non-traded inputs into its export competing sectors. There is some evidence that these shifts are occurring on the US side. There is much less evidence that anything is changing in China, which is probably one of the motivations for increased capital flight from China. This capital flight is repatriating some of the rich countries' debt to China in the form of personal holdings of OECD assets. Similarly, sub-starved northern European might decide to take more vacations in the south, injecting purchasing power into austerity battered economies and recycling debt as consumption.

Second, things could continue as they are. The United States could run chronic large deficits, which China could recycle as mounting holdings of US Treasury bonds. As long as China's internal interest rates are lower than the interest rate it receives on its Treasury holdings, the Chinese central bank can run a profit. But if this relationship shifts – as is happening now – the PBoC will have an unbalanced balance sheet and operational losses. In Europe this kind of status quo scenario is now operating. The ECB and various governments are trying to wait out the crisis by “extending and pretending” – i.e. extending the term of loans and pretending losses to bank capital have not occurred. This scenario has no long-term stability in either region.

Third, an acute trade war could erupt as Europe seeks to maximize trade surpluses for its indebted south. While looked like the least plausible outcome in early 2013, it was still possible that electoral politics would return parties committed to domestic reflation at any cost.

Research going forward should thus look at the political bases for income inequality as this affects countries' ability to absorb what they produce. This implies that international political economy as a discipline should pay less attention to global financial regulation and public and private international financial institutions as objects of research, and more attention to the composition of global debt stocks, including their geographic unevenness, and the way that domestic political economies generated trade deficits/surpluses that were not self-equilibrating. Fortunately, Keynes has already sketched out the major lines in this research focus.