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Post-Crisis Prospects and Challenges for the United States, China, and Japan

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Contents

THE U.S. EXTERNAL DEFICIT: A Soft Landing, Doomed or Delayed?[1]

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Abstract

The objective of this paper is to explore how the external balance of the United States might evolve in future years as the economy emerges from the recession. We examine the issue both from the domestic perspective of the saving and investment balance and from the external side in terms of the basic determinants of exports and imports and the role of the real exchange rate. We highlight the need for sustained depreciation of the dollar to improve the competitiveness of U.S. exports and argue that the current real exchange rate is consistent with a significant reduction in the size of the trade deficit to 3-4 percent of GDP. However, the favorable external outlook is very inconsistent with a projected domestic situation of low rates of private saving and a very large public sector budget deficit matched by a cyclically depressed rate of investment. A recovery of investment is likely to be accompanied by a widening of the current account deficit.

The United States has had a substantial current account deficit ever since the early 1990s. For most of that period, the deficit has increased steadily, reaching a peak of $800 billion or 6.7 percent of national income in 2006. There has been widespread agreement that deficits of such a magnitude could not be sustained, which has led to a pervasive fear that the economy might be heading toward a hard landing—with an abrupt collapse of the dollar and severe economic disruptions both domestically and globally.

In the fully-employed economy of the mid-decade, the rebalancing of the U.S. economy was viewed as a relatively straightforward, though politically difficult, two-pronged task. It would require: (1) expenditure reduction focused on reducing an over-emphasis on domestic consumption in order to free up resources for increased production in the tradable-goods sector, and (2) expenditure-switching aimed at directing those resources into increased exports. The first goal was often described as a need to increase national saving, and the second as a change in the relative price of U.S.-produced products to make them more competitive in world markets.

For a brief period in the middle of the decade, it appeared that a relatively benign adjustment might be underway. A real depreciation of the U.S. dollar

[1] Rosanna Smart and Joshua Montes assisted with the research. Financial support was provided by the Tokyo Club Foundation for Global Studies.

improved the competitiveness of American products and the current account deficit gradually began to recede during 2007 and the first three quarters of 2008. The improvement would have been even more marked were it not for the sharp increase in the price of petroleum imports. Export volumes grew by 18 percent between the second quarter of 2006 and the second quarter of 2008, while import volumes were flat. The United States seemed to have begun a soft landing.

However, there was little evidence of adjustment on the domestic side. The national saving rate continued to decline, turning negative in early 2008 due largely to sharply higher federal budget deficits. It was falling rates of investment, not increases in saving that freed up domestic resources. The government responded to a weakening of residential investment with a temporary tax cut aimed at stimulating consumption, further reducing saving.

All of this changed in the fall of 2008 with the onset of a global financial crisis centered on the United States. There was a severe contraction of domestic demand and employment, and concerns about the composition of aggregate demand largely vanished in the midst of extreme countercyclical policies aimed at stabilizing the economy. The external economy experienced an even larger collapse as global trade declined 25 percent below trend in the first half of 2009. U.S. exports fell 20 percent below year-earlier levels, with imports falling an even larger 28 percent. In 2009, the U.S. current account deficit is estimated at only 3.5 percent of national income—half its value in the peak year of 2006. Perversely, the U.S. real exchange rate also soared—temporarily reversing about half of the prior decline from its peak as investors sought a safe haven in U.S. treasury securities.

What will be the future of external rebalancing, and should it still be a major policy concern? The recession is ending, but most forecasts for the United States suggest a weak recovery with high levels of unemployment continuing for several years. Furthermore, distortions in the domestic saving and investment balance are far worse than before the crisis: the fiscal deficit has pushed the national saving rate highly negative and the rate of net investment is a third that of the pre-crisis years. In other countries that experienced severe financial crises, recovery was largely driven by improvements in the trade balance (export-led growth). However, such a scenario may be difficult in a global recession where most countries will see increased exports as a solution to their problems. Will the recovery of trade flows leave the United States with an imbalance comparable to that of the pre-crisis years?

The objective of this paper is to explore how the U.S. economy and its external balance might progress in future years. In the next section, we review the evolution of the external imbalance over the past quarter century—both from the domestic perspective of the saving and investment balance and from the external side as reflected in the U.S. current account imbalance and international investment position. The bulk of the paper then focuses on challenges to external rebalancing from both the domestic and external perspectives. We examine the causes of low private saving in the United States and how saving might evolve in the future. Second, we highlight the challenges faced by the public sector as the result of the aging of the population and continued rapid growth of health care costs. On the external side, we summarize the recent research on the determinants of trade flows and other elements of the current account. We focus particularly on the sensitivity of trade to variations in the real exchange rate and on concerns related to U.S. export performance. Finally, we pull these strands together to consider the risks to a resumption of the soft landing that the crisis has arrested.

Retrospect

Much of the debate and confusion surrounding the sources and consequences of the U.S. imbalance in its economic relations with the rest of the world are due to the different perspectives from which the external imbalance can be analyzed. One definition of the current account is the difference between the incomes earned on exports (and other transactions with the rest of the world) and payments to foreigners for imports (and other services).[2] The dominant role of exports and imports leads to a natural focus on the determinants of trade with other countries, such as exchange rates and the relative openness of markets.

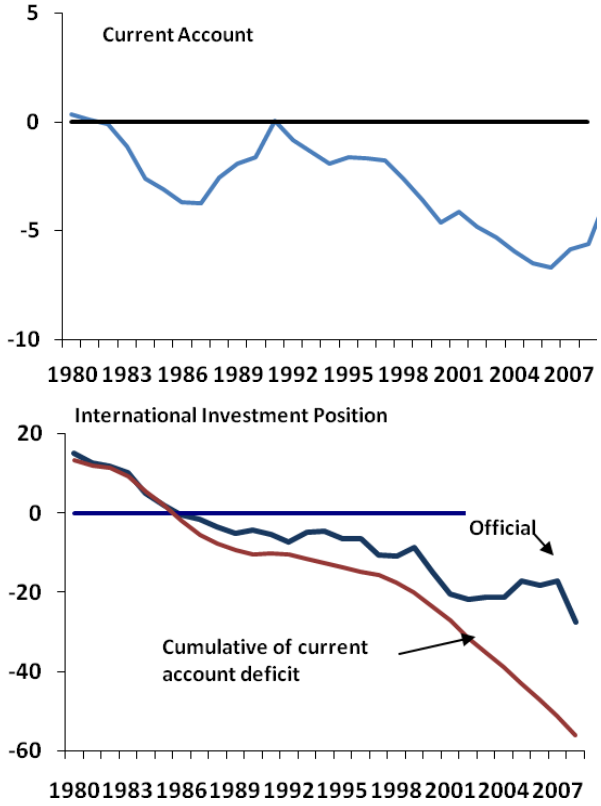
[2] The current account is the sum of three main kinds of external transactions; trade in goods and services, net factor income receipts, and net transfer receipts. Most discussions of external economic relations focus on trade flows because they are the largest component.

It also often leads to claims of "unfair" trade practices. From a domestic perspective, however, the current account is also the difference between the nation's total income and its total expenditures: thus, a current account deficit can be said to be the result of the nation spending more than it earns, living beyond its means, and thereby borrowing from the rest of the world. It is useful to review the imbalance from both of these perspectives, recognizing the interactions and the importance of both sets of factors.

External Balance

Figure 1 shows the evolution of the U.S. external balance over the past quarter century. The balance of net resource flows as measured by the current account is shown in the top panel, and the cumulative net international investment (stock) position of the United States is shown in the lower panel. As the chart makes clear, there have been two episodes of large current account deficits: the early 1980s and the current episode, which emerged in the aftermath of the Asian financial crisis and has resulted in much larger and longer-lasting deficits. The top panel also shows the recent beginning of a correction after 2006 although it is exaggerated in 2009 by the effects of the economic crisis. The result of a quarter-century of current account deficits is the buildup of a highly negative international investment position that plummeted from a surplus in excess 15 percent of national income in 1980 to a net indebtedness of 27 percent in 2008. It is noteworthy, however, that the balance sheet has not deteriorated as much as would be expected on the basis of the large current account imbalances of the last decade. This is shown in the lower panel of figure 1 by cumulating the current account deficits since 1980 and expressing the result as a share of national income. This indicator suggests that the U.S. debt position would have been expected to exceed 50 percent of national income by 2008. The large difference between the two measures reflects the greater valuation gains on U.S. investments abroad relative to those on foreign investments in the United States.[3] The official balance of payments accounts exclude those capital gains and losses.

Figure 1. Stock and Flow Measures of the U.S. External Balance, 1980-2009 (percent of national income)



Source: U.S. Bureau of Economic Analysis and authors' estimates.

The U.S. imbalances are placed in a broader global context in table 1, which provides a simple summary of the distribution of current account balances across major regions of the world for the period of 1980 to the present. Absent errors and omissions, the sum of the current accounts across all economies should equal zero. Thus, the deficits of some countries will be offset by surpluses of others.[4] The table highlights the sharp dichotomy between the external position of the United States and of everyone else. The United States consistently reports large deficits, which are matched by surpluses in most other regions of the globe. Europe's surplus has declined, however, since the mid-1990s; and Japan's surplus has remained basically unchanged for nearly a quarter of a century. Similarly, little has changed in Latin America. Instead, the offsets to the increased U.S. deficit are concentrated in the

[3] For example, half of U.S. investments abroad are allocated to direct investment and corporate equities, compared to only a quarter of foreign investments in the United States. The role of capital gains is highlighted in Gourinchas and Rey (2007). In a previous paper, we also argued that some of the discrepancy can be traced to the shifting of reported income by multinational companies to avoid U.S. taxation (Bosworth, Collins, and Reich, 2007).

[4] Prior to the 1970s, current account imbalances were strictly limited, as most national financial markets operated as closed systems. With the emergence of large scale cross-border capital flows, countries have become capable of financing increasingly large imbalances on a sustained basis.

emerging economies of Asia and the oil-producing states of the Middle East. Given the rise of oil prices, the surge of saving within the oil-producing regions is not a surprise, but the sudden emergence of a large excess of saving over investment in Asia was less expected.

Table 1. Current Account as a Share of World GDP, Selected Regions and Years (percent)

Region	1980-89	1990-99	2000-05	2006-08	2009
United States	-0.50	-0.43	-1.41	-1.37	-0.65
Japan	0.26	0.36	0.35	0.33	0.17
Europe[1]	-0.01	0.09	0.23	0.15	-0.02
Emerging Asia[2]	-0.01	0.06	0.38	0.86	0.86
Emerging Latin America[3]	-0.11	-0.14	-0.02	0.04	-0.03
Middle East[4]	0.12	-0.04	0.21	0.51	0.11
Other countries	-0.31	-0.21	0.00	-0.11	-0.24
Discrepancy	0.54	0.30	0.27	-0.41	-0.20

[1]Austria, Belgium, Switzerland, Germany, Denmark, Spain, Finland, France, Great Britain, Greece, Ireland, Italy, Netherlands, Norway, Portugal and Sweden.
[2]China, Hong Kong, India, Indonesia, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand. First column average for 1982-1989.
[3]Argentina, Brazil, Chile, Columbia, Ecuador, Mexico, Peru, Venezuela.
[4]Bahrain, Egypt, Iran, Jordan, Kuwait, Lebanon, Libya, Oman, Qatar, Saudi Arabia, Syria, UAE, Yemen.
Source: IMF *World Economic Outlook*, October 2009.

Trade in goods and services constitutes the largest component of the current account, and its balance is driven by rates of growth in foreign incomes (Y_f) and domestic incomes (Y_d) and the relative price of domestic versus foreign-produced goods (q):

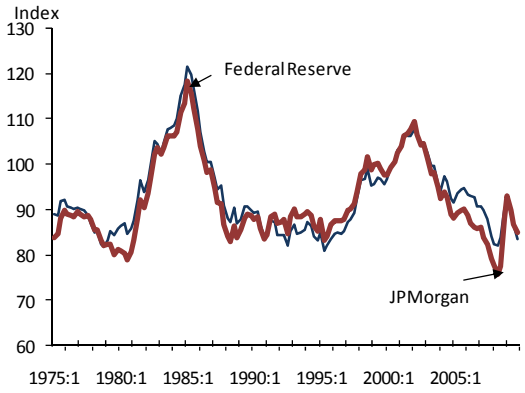
$$(1) \qquad NX = f(Y_f, Y_d, q).$$

The concept of the real exchange rate provides a simple measure of relative prices and it is defined as the nominal exchange rate (e) multiplied by the ratio of foreign and domestic prices (P_d/P_f):[5]

$$(2) \qquad q = e \text{ x } (P_d/P_f) .$$

Two alternative measures of the U.S. real exchange rate are shown in figure 2. Both are weighted averages of the exchange rates with major trading partners, with weights based on bilateral trade flows, and an appreciation of the dollar is shown as a rise in the index.[6] The Federal Reserve reports a measure that uses consumer price indexes to adjust for differential rates of inflation, while JPMorgan publishes an index that is based on producer price indexes for manufacturing goods excluding food and fuels. The long-term movements in the two indexes are very similar, but the JPMorgan index indicates a slightly larger decline prior to the 2008 crisis and a sharper initial rise. Both indexes suggest that an adjustment was underway prior to the crisis.

Figure 2. Alternative Measures of the Real Exchange Rate, 1975-2009



Source: JPMorgan and the Board of Governors of the Federal Reserve.

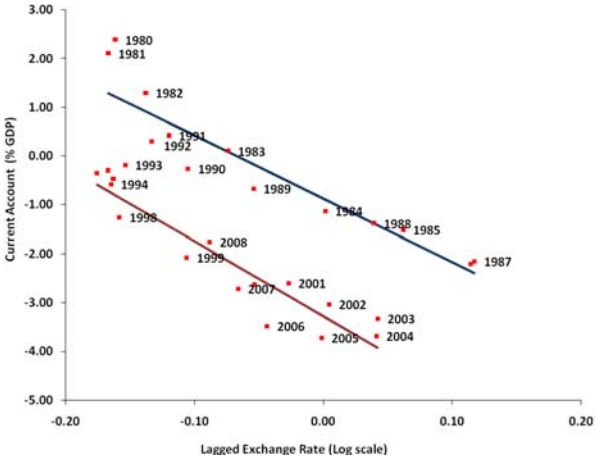
The real exchange rate also shows a very strong negative correlation with the current account balance reported in figure 1. It seems evident that a currency appreciation is associated with a deteriorating current account balance. But, it is also true that the exchange rate only affects trade flows with a substantial lag because it takes time for exporters and importers to adjust to their competitive positions. A simple means of summarizing the relationship is provided in figure 3, which graphs the non-oil trade balance against a three-year weighted average of the exchange rate.[7] While trade is affected by other factors, it seems very evident that the lagged exchange rate plays a fundamental role. There is also evidence that the relationship has been shifting down over time. We explore these issues more fully in a later section.

[5] We measure the exchange rate as the foreign price of domestic currency so that an appreciation of the currency is recorded as an increase in the exchange rate index.

[6] Market shares of U.S. goods in foreign markets and foreign goods in U.S. and third-country markets are used to construct the currency weights. The weights are updated on an annual basis in the FRB index, while those of JPMorgan change about once per decade.

[7] The non-oil trade balance is measured as a percent of GDP and the exchange rate is a weighted average of the FRB index with weights of .25, .5, and .25 on the rates lagged one, two, and three years. The figure is based on an earlier presentation in Baily and Lawrence (2006).

Figure 3. Correlation of the Non-oil Trade Balance and the Real Exchange Rate, 1980-2009



Source: Bureau of Economic Analysis, Board of Governors of the Federal Reserve and authors' calculations.

The continuing deterioration of the U.S. investment position generated frequent forecasts of hard-landing scenarios based on a view that foreign investors would ultimately become unwilling to accumulate steadily rising shares of U.S. assets in their portfolios. Many of those scenarios envisioned a 'sudden stop' of capital inflows to the United States, leading to an uncontrolled fall in the value of the dollar and sharply higher U.S. interest rates. Paradoxically, the crisis that emerged in 2008 seems more related to a surplus of capital inflows rather than any shortage, and the dollar surged in value with the onset of the crisis. Many of these observers now perceive the crisis to be the result of an excessive willingness of foreigners to allocate funds to the United States, which in turn contributed to a series of speculative bubbles in U.S. asset markets.

Internal Balance

It is notable that for most of the past three decades a growing trade deficit has been associated with a buoyant domestic economy, rapid job growth, and a decline of unemployment to unprecedented levels. This domestic strength suggests that the trade deficit was not something forced on the U.S. economy by outside pressures, but rather a response to changing domestic economic conditions that pushed aggregate demand beyond the nation's productive capacity. Those pressures could only be met by scaling back exports or importing more. For example, the changing composition of aggregate demand, shown in table 2, highlights the growing emphasis on private consumption as the secular counterpart to the growing trade deficit. However, the two episodes of marked reduction in the trade deficit—the early 1990s and the current period—are notable for sharp cyclical reductions in domestic investment, rather than a scaling back of consumption.

Table 2. Composition of U.S. Aggregate Demand, 1980-2009 (percent of total)

	1980-84	1985-89	1990-94	1995-99	2000-04	2005-07	2008	2009
Consumption	80.4	82.2	83.1	82.0	84.8	85.4	86.7	87.6
Private	63.4	65.2	66.7	67.3	69.6	69.7	70.1	70.7
Government	17.0	16.9	16.4	14.7	15.2	15.7	16.5	16.9
Investment	20.7	20.3	17.8	19.6	19.5	20.1	18.2	14.9
Private	17.2	16.6	14.3	16.5	16.3	16.9	14.8	11.3
Government	3.5	3.8	3.4	3.1	3.2	3.2	3.4	3.6
Net Exports	-1.1	-2.5	-0.9	-1.7	-4.2	-5.5	-4.9	-2.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Bureau of Economic Analysis, National Income and Product Accounts and authors' calculations.

A domestic perspective also emphasizes the relationship between the nation's current account and its balance of domestic saving and investment. This follows directly from the basic national accounts identity that total domestic output (GDP) equals the sum of public and private consumption expenditures (C), investment (I), and exports (X), minus imports (M):

$$(3) \qquad GDP = C + I + X - M,$$

which can be rewritten as

$$(4) \qquad X - M = GDP - C - I,$$

$$= S - I.$$

That is to say, the trade balance is equal to saving minus investment.

The situation is slightly more complex in practice because the residents of a country can earn income from overseas activity as well as domestic production. Thus, the national accounts distinguish between gross domestic production (GDP) and gross national income (GNI), where GNI includes net earnings from abroad. In addition net transfers are added to both sides of the identity. The result is a small redefinition of national saving:

$$(5) \qquad CA = (GNI - C) + NTR) - I, \text{ or}$$

$$CA = S - I.$$

Thus, the current account (external) imbalance is precisely matched by an (internal) imbalance between

national saving and investment (the 'S-I balance'). Finally, the U.S. national accounts are structured to measure income, saving, and investment net of the depreciation of physical capital.[8]

A summary of the U.S. net saving and investment balance is shown in table 3 for the period of 1960-2009. For several decades prior to the mid-1980s, variations in net national saving were largely driven by changes in government saving, as the private saving rate was very stable and largely free of any trend. In the early 1980s, the simultaneous emergence of a large federal budget deficit and a current account deficit gave rise to the "twin deficits" hypothesis. The two were widely viewed as linked through the pressures of financing a large budget deficit leading to higher U.S. interest rates, an appreciation of the exchange rate, and a trade deficit. However, the correlation weakened and the reemergence of a large current account deficit in the late 1990s, despite a rapidly improving fiscal situation, strongly suggested that the notion of a special link between government budget deficits and the external balance was an overly simplistic interpretation. Instead, the gap between saving and investment in later years can be traced to a large drop in the private saving rate—due in turn to sharply lower rates of household saving—and strong investment demand. The 1990s saw both a boom in information technology, making the United States a particularly attractive location for business investment, and a strong expansion of residential investment. The magnitude of the household saving decline remains a puzzle despite extensive research; but some of the potential reasons are discussed more fully in a following section.

The economic crisis has brought on another major realignment—with household saving showing a modest increase, but investment demand collapsing. Moreover, government budget deficits have reemerged during the current decade as a significant source of the low national saving rate, exacerbated by extraordinary fiscal measures in 2008-09 that turned the national saving rate negative.

[8] The emphasis on net measures of saving and investment is also common for other advanced economies, but many developing economies do not undertake detailed estimates of capital depreciation and present estimates of saving and investment on a gross basis.

Table 3. United States Net Saving and Investment by Sector, 1960-2009, percent of national income

Sector	1960-79	1980-89	1990-99	2000-07	2008	2009
Saving	10.9	6.5	5.4	3.6	-0.2	-3.1
Private	10.9	10.0	6.9	5.3	5.3	6.8
Household	7.0	7.2	4.6	2.2	2.3	3.6
Government	0.0	-3.6	-2.4	-1.7	-5.4	-10.0
Domestic investment	11.1	9.4	7.9	8.4	6.2	2.1
Private	9.0	7.8	6.7	7.1	4.7	0.6
Government	2.1	1.6	1.2	1.3	1.5	1.6
Saving - Investment	-0.2	-2.9	-2.5	-4.8	-6.4	-5.2
Current account	0.4	-1.8	-1.7	-5.5	-5.6	-3.4
Statistical discrepancy	0.7	1.1	0.8	-0.7	0.8	1.8
Capital consumption	11.8	14.1	13.3	13.7	14.6	15.3

Notes: Net income, saving, and investment exclude capital consumption allowances. The statistical discrepancy is measured as investment, plus the current account, minus saving.
Source: Bureau of Economic Analysis, National Income and Product Accounts, and authors' calculations.

Finally, the national accounts include a significant statistical discrepancy. At times this has made it difficult to fully reconcile short-run changes in the current account with the S-I balance after 2006 that is observed in the reported current account. Instead, the statistical discrepancy changed from a large negative residual in 2005-06 to a positive value for 2008-09.

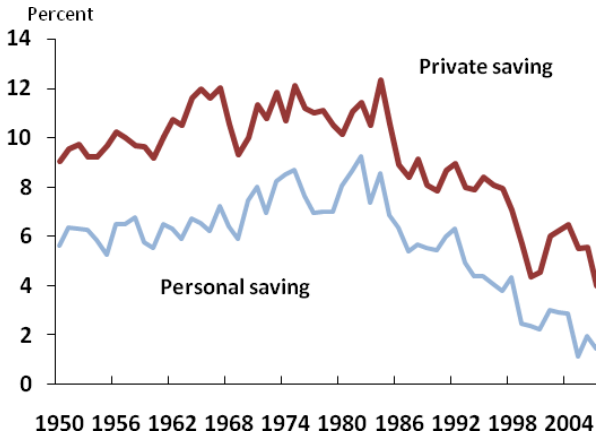
Why Don't Americans Save?

As we look ahead at the potential for a correction of the U.S. external imbalance, the greatest uncertainty concerns future patterns of change in private saving. Figure 4 depicts the unprecedented magnitude of the saving decline. The personal saving rate has fallen from an average of seven percent of national income in the early 1980s to less than two percent in the middle of this decade. Prior to the 1980s, there was actually evidence of a modest upward trend in the saving rate with very limited annual fluctuations. A broader measure of private saving, which includes corporate retained earnings, indicates a similar pattern. Retained earnings are very volatile over the business cycle, but have not contributed to the secular reduction in saving. Thus, the puzzle is largely one of accounting for the decline in the household saving rate.

Despite a significant volume of research, no consensus has emerged on the causes for the saving decline. The failure of saving rates to rise as the baby boom generation moved into its peak earning years has shifted the focus away from demographic explanations to a greater emphasis on the role of wealth in consumption. Some have challenged

standard measures of saving as misleading indicators of the nation's actual condition.

Figure 4. Private and Personal Saving, 1950-2009
(percent of national income)



Source: National Income and Product Accounts.

Other scholars have argued that inappropriate definitions of saving and investment distort the perspective of the United States as a low saving nation. The current line of demarcation between consumption and investment is somewhat blurry, and a case can be made for an expanded definition of investment. Lipsey and Kravis (1987) pointed out that, compared to other nations, Americans devote an unusual proportion of their consumption to the purchase of consumer durable goods and their children's education, and that both of these outlays should be more properly viewed as investments. Like home purchases, consumer durables yield services over a long period of time, rather than being consumed in the current period. Similarly, they believed that the definition of capital formation should be expanded to include all forms of human capital investment, e.g., education and job training. In addition, the United States stood out in past years for the magnitude of its investments in research and development (R&D). All of these proposed adjustments have their advocates and would increase the reported rate of national saving relative to most other countries. The U.S. national accounts are being expanded to incorporate some of these factors in a series of satellite accounts. However, preliminary calculations suggest that, while interesting in their own right, these adjustments have only a modest impact on the observed decline in the U.S. saving rate over the past quarter century (Reinsdorf and Perozek, 2002).

More difficult conceptual issues are raised by the need to reconcile the low and falling rate of national saving with other statistics showing a sharp rise in the nation's wealth-income ratio. In other words, if Americans save so little, why are they so rich? The conventional measure of saving excludes all forms of capital gains; yet many economists have argued that wealth changes are a far better measure of changes in economic well-being than rates of saving alone.[9] Indeed, at the individual level there is much to be said for focusing on wealth accumulation rather than saving. By enabling greater future consumption, wealth is an important element of economic well-being, and it matters little how the individual accumulated it.

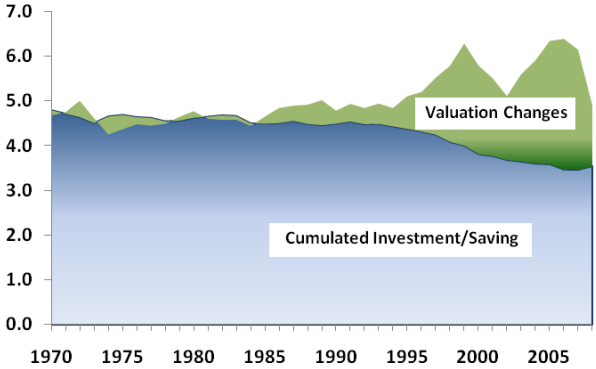
At the aggregate level, however, the issues are more complex (Auerbach, 1985). It is necessary to understand why wealth levels are rising. For example, increases in home values are seen as a gain to current homeowners, but in the aggregate they largely reflect an intergenerational transfer as younger families pay higher prices to older homeowners to purchase the same flow of housing services. In the more general case of a change in the market valuation of U.S. corporations, there are two distinct situations. An increase in market valuations may result from changed expectations of future growth in the underlying stream of corporate income—increased capital or higher expected rates of innovation. Alternatively, the increase might simply reflect the use of a lower discount rate in the evaluation of an unchanged expected flow of future returns. The first type of change might reflect greater real value; but the second is more comparable to the variation in wealth values that we associate with inflation, and often proves to be quite transitory.

In any case, there are limited advantages to introducing valuation changes directly into the national accounts. While most economists would agree that wealth and income are both important determinants of consumption, few would go so far as to argue that the marginal propensity to spend out of wealth is anywhere near that for changes in income. It seems preferable to maintain the existing framework, but to include wealth and its changes as major determinants of saving.

[9] Some of the most cited references are Auerbach (1985), Bradford (1991), Eisner (1991), Gale and Sabelhaus (1999), and Peach and Steindel (2000).

From this perspective, however, it would appear that the strong capital gains in equities and home ownership over the past two decades may have played an important role in stimulating consumption. In figure 5, we show the pattern of change in the household wealth-income ratio since 1980 and separate the contribution of saving to wealth accumulation from that of valuation changes. Prior to the mid-1990s, valuation changes were a minor source of wealth gain, as most asset prices simply rose in line with the overall rate of price inflation. Household wealth varied within a narrow range of 4-5 times disposable income. More recently, increases in the relative prices of housing and equities raised the wealth-income ratio to 6 times income in 1999 and 2004-07. In contrast, the contribution of saving was relatively constant in the 1980s, but began to decline in the 1990s; and by 2007, the wealth-income ratio exclusive of capital gains had fallen to 3.5. Thus, it is evident that valuation changes have played a greatly increased role in the accumulation of household wealth.

Figure 5. Household Wealth as a Ratio to Income, 1970-2008 (ratio to disposable income)



Note: Net investment flows are converted to real values, cumulated, and converted back to nominal values. Wealth includes consumer durables.
Source: Computed from tables B100 and R100 of the Flow of Funds Accounts.

In typical empirical formulations of the life-cycle model of consumption, researchers estimate a long-run effect of a change in wealth on consumption of about 0.05.[10] That magnitude would suggest that an increase in the wealth-income ratio from 4.5 to 6 contributed to a rise in the share of consumption in disposable income of 5-7 percentage points—a large proportion of the observed decline in the saving rate since the early 1980s. However, the empirical results vary widely and some studies maintain that the effects differ among the various categories of wealth, such as equities and housing. It is even more difficult to distinguish a causal relationship given that consumption and asset valuations are influenced by many common factors. Furthermore, a comparison of the saving rate in figure 4 and the wealth-income ratio in figure 5 highlights that a significant portion of the saving decline preceded the surge in wealth valuations that began in the mid-1990s.

The effect of variations in housing wealth on consumption is particularly controversial. Many studies find a strong cyclical correlation of housing market activity and consumer spending. However, the argument that causation flows from housing wealth to consumption has been much more difficult to establish. Increases in home prices might be correlated with consumption for several reasons. First, higher home prices raise overall wealth and thus desired consumption. Second, they increase the level of collateral for households that were previously credit-constrained. And third, both could be influenced by common cyclical factors.

Buiter (2008) and Sinai and Souleles (2005) have argued that home ownership is largely a hedge against future rent costs and to the extent that the home value is equal to the present value of future consumption of housing services, fluctuations in home prices should imply no net aggregate wealth gain. Empirically, the evidence has been mixed. Case, Quigley and Shiller (2005) argued that the effect of variations in housing wealth was greater than that of changes in equity valuations. However, Calomiris and others (2009) concluded that the results were very sensitive to method of estimation and that there was no stable relationship between housing wealth and consumption in the Case, Quigley and Shiller data set. Attanasio and others (2009) also found a correlation between consumption and home prices for renters as well as homeowners, lending support to the explanation of a common cyclical factor.

A variety of other factors have also been put forth to explain the collapse of saving. For example, it has long been recognized that inflation can seriously distort measures of capital income. In periods of high inflation, a large portion of nominal interest payments should be viewed as a repayment of principal rather than as income. To the extent that investors anticipate

[10] Poterba (2000) provides a review of previous articles. More recent macroeconomic studies are those of Case, Quigley, and Shiller (2005) and Belsky and Prakken (2004).

inflation and understand its effects, they will demand a higher nominal interest rate premium to maintain the purchasing power of their assets. Roughly, the effect on nominal incomes will be equal to the rate of inflation times the net stock of interest-bearing assets, and the same amount should pass through to saving. The effects on reported household saving were on the order of three percent of income in the early 1980s when inflation was high and households were large holders of government and corporate debt. However, with the slowing of inflation in recent years, the adjustment has declined to less than one percent (Reinsdorf and Perozek, 2002). In addition, households now have large offsetting mortgage liabilities of their own.[11] Thus, lower inflation is a potential explanation for some of the decline in the saving rate over the past two decades. In addition, some analysts reclassify the purchase of consumer durables as investment/saving with a subsequent service flow being imputed back to consumption. While the adjustment smoothes the cyclical pattern of consumption, it has little effect on longer term measures of the saving rate.

Retirement saving accounts may also have played a significant role in the overall saving decline. The capital income of employer-provided pension programs is generally exempt from income taxation, but they are subject to some restrictions on withdrawal prior to retirement. Both the national income accounts and the flow of funds accounts classify net additions to these funds as part of the saving of the household sector, but workers may have very little knowledge of the changing valuation. Retirement saving was a slowly rising share of total household saving throughout the period 1952 to 1985, reaching a peak equal to two-thirds of the total in the mid-1980s, but the magnitude of the annual accumulation has declined in subsequent years. For some funds, the magnitude of capital gains from equities reduced the need to make new contributions. Other funds matured, leading to a rise in benefit payments relative to contributions. Furthermore, there has been some erosion in the proportion of workers covered by the private pension system.

Alternative saving measures do provide some insight into the sources of the fall in the household saving rate. However, as emphasized by Reinsdorf (2007), none of the adjustments change the fundamental conclusion of a large secular decline in the saving rate. More importantly, the alternatives provide little reason to anticipate a future turnaround.

The research on household saving behavior has left us with a great deal of uncertainty about future trends. The link in the life-cycle model between saving and desired wealth accumulation suggests that saving will rise in future years because the forces that have sustained wealth accumulation in the face of depressed saving cannot continue indefinitely. As we have learned from the current crisis, neither equity nor housing prices are likely to outrun the growth of nominal incomes and substitute for saving to the extent of that they have over the past two decades. The magnitude of the asset losses during the crisis should accelerate that process. However, some recent research has minimized the link between housing wealth, which was the source of much of the excess capital gains, and consumption. Other explanations that emphasize demographic factors, the growth of the public pension system, and behavioral factors would point to a more permanent shift toward a low rate of household saving. We conclude that a large reversal of the private saving rate is unlikely in the near future and that an increase in the national saving rate will require a substantial contribution from the public sector.

Public Sector Fiscal Balance

As mentioned earlier, there is no longer much support for the “twin deficits” notion of a direct one-for-one link between budget deficits and the current account. Government saving and investment, however, are still important components of the overall accounting identity linking national saving, investment, and the current account, and rejection of the twin deficits view does not imply that variations in the fiscal deficit have no implications for the current account. Yet, because the components are all endogenous with common determinants, it is difficult to measure the effect of an exogenous shift in the fiscal balance with any degree of precision. Recent empirical efforts to measure the net relationship between the two components suggest that 30-40 percent of a change in the fiscal balance will be reflected in the current account.[12] The

[11] Due to this, households are no longer net direct holders of debt instruments. They do hold significant amounts of debt indirectly through pension plans. However, foreign investors have now emerged as holders of large portion of U.S. debt instruments.

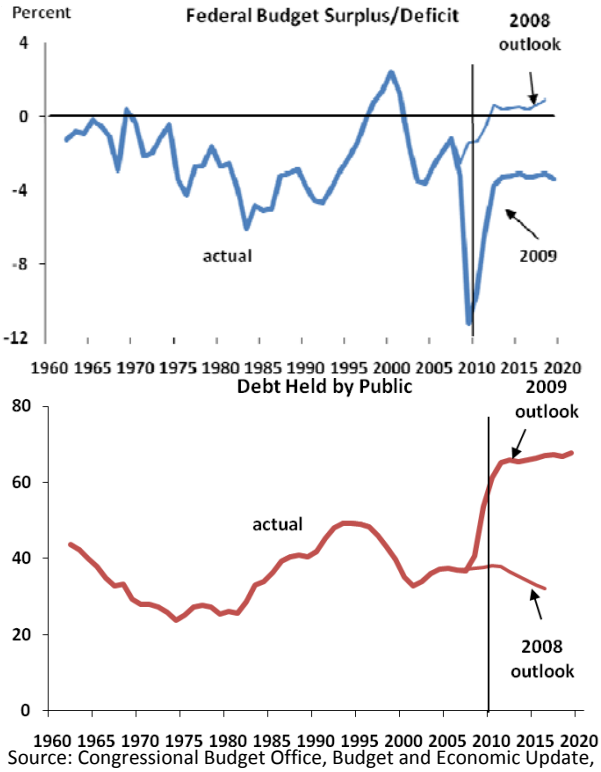
[12] A recent empirical study with references to the earlier work is Bartolini and Lahiri (2006). They interpret the results as supporting a

remainder is absorbed by offsetting changes in the private saving-investment balance.

Some researchers have interpreted the finding of a limited link between the fiscal and external balances to imply that deficit reduction cannot play a critical role in reducing the external imbalance. Perhaps that was true a few years ago when the projected fiscal deficit was a relatively modest percent of GDP. However, as shown in figure 6, the financial crisis and the measures taken to reverse it have dramatically altered the fiscal outlook of the United States. The deficit exceeded 11 percent of GDP in FY2009, and is projected at 10 percent in 2010. Those deficits are sufficient to turn the net national saving rate negative for 2009 and 2010. The budget projections of the Congressional Budget Office (CBO) indicate that the deficits will remain above 3 percent of GDP in future years. Yet, because they must be based on current law, the baseline projections are normally overly optimistic. A more realistic alternative would suggest a deficit that remains well above 5 percent of GDP throughout the next decade.[13] Even with the baseline assumption, the debt-to-GDP ratio will nearly double in the next three years to 65 percent and slowly rise thereafter. Under the alternative projection, the debt will be about 85 percent at the end of the 10-year projection period.

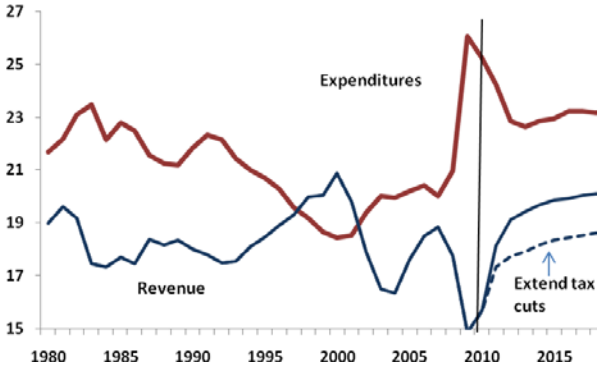
An alternative perspective that highlights the conflict between a rising share of GDP being devoted to government expenditures and a stable or falling revenue share is provided in figure 7. For several decades, government expenditures were a constant share of GDP as declining defense spending offset steadily rising outlays on medical and income transfers to the elderly. In future years the total will rise at an accelerating rate due to increased costs for a retiring baby-boom generation and interest on the public debt. Meanwhile, government revenues remain at or below their historical share of GDP.

Figure 6. The Federal Budget Balance and the Public Debt, 1960-2019 (percent of GDP)



Source: Congressional Budget Office, Budget and Economic Update, August, 2009 and August, 2008. Baseline projections.

Figure 7. Federal Revenues and Expenditures, 1980-2019 (percent of GDP)



Source: Congressional Budget Office, August 2009 Budget Projections and earlier issues.

There is, however, no political support for either a scaling back of programs for the aged or tax increases. The Obama administration has committed to a PAYGO rule of paying for new future programs with offsetting budget actions, but they have exempted the items in the above budget projections. And with current projections of continuing high levels of unemployment in the short run, there is little sense of urgency about reductions in the budget deficit.

view that reductions in the fiscal deficit cannot play a major role in a correction of the external imbalance.

[13] The alternative assumes that the Congress will extend the bulk of the Bush administration tax cuts (as the Obama administration has proposed) and an indexation of the alternative minimum tax (AMT) for inflation. The Congress has also acted every year to prevent the implementation of a law reducing Medicare reimbursements.

Why Is the U.S. Trade Deficit So Persistent?

We have already documented the persistently large U.S. external deficits over the past quarter century and in particular the period from the early 1990s through the mid 2000s in which the deficit increased steadily to over 6 percent of GDP. We have also argued that a gradual tapering of this deficit began in 2006—associated with a substantial real depreciation of the U.S. dollar (and expenditure switching) but with little evidence of the internal rebalancing (expenditure reductions) also required for a sustainable transition to lower imbalances. While the onset of the economic crisis, with its sharp dollar appreciation, arrested the fledgling 'soft landing,' the collapse in world trade cut the U.S. trade deficit in half in 2009.

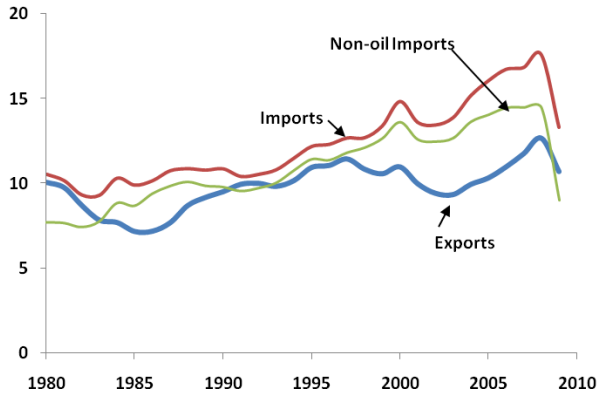
In this section we take a closer look at net exports, the main component of the current account. After briefly describing the evolution of U.S. imports and exports, we turn to a review of their determinants and the implications for what might be required for a sustained rebalancing from this 'external' perspective. Also of interest is recent work examining experiences with current account reversals and with recovery from crises in advanced economies that may be quite relevant for the United States.

Figure 8 shows the evolution of exports and (total as well as non-oil) imports as a percentage of GDP since 1980. While the United States did become somewhat more open during this quarter century, it is notable that most of this increase is associated with import growth in the second half of the period. In 2005, exports were about the same share of output as they had been in 1980. The figure also shows the two episodes of large imbalances. In the mid 1980s, the trade deficit was primarily due to deterioration in exports. In the more prolonged second episode, the issues have been steadily rising imports combined with weak export performance. The figure also shows exports beginning to grow more rapidly than imports and to narrow the deficit during 2006-7, and most recently, the sharp drop in exports and especially imports.

Determinants of the U.S. External Balance

A large empirical literature studies the determinants of imports and exports, typically estimating the sensitivity of exports and imports to changes in (lagged) relative prices and incomes. During the past decade, there has been a focus on examining what it would take to achieve a sustained reversal of the U.S. current account deficits. However, there has been considerable variation in time period, specification, and measurement of key variables resulting in a wide range of estimates.

Figure 8. Exports and Imports, 1980-2009 (percent of GDP)



Source: Bureau of Economic Statistics, National Income and Product Accounts.

Until relatively recently, the empirical results tended to support what became known as 'elasticity pessimism' for two reasons.[14] First, U.S. imports were found to be quite insensitive to changes in relative prices. While exports seemed to be somewhat more price elastic, studies often found the overall price elasticities low enough that a depreciation of the dollar would only be associated with trade balance improvement because of the relatively low pass-through of nominal exchange rates into especially import prices. Conventional wisdom suggested a one percentage point of GDP decline in the U.S. external deficit would require a relatively large real depreciation of the dollar—by as much as 10 to 20 percent.

Second, the estimates tended to support a finding by Houthakker and Magee (1969) that U.S. imports are considerably more sensitive to increases in U.S. income than are U.S. exports to increases in the income of U.S. trading partners. Thus, balanced growth in the United States and its trading partners would be associated with a deteriorating U.S. external

[14] Examples include Hooper, Johnson and Marquez (2000) and Chinn (2004). Unlike the earliest studies, these authors incorporate the more recent estimation techniques that allow for feedback among key variables and address non-stationarity in the trade data. IMF (2007) provides a summary of the relevant literature, as well as new estimates of the relevant elasticities and an interesting review of 42 episodes since 1960 in which advanced countries achieved reversals of large, sustained external deficits.

balance, exacerbated in periods of relatively strong U.S. growth.

More recent work benefits from improvements in specification and inclusion of data since 2000. In particular, researchers have explored issues related to vertical integration and trade in intermediates, as well as aggregation bias and the possibility that shifts in the composition of trade away from goods and towards services may have increased price and income responsiveness. While there is no clear consensus on the magnitude of the relevant elasticities, studies that use the same methodology to compare the past decade with prior periods tend to find that both exports and imports have indeed become more elastic, and furthermore, that the Houthakker-Magee asymmetry in income elasticities has disappeared. Thus, a one percentage point reduction in the aggregate trade deficit may now be associated with a smaller real dollar depreciation, perhaps in the range of 8 to 15 percent, and balanced growth need not imply trade balance deterioration.[15]

Can U.S. Exports Compete?

While the U.S. external deficit does respond to changes in the real exchange rate, figure 3 showed that the relationship between relative prices and the non-oil balance seems to have shifted in the mid 1990s such that a given level of the external balance is now associated with a more depreciated dollar. Martin Baily and Robert Lawrence (2006) identify weak U.S. export performance as the primary explanation. Similarly, our previous work[16] argued that the United States underperforms as an exporter of goods relative to a peer group of high-income European countries and Japan. Our analysis was based on a standard 'gravity equation' formulation that relates bilateral import and export flows to economic size, distance, and other measures believed to be associated with degree of 'trade resistance' such as common language and existence of colonial ties. We pooled the data for the bilateral trade for each of three regions (the original 15 members of the European Union, Japan, and the United States) with 162 other countries for the period 1980 to 2005. We also included the real exchange rate for each of the three regions as a measure of relative price competitiveness. Those regressions are reproduced in table 4. A 'dummy variable' in the export equation for all trade with the United States is consistently negative and significant. In contrast, we find no evidence that the United States performs differently than Japan or than the EU in terms of imports.

Table 4. Combined Gravity Model for the United States, Japan, and the EU-15

	Exports		
	(1)	(2)	(3)
Weighted distance	-1.102	-1.098	-1.123
	(-61.2)	(-62.6)	(-63.4)
Population	0.831	0.837	0.838
	(-172.3)	(-178.0)	(-178.8)
GPD per capita	0.973	0.974	0.972
	(-153.1)	(-157.4)	(-157.5)
Common language	0.258	0.529	0.544
	(-10.9)	(-20.7)	(-21.3)
Colony	0.556	0.156	0.326
	(-21.9)	(-5.2)	(-9.2)
East Asia region	0.400	0.407	0.414
	(-15.1)	(-15.8)	(-16.1)
United States		-0.586	-0.609
		(-24.2)	(-25.1)
Average exchange rate			-1.119
			(-8.7)
Constant	-34.325	-34.249	-28.940
	(-170.8)	(-175.1)	(-45.1)
Adj R^2	0.840	0.848	0.849
Observations	10,570	10,570	10,570
	Imports		
	(1)	(2)	(3)
Weighted distance	-1.02	-1.02	-1.007
	(-39.7)	(-39.7)	(-38.6)
Population	0.976	0.976	0.975
	(-139.5)	(-139.4)	(-139.4)
GPD per capita	1.062	1.062	1.063
	(-116.6)	(-116.6)	(-116.6)
Common language	0.562	0.562	0.554
	(-16.7)	(-15.0)	(-14.7)
Colony	0.698	0.699	0.610
	(-19.3)	(-16.0)	(-11.6)
East Asia region	0.755	0.755	0.751
	(-19.9)	(-19.9)	(-19.8)
United States		0.000	0.012
		(0.0)	(-0.3)
Average exchange rate			0.586
			(-3.1)
Constant	-38.490	-38.490	-41.276
	(-133.9)	(-133.8)	(-43.6)
Adj R^2	0.762	0.762	0.762
Observations	10,433	10,433	10,433

Note: All of the regressions are estimated within a fixed effects model allowing for shifts over years. All variables are measured as logarithms except for the categorical variables of common language, colony, the United States, and the East Asia region. The average exchange rate is computed as the trade-weighted real exchange rates of the United States, Japan, and the EU-15, averaged over the prior five years using data provided by JPMorgan. t-statistics are shown in parentheses.
Source: Estimated by the authors as described in the text.

[15] See IMF (2007) and Crane, Crowley and Quayyum (2007).

[16] Bosworth and Collins (2008).

Why has U.S. export performance been so weak? This does not appear to be attributable to either a lack of growth in U.S. export markets or to the commodity composition of trade. A partial explanation may relate to the willingness of American multinational firms to use foreign affiliates as an alternative to exporting.[17] Foreign observers often point to U.S. government restrictions on high technology exports, but the magnitude of potential trade covered by those measures is relatively small. While this is an area that would benefit from additional analysis, it is important not to exaggerate the concerns with export performance. Baily and Lawrence stress that only a quarter of the increased deficit between 1991 and 2005 can be attributed to the shift they uncover, with fully three quarters associated with the much stronger value of the U.S. dollar.

Impact of the Crisis

While trade flows typically fall during global downturns, the drop during the current crisis has been considerably more severe than historical evidence would have predicted. In partial explanation, Caroline Freund (2009) presents evidence that the sensitivity of world trade to global GDP has increased every decade since the 1960s, and that the cumulated rise in this income elasticity is large and significant. Furthermore, the sensitivity tends to rise in the midst of a recession. She also finds banking crises to be associated with somewhat larger import declines, supporting the hypothesis that the financial crisis may be partially to blame for the speed and extent of trade collapse. Other hypotheses have been advanced to explain the magnitude of the recent collapse in trade. One focuses on the implications of increased specialization in the global supply chain. Another notes that goods production tends to fall more sharply than services production during a downturn. Goods are a larger share of trade than of GDP, and the share of services in global output has been growing. While each of these factors seems likely to have played a role, it is too soon for a full analysis that might suggest their relative importance.

Unlike unemployment, trade flows tend to rebound relatively quickly as output growth recovers in the aftermath of a crisis.[18] Indeed, Freund (2009) finds that most of the trade adjustment occurs in a year. Thus the moderation of large imbalances seen in the midst of the downturn is typically short-lived. She also finds that, on average, there is no lasting rebalancing for either those countries in deficit or those in surplus pre-crisis. Cases in which the crisis triggered a significant change in investment or fiscal policy are offset by those in which the imbalance deteriorated further post-crisis. However she, like other researchers, cautions against drawing too close parallels between the current crisis and past episodes—due to its much greater pervasiveness and severity and the fact that it originated in the core, not in smaller, more peripheral economies.[19]

Post-Crisis Outlook

The financial crisis has greatly distorted both external trade flows and the internal U.S. balance of saving and investment. The external deficit has fallen to -3.2 percent in 2009, half its 2006 peak value (see table 3). Yet, during the same period the government budget deficit has exploded to over 10 percent of national income, and the net national saving rate has turned highly negative. A rise in private saving has offset a portion of the increase in the fiscal deficit, and there is an even larger decline in domestic investment. However, the net improvement in the domestic saving-investment balance, as currently reported, is quite modest and results in a large statistical discrepancy within the national accounts. The preliminary data for 2009 suggest that there is strikingly little direct evidence of a fundamental shift in household saving, and the reduction in the current account has been largely accommodated by the collapse of investment. There are known to be long lags in the effects of wealth changes on consumption, and it is possible that the recovery will be marked by higher rates of household saving in the future; but the domestic rebalancing that has occurred to date is far from the desired path.

On the external side, much of the rise in the exchange rate that occurred during the most severe months of

[17] Lowe (2008) shows that sales of foreign affiliates less their purchases from U.S. parents, at $3.9 trillion in 2005, are 70 percent greater than comparable measures of net sales of foreign firms in the United States. However, in our earlier work, we found little difference between U.S. and Japanese affiliates' activities in China.

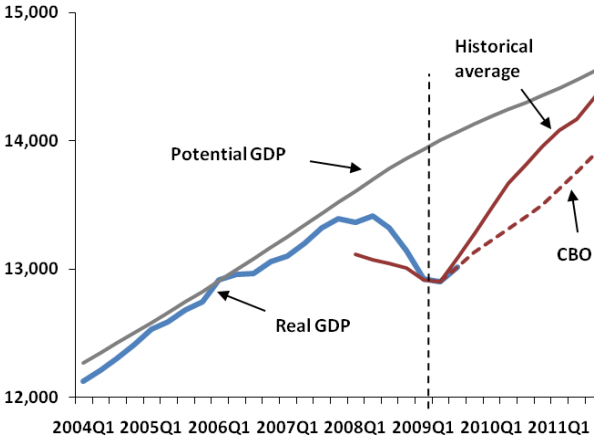
[18] Reinhart and Rogoff (2008, 2009) and Freund (2009).

[19] Cecchetti, Kohler and Upper (2009) study 28 financial crises since the 1980s and argue that the current crisis is unique. They use the variation in their sample (not the averages) to draw inferences. Interestingly they find that external factors (growth in trading partners and number of concurrent crises) do not affect the duration or depth of the crisis-related downturn.

the crisis has been reversed, and it is again close to its mid-2008 low. That value appeared to be consistent with a gradual reduction in the size of the trade imbalance. However, because both exports and imports remain far below their pre-crisis levels, it is difficult to project the future of their evolution with much confidence.

Current expectations are for a weak recovery of the U.S. economy relative to the historical norm. In figure 9, we show the path of recovery as projected by the CBO in its August economic report and contrast it with the average recovery from the eight prior U.S. business cycles. The initial few quarters may incorporate sharp cyclical gains in inventory investment, but overall investment is likely to be relatively weak for several years due to excess capacity in residential and commercial real estate. Thus, GDP growth is projected at only 1.7 percent for 2010 and 3.5 percent in 2011. A similar weak recovery is projected by the IMF in its October 2009 report. U.S. income growth less rapid than its trading partners and a depreciated exchange rate are consistent with the current account remaining at a reduced level of about 3 percent of GDP; but it is an external balance matched by low rates of national saving and even lower rates of domestic investment. This scenario is far from the soft landing that seemed achievable in mid-2008.

Figure 9. Projected Levels of U.S. GDP, 2004-2011
(billions of dollars)



Source: Computed by the authors from the Congressional Budget Office midyear economic and budget report.

From a foreign perspective, it would seem that the era of strong expansion of U.S. markets and a strong dollar are clearly over. Given the large budget deficits already projected for the United States, further fiscal stimulus seems extremely risky and not easily financed domestically without a significant rise in private saving. Investment is very low, but the government lacks an effective means of influencing private investment decisions. Thus, economic recovery would seem to necessitate major improvements in exports and the overall trade balance, something that can only be achieved by further declines in the exchange rate as a means of improved competitiveness. A likely reliance on net exports to fuel an expansion reinforces expectations of a slow recovery.

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PROSPECTS FOR PROMOTING CHINA'S INTERNAL DEMAND:

Some Issues Calling for Clarification

Gang LU

From 2004 when the Central Economic Work Conference first propounded the idea of "promoting the transformation of the economic growth pattern," to 2007 when the Seventeenth National Congress of the Communist Party of China clearly pointed out that China is going to "accelerate transformation of the mode of economic development, pursue the policy of boosting domestic demand, particularly consumer demand, and propel the transition in the mode of economic growth from relying mainly on investment and export to relying on a well coordinated combination of consumption, investment and export," propelling domestic demand has gradually become a hot issue concerning China's economy. Against the backdrop of the current global financial and economic crisis, due to the decrease of U.S. import demand, various countries and regions displayed a more urgent expectation for China's domestic market and thus the issue of China's internal demand has attracted even more attention from the international community. Hence come many doubts and questions. This paper tries to address some of them.

Question 1: The global financial crisis has led to China's great efforts to stimulate investment. Would this prevent China from expanding domestic consumption?

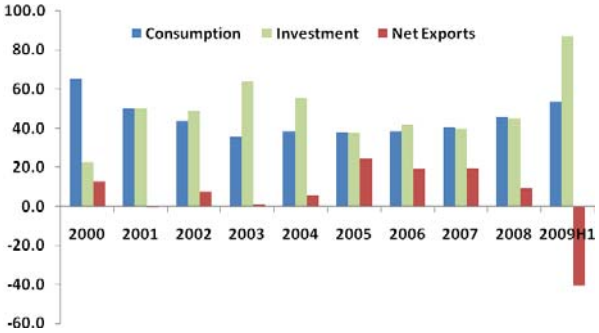
Answer: The financial crisis has not changed China's long-term policy target of expanding domestic consumption.

It is true that China is stimulating investments in order to deal with the financial crisis, but it should be noted that the abrupt increase in the contribution rate of investment to economic growth at present is only temporary and does not necessarily mean a fundamental change of the economic growth route of China in the mid- and long-term period.

Since 2004, when China first raised the idea of changing its economic growth mode during the Central Economic Work Conference, the contribution of investment to the country's real GDP growth has dropped significantly. The contribution rate was 64.5 percent in 2003, but dropped to 39.3 percent in 2005 and remained at roughly 40 percent until 2008 (figure 1). Over the first half of 2009, however, the situation changed dramatically. During this period, China's real GDP witnessed an increase of 7.1 percent on a year-on-year basis, including an increase of 6.2 percentage points produced by investment, which means the contribution rate of investment has suddenly jumped to as high as 87.3 percent, surpassing the last two peaks which occurred in 1985 and 1993. Therefore, it is safe to say that now China is

again relying mainly on investment for its economic growth.

Figure 1. Contribution of consumption, investment, and net exports to China's real GDP growth (%)



Note: Calculated at constant prices. Contribution rate refers to the ratios between the increments of the three types of demand to the GDP increment by expenditure approach. The data for 2009 cover the first half year.
Source: National Bureau of Statistics of China.

However, it is worth noting that the contribution of consumption is still on the rise, although slowly, continuing the upward trend since 2004. In the 7.1 percentage points of China's GDP growth in the first half of 2009, 3.8 percentage points is produced by consumption, with a contribution rate of 53.5 percent, which is the highest level in the last five years. On the other hand, net exports of commodities and services contributed minus 2.9 percentage points to GDP growth, producing a contribution rate of -40.8 percent. Therefore, it can be clearly seen that although the role of investment enhanced considerably in China's GDP growth, the role of consumption also maintained its upward movement. This indicates that the rapid increase of investment is only a result of the government's temporary economic stimulation policies which are intended to offset the adverse impact on the economy produced by abrupt decrease of exports. The growth of consumption is still stable and healthy.

Transformation of the economic development mode is a strategic decision made by the Chinese government based on the recognition of the unsustainability of China's current economic development mode. This decision does not and will not change due to the financial crisis.

During the 17th National Conference of the Communist Party of China held in October 2007, shifting the country's economic development mode was formally set as a strategic goal. In place of investment- and export-led development, the conference declared that China will adopt a more balanced growth path that relies more on domestic consumption. This shows that China's policy makers had made up their minds well before the financial crisis that changing the growth mode is a must if China wants to achieve sustainable growth.

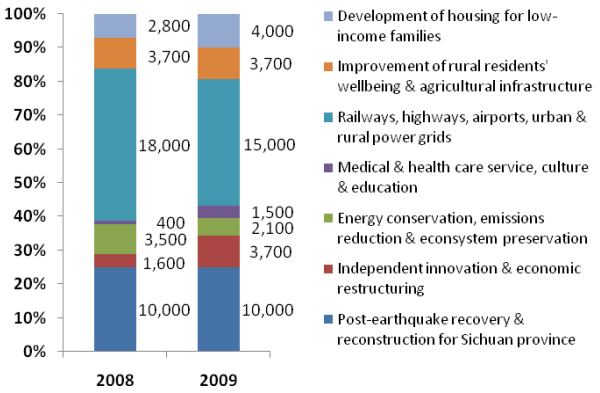
The meeting of the Political Bureau of the Central Committee of the Communist Party of China (CCCPC) held on November 28, 2008 made "ensuring growth, expanding domestic demands and adjusting structure" the aims of the economic work of 2009. The China Monetary Policy Report for Quarter Four, 2008 issued by People's Bank of China (PBOC), China's central bank, on February 23, 2009 indicated that "in the context of a weakening external demand and an accelerating adjustment of the global economic imbalances, the fundamental approach to achieve stable and relatively rapid economic growth is to expedite economic restructuring and reform focusing on expanding domestic consumption demand." Both actions indicated that, faced with the global financial crisis, China's policy makers have not changed the designated strategic aim of expanding domestic consumption.

Judging from actions, expanding consumption demand is no less important than stimulating investment in China's counter-crisis measures.

In the Four-trillion-yuan Economic Stimulus Package for 2009 and 2010 unveiled by China in November 2008, the total amount of investment on the development of housing for low-income families, the project to improve the wellbeing of rural residents and agricultural infrastructure development, and the post-earthquake recovery and reconstruction scheme for Sichuan Province reached 1.65 trillion yuan (figure 2). These three programs are indeed investment projects, but they will substantially enhance the consumption capacity of the residents by improving the social public services. The Second Session of the 11th National People's Congress (NPC) of China held in March 2009 also made structural readjustment to the Four-trillion-yuan Economic Stimulus Package by adding investment of 120 billion yuan on the development of housing for low-income families. Thus the total amount of investment on the three projects mentioned above reached 1.77 trillion yuan. Including investment of 150 billion yuan on the medical and healthcare service system and cultural and educational system, investment related to the

expansion of consumption demand in the four trillion yuan stimulus amounts to 1.92 trillion yuan, nearly half of the total investment.

Figure 2. Composition of the Four trillion-yuan Economic Stimulus Package for 2009 and 2010



Note: 2008 stimulus amounts were announced by NDRC at end of year; 2009 amounts were announced by NPC and CPPCC. Amounts are in RMB 100 million.
Source: National Development and Reform Commission (NDRC), National People's Congress and CICC Research

The financial crisis has actually promoted reform in the key fields of medical and healthcare service system, culture and education system and social security, which will weaken the residents' motivation to make precautionary savings and promote consumption in the mid- and long-term.

The investment in the medical and health care service system and culture and education system is seemingly small in the 4 trillion yuan stimulus, and the investment only increased to 150 billion yuan after readjustment from the initial amount of 40 billion yuan. However, in the Second Session of the 11th National People's Congress (NPC) held in March 2009, Premier Wen Jiabao announced a series of major actions for the reform of China's public healthcare system in his Report on the Work of the Government. Urban residents will be covered by basic medical insurance for urban workers or basic medical insurance for non-working urban residents, and rural residents will be covered by a new type of rural cooperative medical care system. These programs will cover over 90 percent of those eligible within three years. In 2009, the government will formulate and promulgate a unified national basic drugs catalog and adopt policies concerning their production, distribution, pricing, use and insurance reimbursement in order to ease the burden on patients for the cost of basic drugs. In the coming three years, the central government will allocate funds to support the building of another 5,000 health clinics in central villages and towns, 2,000 county-level hospitals and 2,400 community health service centers in urban areas. The government will steadily promote equal access for all to basic public health services and will expand the scope of free public health services. Governments at all levels will allocate an additional 850 billion yuan in the next three years, including 331.8 billion yuan from the central government, to ensure smooth progress in the reform of the system of medical and health care.

As regards the education system, Premier Wen announced that the government will increase public expenditures on rural compulsory education to 300 yuan per primary school student and 500 yuan per junior high school student. He promises the government will progressively ensure that children of rural migrant workers have access to free compulsory education in their parents' working places.

Apart from the medical and health care service system and the culture and education fields, China will also further increase investment in social security. Premier Wen also claimed in his report that the government will improve the basic endowment insurance system and comprehensively extend the approach of "planning as a whole at the provincial level." The pilot projects for establishing a new type of endowment insurance system for rural residents will cover approximately 10 percent of counties and county-level cities in the country. The government will introduce a method for transferring pension accounts for workers moving from one region to another, expand coverage of social security programs and increase social security benefits. The government will continue to raise the amount of basic pensions for enterprise retirees by an annual average of about 10 percent per person for the next two years. The government will continue to increase unemployment insurance benefits and workers' compensation. The government will extend greater financial support to both urban and rural recipients of cost of living allowances and to childless and infirm rural residents who receive subsidies for food, clothing, medical care, housing and burial expenses.

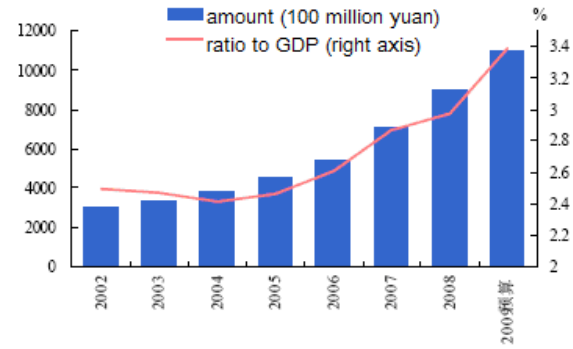
The investment in the medical service system, education and social security in China's financial budget for 2009 will reach 341.56 billion yuan (figure 3), 1,094.66 billion yuan (figure 4), and 833.07 billion

yuan respectively (figure 5) respectively. These levels represent increases of 25.5, 22.5, and 23.1 percent respectively, which are much above the average annual growth rate for 2003-2008. This clearly indicates that China is increasing, not decreasing, her efforts to expand domestic consumption demand.

Figure 3. National public finance expenditure on medical and healthcare service

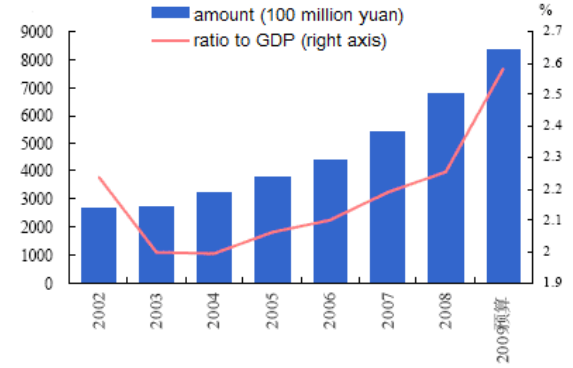
Note: Figure for 2009 refers to 2009 budget.
Source: Ministry of Finance of China.

Figure 4. National public finance expenditure on education



Note: Figure for 2009 refers to 2009 budget.
Source: Ministry of Finance of China.

Figure 5. National public finance expenditure on social security and employment



Note: Figure for 2009 refers to 2009 budget.
Source: Ministry of Finance of China.

Against the backdrop of the crisis, other reforms to expand domestic consumption are also being promoted.

In this regard, a good example is the notification made by the People's Bank of China in March 2009, which vows to "promote consumer credit and expand and preserve the consumer credit market." According to this notification, the regulator for China's financial market will

- "collectively boost credit consumption in industries closely related with the wellbeing of the people such as autos, houses, household appliances, education and tourism,"
- "guide the financial institutions to introduce new consumer credit products,"
- "encourage to set up consumption finance companies in areas where conditions are ripe, encourage and support the commercial banks and auto finance companies conduct business cooperation from various aspects,"
- "support qualified auto finance companies to issue finance bonds," and
- "expand the scale of auto loan securitization and broaden the auto finance companies' access to financial resources."

Question 2: China has enhanced its effort to expand domestic demand. Does this mean that a rebalancing between the economies of the United States and China can be achieved in the near term?

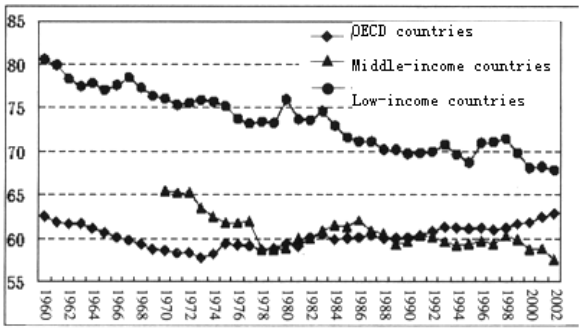
Answer: It is unrealistic to expect China to complete the mission of shifting its economic development mode in three or five years.

Basically, consumption is decided by peoples' income level. China's per capita income is still low, although it has increased a lot since 1978.

A research group from the Development Research Center (DRC) has found that a country's consumption rate usually follows a "down-up-level off" pattern, with the progress of industrialization and the increase of personal income (figure 6). For example, the consumption rate of OECD countries kept decreasing

during the period of 1960-1973 and then kept going up in 1974-1986.

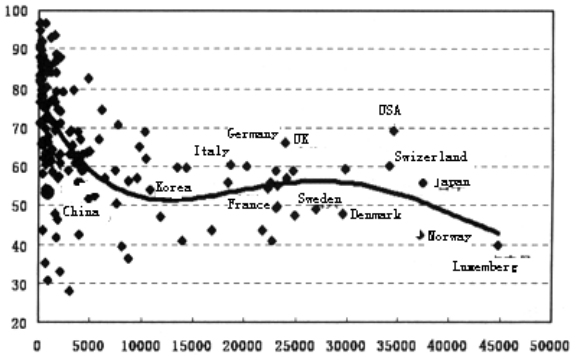
Figure 6. Characteristic of the changing pattern of consumption rate



Source: "China: Looking for new breakthroughs in fighting the crisis", DRC research group, *Management World*, Issue 6, 2009.

In a comparison of data on 168 countries for the year 2000, the research group of DRC has also found that low-income countries tend to have the highest consumption rate and middle-income countries tend to have the lowest consumption rate (figure 7). High-income countries' consumption rate tends to be between the former two groups of countries.

Figure 7. Relationship between per capita GDP and consumption rate



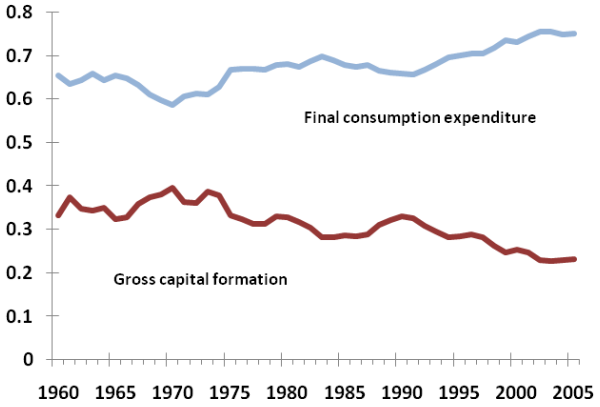
Source: "China: Looking for new breakthroughs in fighting the crisis", DRC research group, *Management World*, Issue 6, 2009.

Even calculated by PPP standards, China's per capita GDP in 2008 is only 5,962 USD, placing it 101st among 182 economies in the world.[1] Therefore, China is currently only a middle-income country and is at a stage of low consumption rate.

It is a common phenomenon that the investment rate goes up and hence drags the consumption rate down during the process of industrialization. The process of industrialization has not been completed in China.

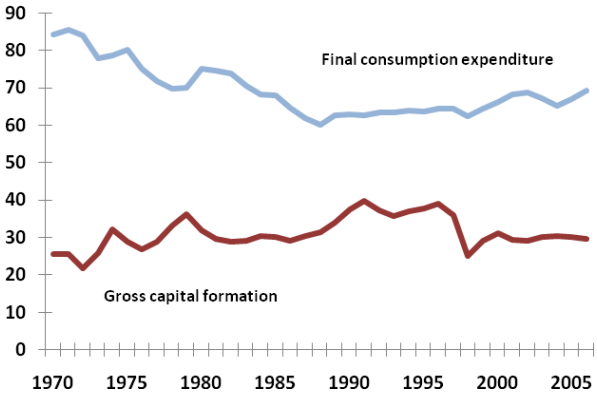
Since industrialization requires huge amounts of investment, a country's investment rate tends to be high when it is trying to become an industrialized economy. From the experience of East Asian economies such as Japan, Korea and Singapore, we can easily find this pattern (figures 8, 9, and 10).

Figure 8. Investment and consumption rates of Japan, 1960-2006, percent of GDP



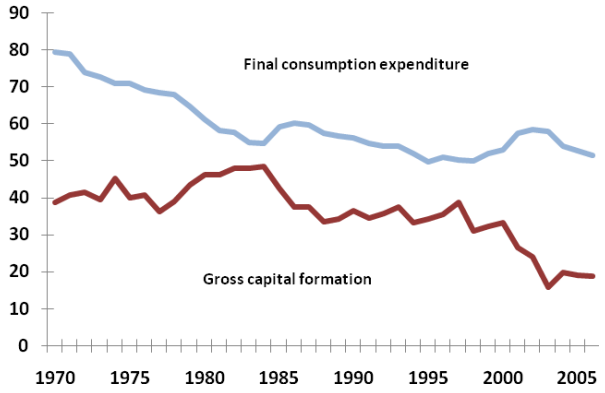
Source: World Bank.

Figure 9. Investment and consumption rates of Korea, 1970-2006, percent of GDP



Source: UNCTAD.

Figure 10. Investment and consumption rates of Singapore, 1970-2006, percent of GDP

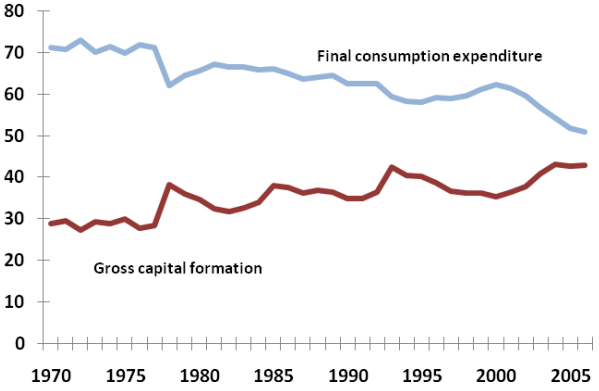


Source: UNCTAD.

[1] "China Economic World Ranking Report," Issue 2, August 2009.

At its present stage of industrialization, China's investment rate is still increasing, and its consumption rate decreasing (figure 11).

Figure 11. Investment and consumption rates of China, 1970-2006, percent of GDP



Source: UNCTAD.

Judging by the share of industry in GDP, it seems that China's industrialization is already at a very high level. In 2007, industry accounted for 43.5 percent of China's GDP (table 1). This ratio is almost the highest when compared with the historical high levels of many industrialized or newly industrialized countries.

However, from the perspective of technology level, there is still a big gap between China's industry and advanced countries. As can be seen from table 2, China's exports of electronic and IT products are mainly in the form of the processing trade, which accounted for 87 percent in 2005. Although the electronics and IT industry itself is capital-intensive and can raise labor productivity, processing and assembling activities create limited value and they are no more than a labor-intensive link in the global value chain, since a great quantity of technology-intensive manufacturing equipment and key parts and components come from abroad.

Table 1. Highest share of industry in GDP for selected countries

	Share (%)	Year
UK	36.3	1970
Germany	39.1	1970
Australia	30.1	1970
Japan	38.8	1970
Sweden	30.9	1974
Italy	32.0	1976
France	28.4	1978
Canada	30.5	1979
Switzerland	26.1	1980
South Africa	45.2	1980
United States	29.3	1981
Hungary	37.9	1982
New Zealand	27.2	1982
Brazil	35.5	1984
Israel	24.7	1984
Taiwan Province of China	43.4	1986
Mexico	31.4	1987
Korea	34.5	1987
Singapore	32.2	1988
Poland	43.4	1990
Russia	39.7	1991
India	22.7	1995
Malaysia	45.9	2006
Thailand	41.4	2006
China	**43.5**	**2007**

Source: Research report, Galaxy Securities.

Table 2. Comparison of China's export structure with developed countries, percent

	China				Korea	Germany	Japan	US
			2005					
				Processing				
Technology Level	1996	2001	Total	Trade	2004	2004	2004	2004
Primary products	10	7	4	1	2	5	1	9
Resource-based products	11	9	8	3	10	12	7	14
Agro-based	5	4	3	1	3	6	2	6
Other	6	5	5	1	8	6	5	8
Low technology manufactures	45	40	31	11	10	12	6	10
Textiles, garments & footwear	30	25	18	6	5	3	1	3
Other	15	15	13	5	4	8	5	7
Medium technology manufactures	19	20	23	12	41	51	59	39
Automotive	1	2	2	1	13	18	22	9
Process	6	5	6	2	12	11	11	10
Engineering	11	13	14	9	17	22	27	20
High technology manufactures	15	24	33	28	37	20	27	29
Electronic and electrical	13	22	31	27	35	12	22	16
Other	2	2	3	2	2	9	5	13

Note: For the purpose of calculation, China Customs data have been used for China and UN COMTRADE data used for the developed countries.
Source: "Improving export structure must be based on upgrading industrial structure", Lu Gang, http://www.drcnet.com.cn/.

This judgment can be substantiated by examining foreign-invested enterprises (FIEs) in China as most of them are engaged in processing trade production. According to *China Statistical Yearbook*, the overall labor productivity, or the industrial value added per capita, of FIEs in China's electronic and telecommunication equipment manufacturing sector in 2005 is RMB 143,000, against RMB 38,000 for FIEs in the textiles, garments, footwear and caps sector. However, the ratio of value added to gross industrial output value for the first group of enterprises (20.1 percent) is remarkably lower than for the second group of enterprises (29.4 percent). Therefore, although the electronic and IT products that China exports are indeed technology-intensive, the value added through processing trade production is still limited. China is still at the low end of the global production chain, which includes R&D, design, key parts manufacturing, processing and assembling.

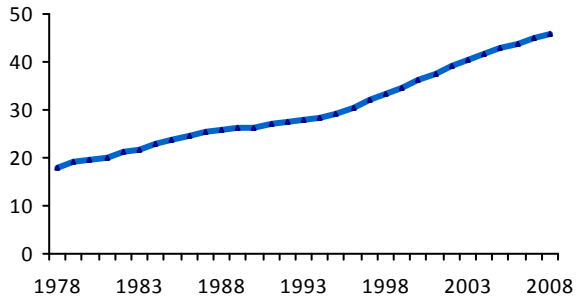
Another structural change in Chinese exports during the last decade is that the share of medium-tech products, mainly including iron and steel products, chemical products, automobiles and machinery, rose only slightly, from 19 percent in 1996 to 23 percent in 2005, while the corresponding figures for Korea, Germany, Japan and the United States in 2004 were 41, 51, 59, and 39 percent respectively. Again, this shows that there still exists a big gap between China and developed countries in terms of industrial technology level. This is why China's leadership has recently set independent innovation as a national development focus.

Due to China's as yet incomplete process of urbanization and the reform of the housing allocation regime, Chinese people will have to save a large portion of their income in order to buy houses. Therefore, the savings rate of the country will remain at a high level in the coming years.

A report by China's Renmin University has found that there exists a positive correlation between urbanization and the investment rate and a negative correlation between urbanization and the consumption rate. The investment rate tends to rise and the consumption rate tends to drop before the urbanization rate reaches 60 percent.

It took 15 years (1981-1996) for China's urbanization rate to increase from 20 to 30 percent and 7 more years (1996-2003) for the rate to gain another 10 percentage points (figure 12). In 2008, China's urbanization rate stands at 45.7 percent, still about 15 percentage points below the 60 percent threshold.

Figure 12. Urban population as a percent of China's total population, 1979-2008



Source: *China Statistical Yearbook* 2009.

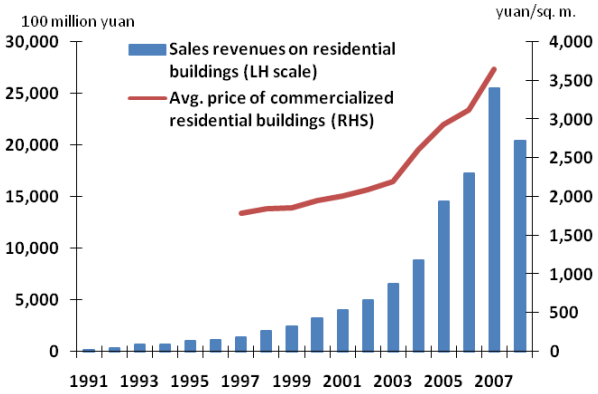
During the process of urbanization, new migrants rushing into cities, including university graduates and migrant workers, have to save a huge portion of their income in order to own their own home, or at least to rent a decent flat. This would considerably restrict their consumption ability on other goods and services.

Aside from urbanization, the reform of China's housing allocation regime is another important factor which needs to be taken into account if one wants to evaluate the country's consumption potential. Urban residents used to receive free housing from the government. But after the reform of this allocation starting in 1998, they could no longer enjoy this benefit and must buy their own housing instead. This has created a soaring real estate market ever since it was instituted (figure 13). At the same time, urban residents are faced with a heavy economic burden if they want to own a decent house.

At present, there are still a significant proportion of urban residents in China who have not yet purchased housing in the marketplace. According to a questionnaire survey conducted by the Anhui branch of China's Statistical Bureau in 2006, 92.4 percent of urban families in Anhui Province have their own homes, but only 26.3 percent of those families have purchased commercialized houses, i.e., at a market price. Almost half, or 48.4 percent, of urban families live in premises they bought at a subsidized price from the government during the housing allocation reform and 17.7 percent of families built their own houses. Since the quality of the latter two types of dwellings

(subsidized flats and owner-built houses) is usually inferior to commercialized buildings, there still exists huge potential demand for people to buy new housing at market prices. Besides, the offspring of those who bought a flat at a subsidized price cannot enjoy such treatment and will have to buy their housing on the market.

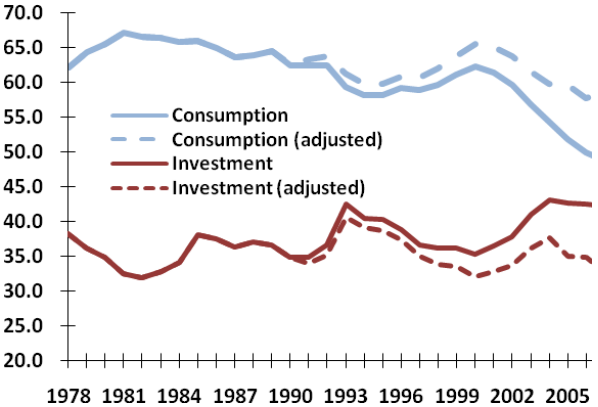
Figure 13. Sales revenue and average price of commercialized residential buildings in China



Note: Sales revenue is for residential buildings; average price is for commercialized residential buildings.
Source: *China Statistical Yearbook* 2009.

To find out how much the factors of urbanization and housing allocation regime reform have impeded China's consumption rate, we can make the following experiment. If we deduct the sales revenue of commercialized residential buildings in China from the country's total investment and add this amount to consumption, China's consumption rate would be 58.5 percent, 10 percentage points higher than the actual level (figure 14).

Figure 14. Experimental adjustment of China's consumption and investment rates, 1985-2007 (% of GDP)



Note: Actual data adjusted by deducting sales revenue of commercialized residential buildings from investment and adding it to consumption.
Source: *China Statistical Yearbook* 2009 and author's calculation.

Besides, China will continue to promote the development of its export sector due to the heavy dependence of employment on exports. This means net exports will continue to be a major contributor to GDP growth in the coming years, although its relative importance would be decreasing.

Employment in China is highly dependent on exports and the export sector's contribution to employment is irreplaceable in the short term. According to estimates of the Ministry of Commerce of China (MOFCOM), China's foreign trade directly brought job opportunities for about 80 million people, 60 percent of whom are rural migrant workers. Such traditional labor-intensive export industries as agriculture, light industry, and textiles directly employ about 50 million people. It is very difficult for this huge labor force to swiftly move into other industries when exports shrink sharply. First of all, the people employed in such traditional labor-intensive export sectors as light industry and textiles are mainly poorly educated migrant workers with low technical skills. It is hard for them to switch to other industries after retraining.

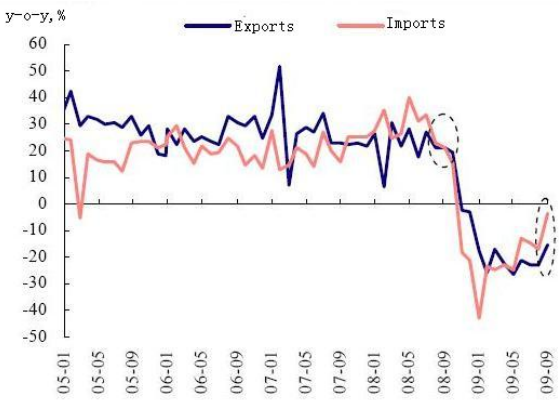
Secondly, China is currently increasing investment mainly in capital-intensive sectors aimed at the domestic market. On the other hand, a large part of the export sector is labor-intensive. Since the expanding domestic sector is capital- rather than labor-intensive, it is not able to fully absorb the excess workers from the export sector.

Thirdly, many unemployed migrant workers are not willing to go back to rural areas. Their land might have been rented to others so they would have no land to work on even if they returned to their villages. Many workers migrated to cities when they were still young and before they had learned the systematic agricultural production techniques from their parents. Moreover, many of them have already become accustomed to the modern life style in cities and are not psychologically fit for rural life.

Under these circumstances, if no action were taken to alleviate the shock, plummeting exports would leave many unemployed migrant workers stranded in the cities, which could severely undermine social stability. Undoubtedly, this is politically unacceptable. Therefore, the Chinese government has taken several important measures to protect its exports. For example, China increased the coverage of export credit insurance, deciding to arrange 84 billion USD of short-term export credit insurance in 2009. The

government has also increased the export rebate rate on a large number of products. With the recovery of the U.S. and EU economies, and with the help of the above-mentioned measures, China's exports have showed a clear sign of recovery since May 2009 (figure 15).

Figure 15. Growth rate of China's exports and imports



Source: CEIC, China Customs.

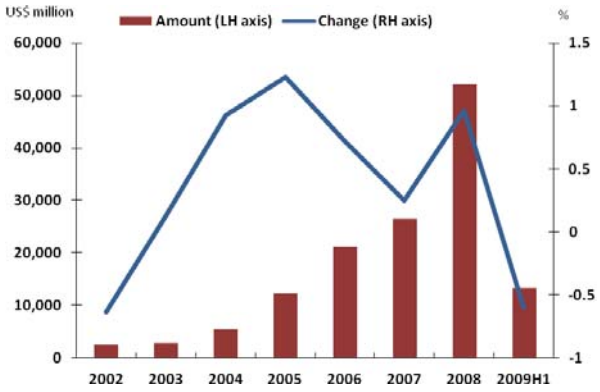
Question 3: Globally, there seems to be an upward trend of investment protectionism against the background of the financial crisis. Will China change its policy of promoting outward FDI due to the need to expand domestic demand?

Answer: The Chinese government will continue to actively promote its "go global" strategy.

The abrupt drop in China's FDI outflows in the first half of 2009 was mainly a result of market factors.

In the first half 2009, China's outbound FDI flow recorded 13.3 billion USD, dropping by 60 percent compared with the same period of the previous year, and contrasting strongly with the rapid increase over the last five years (figure 16). However, the drop mainly resulted from market factors, i.e., the sluggish global economy leading to enhanced risks in external markets, which made Chinese enterprises interested in investing overseas more prudent. There is no change in the Chinese government's policy to encourage enterprises to invest overseas.

Figure 16. China's FDI outflows, 2002-2009-1H



Source: Ministry of Commerce of China, National Bureau of Statistics of China, State Administration of Foreign Exchange of China.

It is the objective requirement of economic development rules for Chinese enterprises to increase overseas investment.

According to the theory of international investment development path, when the per capita GDP of a country reaches 2,000 to 4,750 USD, its overseas investment will increase by a large margin. China's per capita GDP exceeded 3,300 USD in 2008. As a matter of fact, the development of China's outbound FDI during the first three years of the 11th Five-Year Economic and Social Development Plan period has obviously accelerated. The investment flow for the three years, from 2006-2008, totaled nearly 100 billion USD, 1.87 times the total flow of the fifteen years from 1991-2005. The share of China's outbound FDI flow in the world total hit a record high of 3.6 percent in 2008, which will probably make China one of the world's top ten investors for the first time.

While the scale of investment is expanding, the structure, regions, and modes of China's overseas investment have also diversified. The major investment fields have expanded from import/export trade and transportation to finance, mining, manufacturing, telecom and R&D. Since technology, brands, human resources, and marketing networks of enterprises in developed countries have increasingly become the major investment targets of Chinese enterprises, the focus of China's overseas investment is turning from developing countries to both developing and developed countries. As a response to this, China's foreign investment has more and more adopted the M&A mode, and the proportion of

traditional greenfield investment has declined accordingly.

Accelerating China's outbound FDI is an important approach for China to switch its economic growth mode and an inevitable choice for China to realize sustainable development.

Firstly, the future 10 years will be the crucial period for China to turn from a large industrialized country to an industrial power. While enhancing independent innovation capacity has been recognized as a national strategy, overseas investment is a shortcut to achieve this goal. Secondly, the huge gap between supply and demand of energy and mineral resources has pressured China to look for resources overseas. Thirdly, the further development of China's manufacturing industry requires the extension of the industrial chain and expansion to upstream design and R&D and downstream distribution, while directly purchasing overseas brands, patents, marketing networks, and after-sale service networks is a short-cut to realizing this target. Fourthly, expanding overseas development can open up a path for a part of China's foreign exchange to go overseas, which is an important way to help solve the problem of the long-term imbalance in China's international payments.

Supporting enterprises' overseas investment and thus pulling up exports is also an important part of China's counter-crisis measures.

In the policy measures to stabilize external demand issued by the Standing Committee Conference of the State Council presided over by Premier Wen Jiabao on May 27, 2009, an important part is to support the enterprises of various ownership to "go global" in order to promote exports. The specific measures include arranging 10 billion USD in preferential export buyers credit in 2009 and simplifying the examination and approval procedures for preferential purchase and preferential loan projects and funds.

China's reform to promote the mechanism of overseas investment management has not stopped. On the contrary, it has picked up speed. Several key deregulation policies were promulgated in 2009.

The Ministry of Commerce of China (MOFCOM) issued the Management Measures for Overseas Investment on March 16, 2009, further reforming the mechanism for overseas investment management, promoting the facilitation of overseas investment, and greatly supporting Chinese enterprises to "go global."

Compared with the existing regulations, the new Measures have the following three main characteristics:

- First, the power of examination and approval is decentralized to provincial departments of commerce. The Measures stipulates that MOFCOM only reserves the power of examination and approval on a few major sensitive overseas investment projects, i.e., overseas investment projects of over 100 million USD and outbound investment projects in specific countries. Estimated by the number of applications examined and approved in 2008, about 85 percent of overseas investment applications will be handled by provincial-level authorities.
- Second, the examination and approval procedures are simplified. The Measures stipulates that most enterprises engaged in overseas investment will obtain a Certificate of Outbound Investment by Domestic Institutions within three working days after submitting an application form.
- Third, the key points of management are stressed. The Measures stipulates that the commerce administration authority shall mainly examine outbound investment on whether it harms political and economic and trade relations between the PRC and relevant countries (or regions), whether it jeopardizes national economic security, whether it may contravene the international treaties to which China has acceded, and whether it involves vicious competition. The authority no longer examines the economic and technical feasibility of outbound investment projects.

On June 9, 2009, the State Administration of Foreign Exchange (SAFE) of China issued the Circular on Foreign Exchange Control Issues Relevant to Overseas Loans Extended by Enterprises in China. The Circular mainly includes the following content:

- First, the scope of entities that are entitled to provide loans overseas is extended. Compared with the current rules that allow only qualified multinational corporations to provide funds overseas, the new rules extend the scope to include qualified enterprises of all types of ownership.
- Second, the scope of funds sources is expanded, allowing domestic enterprises to provide loans

overseas with their own foreign currencies or by purchasing foreign currencies using RMB within a certain quota.

- Third, approval procedures for providing loans overseas are also simplified. The opening of special foreign exchange accounts for providing funds overseas, the transfer of the funds within China, and the purchasing of foreign currencies will also be directly handled by authorized banks.

On July 13, 2009, SAFE also issued the Provisions on the Foreign Exchange Administration of the Overseas Direct Investment of Domestic Institutions offering facilitation to outbound FDI by domestic institutions.

- First, it expands the scope of source of foreign exchange for outbound investment to include self-owned foreign exchange, qualified foreign exchange loans from domestic banks, foreign exchange converted with RMB funds, tangible or intangible assets, and overseas retained profits.
- Second, it changes the method of reviewing foreign exchange sources for outbound investment from prior examination to after registration.
- Third, it changes the method of SAFE's administration of the capital outward remittance by domestic institutions for outbound investment from approval to registration.
- Fourth, upon the approval of local SAFE, the Provisions allow domestic institutions to remit in advance the initial expenses according to certain proportion of the total amount of investment for outbound investment before the overseas projects are formally established.

Conclusions

Against the backdrop of the global financial crisis, China has actively stimulated investment, but the current rise in the investment rate caused by such actions is only temporary. Policy makers have not changed the strategic decision to transform the country's economic development mode from investment- and export-led to a more balanced growth path that relies more on domestic consumption. Actually, the Chinese government is exerting as much effort to promote consumption as to boost investment in its anti-crisis policy package. More importantly, the financial crisis has actually promoted reforms in such key fields as the medical care system, the educational system, and the social security system, which will decrease China's savings rate and promote consumption in the longer term.

At the same time, it is unrealistic to expect China to complete the mission of shifting its economic development mode in the near term. First, its per capita income, which is the crucial factor in determining the consumption rate, is still low. Second, as China's industrialization has not been completed yet, investment will continue to play a key role in the country's economic growth. Third, the unfinished urbanization process of China, together with the factor of housing allocation regime reform, means that a big portion of people's income will have to be saved to buy housing, which is counted as investment rather than consumption in the GDP statistics. Fourth, net exports will continue to be a major contributor to China's GDP growth in the coming years, as the country's heavy dependence of employment on exports cannot be changed overnight.

As far as outbound FDI is concerned, the Chinese government will continue to actively promote its "go global" strategy. China will not change its policy of promoting outward FDI due to the need to expand domestic demand, although there seems to be an upward trend of investment protectionism against the background of the financial crisis.

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A SEARCH FOR POTENTIAL FEMALE LABOR FORCE IN JAPAN'S AGING SOCIETY

Masaki Kuwahara

Abstract

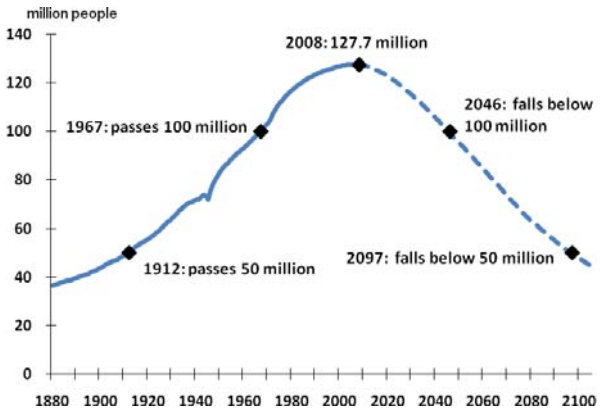
Low female labor participation is a well known feature of Japan's labor market. One way to cope with the aging society, in which a labor shortage is expected to be a serious problem, is to utilize the potential female labor force. In 2008 more than three million Japanese women wished to work but were not in the labor market. An effective policy would be to provide sufficient daycare services so that some of these women could work and raise their children at the same time.

Somewhat surprisingly, demand for daycare services has been increasing since the mid 1990s despite the decreasing population of children. Also, the female labor force ratio and the total fertility rate have been rising together recently. The reasons behind these trends are not clear. However, at least women's behavior seems to be moving in a more desirable direction. Policies that support current changes are required.

1. Introduction

There is almost no doubt that Japan's population will decline. In the most quoted population projection, provided by the National Institute of Population and Social Security Research (IPSS), Japan's population falls below 100 million by the middle of this century and even below 50 million by the end of the century (figure 1). The stark prediction that in 100 years the population will be less than half its current size is attracting serious attention in many different professions. Japan's demography is one of the main concerns in the investment industry, especially among foreign investors who are considering investing in this country.

Figure 1. Population projections for Japan to 2100



Note: Data for 2009 on are medium variant estimates from IPSS.
Source: Nomura, based on National Institute of Population and Social Security Research, Ministry of Internal Affairs and Communications.

The decline in population is expected to be a heavy burden on the economy. From the point of view of the corporate sector, it could mean a shortage of demand for the goods it produces. One obvious way for companies to keep growing amidst a shrinking market is to globalize their business. Exporting or establishing branches abroad will, at least hypothetically, allow a company to maintain the volume of sales. Nomura Group's acquisition of Lehman Brothers' business is a good example, but many other companies are following the same strategy. I discussed elsewhere[1] the importance of globalization for Japanese firms, and the exact same argument applies even after the worldwide great recession we have experienced since last year.

On the other hand, a decline in population could also mean a shortage in labor supply. When declines in demand and supply occur at the same time, the net effects on prices are ambiguous. Since market participants seem mainly to be concerned about inflation this suggests that they assume the impact on the supply side of the economy will be bigger than that on the demand side. This is not a bad assumption given that the labor force tends to shrink more rapidly than total population because a declining population is the result of fewer and fewer younger people.

To avoid inflationary pressures stemming from a labor shortage, Japanese citizens must find some additional workers**.** There are two possible sources for additional labor supply: internal and external. Looking externally, we could invite more foreigners to work in Japan. The country's regulation of immigration is notoriously strict, but there has been some progress. For example, the number of foreign residents has increased from 1.7 million in 2000 to 2.2 million in 2008. However, this progress seems to look too slow to foreign investors.

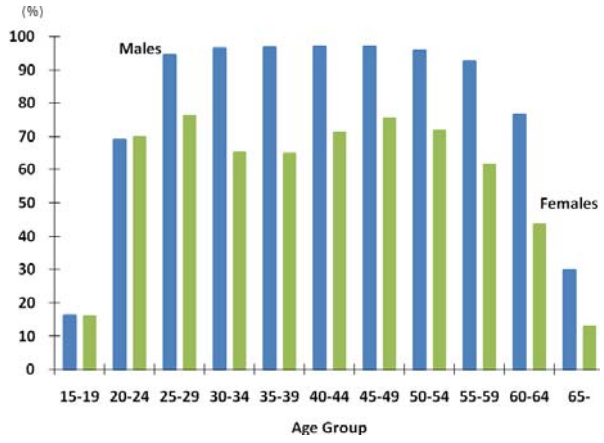
Looking internally, we may be able to find people living in Japan who want to work but are not currently working. There have been efforts to raise the retirement age so that more elderly people continue working until later in their lives. The clear success of this policy can be seen in the rapidly rising elderly labor force ratio. For example, labor force ratio for men aged 60-64 rose from 70.3 percent in 2005 to 76.4 percent in 2008.

But there exists another source of potential labor supply inside Japan: women. And that is what this paper primarily focuses on. I will first summarize the current state of female labor participation. Then I will discuss a complication involved in this subject and propose a way to raise this participation rate. Finally, I will overview recent interesting changes in the behavior of Japanese women that could imply the situation is heading in a desirable direction.

2. Female labor participation in Japan

Low female labor participation in Japan is a well known fact. As of 2008, the female labor force ratio was 62 percent for females aged 15-64.[2] This is 23 percentage points lower than the corresponding ratio for males (figure 2). Admittedly, female labor participation is lower than male participation in many countries. However, international comparisons reveal that Japanese women tend to work less than women in other countries. For example, in 2008 Sweden's female labor force ratio was 77 percent and the U.S. rate was 69 percent (figure 3).

Figure 2. Japan's labor force ratio by gender and age group (2008)

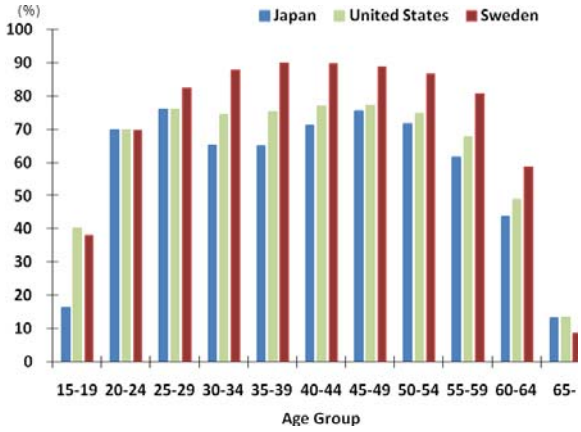


Note: Labor force ratio = labor force/population
Source: Ministry of Internal Affairs and Communications.

[1] Masaki Kuwahara, "How to Survive the Era of Declining Population: The Chinese Market as a Great Opportunity," paper presented at the Tokyo Club Foundation for Global Studies Macro Economy Research Conference, November, 2007.

[2] In this paper, unless otherwise specified, labor force ratios refer to individuals aged 15-64.

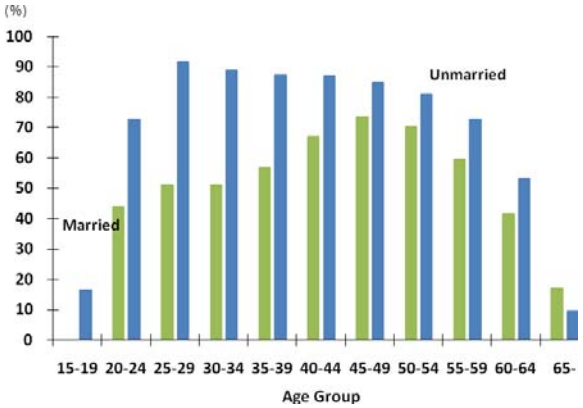
Figure 3. Female labor force ratio in Japan, Sweden, and the United States (2008)



Note: The survey for the United States includes females aged 16 and above. The survey for Sweden includes those aged 72 and below.
Source: Nomura, based on Japan Ministry of Internal Affairs and Communications and International Labor Organization.

A notable feature of female labor participation in Japan is not only its low level, but also its age pattern. By age, the female labor force curve shows a clear "M" shape, with a dent at the 30-39 age category. In demographic studies, this pattern indicates the mass exit of women from the labor market after marriage or giving birth. We can confirm that this is the case in Japan by looking at female labor participation by marital status. In 2008, the labor force ratio for was 53.5 percent for married women aged 25-39, while it was almost 90 percent for unmarried women in the same age group (figure 4).

Figure 4. Female labor force ratio by marital status (2008)



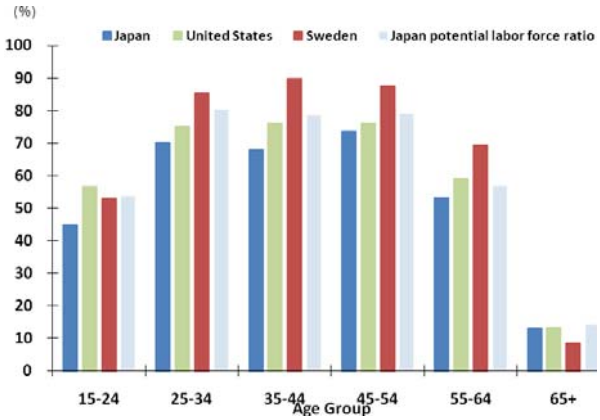
Note: Labor force ratio = labor force/population
Source: Nomura, based on Ministry of Internal Affairs and Communications.

Why do Japanese women tend to work less? It is possible to hypothesize that they just do not like working. If they have different preferences than Japanese men or than women in other countries, Japanese women may be more likely to choose not to work even under exactly the same conditions. If this is the case, asking them to participate in the labor market may not make sense. The cost of making more women want to work should be carefully compared with the cost of the labor shortage to decide whether implementing a policy to raise female labor participation would pay off.

Fortunately, we do not have to be concerned with this case, because there are many Japanese women who are not actually participating in the labor market but who do wish to work. The 2008 *Labor Force Survey* counted 3.16 million women aged 15-64 in this category. This is equivalent to 11 percent of the female labor force and 5 percent of the total labor force in Japan.

We can think of Japan's potential female labor force as including all those women who want to work along with those already in the labor force. Thus, the potential female labor force is 11 percent larger than the official female labor force measure, and the total potential labor force is 5 percent larger. Moreover, calculated in terms of this potential labor force, female labor participation in Japan appears comparable to that in other countries. Japan's potential female labor force ratio of 70 percent is still below Sweden's actual 77 percent ratio, but it is higher than the actual ratio for the United States (figure 5). I see no strong indication that Japanese women particularly dislike working.

Figure 5. Actual and potential female labor force ratio in Japan compared with actual ratios in the United States and Sweden (2008)



Note: The potential labor force ratio is calculated by adding the number of people who wish to work but are not seeking jobs to the actual labor force. The survey for the United States includes women aged 16 and above while the survey for Sweden includes those aged 72 and below.
Source: Nomura, based on Japan Ministry of Internal Affairs and Communications and International Labor Organization.

3. Impacts of greater female labor participation

As mentioned, one possible consequence caused by a shortage of labor is inflation. We do not know when and by how much inflation will accelerate in Japan due to the declining population, but we do know that a 5 percent increase in the labor supply will certainly have the effect of dampening inflation. To illustrate with an extreme case, suppose the 5 percent increment to the labor force was entirely comprised of unemployed people. This would imply a rise in the unemployment rate by 5 percentage points. Simply following the slope of the Phillips curve relationship for Japan, a 5 percentage point rise in the unemployment rate would correspond approximately to a 5 percentage point decline in the inflation rate.

The assumption that all of the increment to the labor force will be unemployed is unrealistic. My view is that further female labor participation could result in the creation of whole new categories of demand. Women staying at home, of course, are not just sitting on their couches. They are busy with all sorts of household work, such as cleaning, cooking, doing laundry, shopping, and caring for children and elderly family members. The services they produce enable their husbands to earn income by working outside the home. In other words, household services provided by stay-at-home wives are an essential part of the entire production system.

The important point is that those household services are usually unpaid. That is why we do not have official statistics on the value of that work in the National Income Accounts. Even so, we can roughly estimate the value of unpaid work by homemakers as follows. First, we obtain the amount of time spent on unpaid household services per person per day from the *Survey on Time Use and Leisure Activities*. Next, we obtain wage rates for jobs similar to unpaid work from the *Basic Survey on Wage Structure*. The total value of unpaid household services produced in Japan in a year can be calculated by multiplying the number of hours spent per person per day by the wage rate, the population, and 365 days. For 2006 it amounted to about 100 trillion yen, equivalent to 20 percent of GDP (table 1).

Table 1. Estimated value of unpaid household work by gender, labor force status, and age group (2006), trillion yen

		Males				Females			
		Working		Non-working		Working		Non-working	
	Total	15-64	65+	15-64	65+	15-64	65+	15-64	65+
Household chores	67.5	3.5	0.7	1.1	2.7	23.1	2.8	18.9	14.7
Cooking	35.4	1.3	0.2	0.4	1.1	12.8	1.6	10.0	7.9
Cleaning	16.8	1.2	0.3	0.4	1.0	5.2	0.6	4.7	3.5
Laundry	12.1	0.5	0.1	0.1	0.3	4.4	0.5	3.6	2.7
Sewing	0.6	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.3
Other	2.6	0.5	0.1	0.2	0.4	0.7	0.1	0.4	0.3
Shopping	19.6	4.0	0.3	0.7	1.1	5.8	0.4	4.9	2.5
Child care	12.8	2.1	0.1	0.1	0.2	3.7	0.1	6.0	0.5
Elderly care	1.7	0.2	0.0	0.0	0.1	0.5	0.1	0.4	0.4
Total	101.7	9.8	1.2	1.9	4.1	33.1	3.3	30.2	18.1

Source: Nomura, based on Ministry of Internal Affairs and Communications "Survey on Time Use and Leisure Activities" and Ministry of Health, Labor and Welfare "Basic Survey on Wage Structure".

Of the 100 trillion yen, about 30 trillion was produced by non-working females aged 15-64. If these women were to start working outside we can imagine they would have less time to spend on household work. For households to continue to consume the same amount of services, they would have to outsource previously unpaid work. Stated differently, unpaid work must become paid work, or-"monetized." That is, if more women participate in the labor market, at least part of the 30 trillion yen demand for household services will be outsourced, thus creating new demand for services to be satisfied through the market.

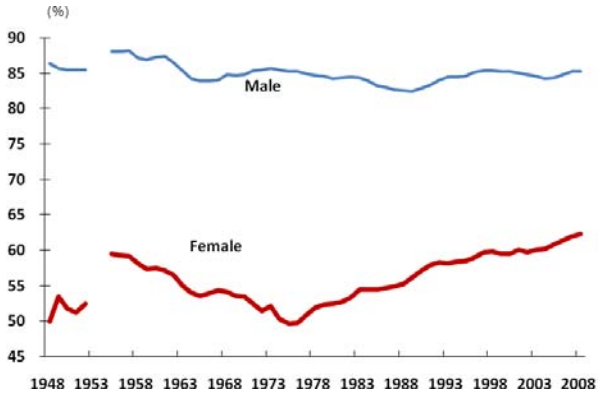
But how large is this new market demand? The average non-working woman aged 15-64 spends five hours a day on unpaid household work, while the average working woman in the same age category spends three hours. Suppose that each woman who has not been working outsources two hours per day of unpaid work when she starts working. Multiplying those two hours by the wage rate and 365 gives an estimated 800,000 yen per year of outsourcing demand created by each woman newly entering the job market. Further assume that 3.16 million women who wish to work but are not seeking a job newly participate in the job market. The total addition to outsourcing demand for household services would then be 800,000 yen multiplied by 3.16 million, which comes to 2.7 trillion yen.

An increase of 2.7 trillion yen in demand is equivalent to 0.5 percent of GDP and is comparable in magnitude to typical fiscal stimulus measures taken by governments to combat economic downturns. Creation of new demand will partially offset the inflation-dampening effect of higher labor participation. But the impact of a 5 percent increase in labor supply does not seem to be offset completely by 0.5 percent increase in demand. In the first place, a demand shortage is another problem caused by a declining population. Raising female labor participation is likely to have favorable effects on both the supply and demand sides of the economy, with stronger effects on supply side.

4. A policy dilemma

Admittedly, raising female labor participation is not an ultimate solution to Japan's declining population. But it does make the negative impact on the economy smaller. If this is the case, why don't we just ask more women to join the labor market? In fact, the female labor force ratio has been rising during the past 30 years, from about 50 percent in 1975 to above 60 percent in 2008 (figure 6). There has indeed been a significant improvement in this regard. It may seem as if the adverse impact of declining population will be automatically offset by rising female labor participation.

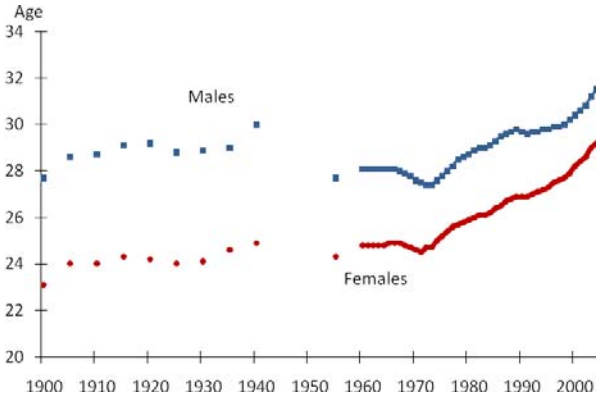
Figure 6. Labor force ratios in Japan by gender for ages 15-64, 1948-2008



Source: Nomura, based on Ministry of Internal Affairs and Communications "Labor Force Survey."

Unfortunately, more complication is attached to the upward trend in female labor participation. Almost at the same time as the ratio started rising, an upward trend in the average age of marriage also started (figure 7). In the 1970s, the average age of marriage for females was around 25. In 2008, that number went up to almost 30. Women's life cycle seems to have shifted into the future by five years during last three decades.

Figure 7. Average age of marriage in Japan

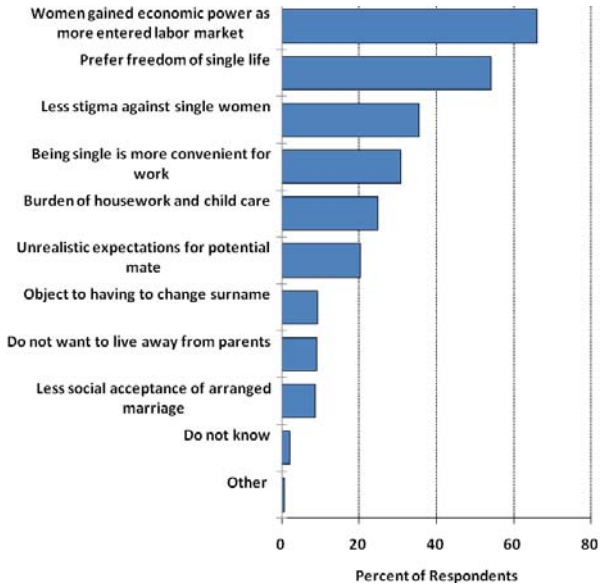


Source: Nomura, based on Ministry of Health, Labor and Welfare.

Why are women delaying marriage?

Rather than trying to analyze women's behavior by specifying a complex decision problem, a task that is beyond the scope of this paper, we can simply look at responses to a 1997 public opinion poll conducted by the Cabinet Office. Sixty-six percent of respondents (males and females) said women were choosing to get married later in life because they had more jobs and more money (figure 8). If this way of thinking is the norm among Japanese women, it is no wonder that the two upward trends appeared at almost the same time. It was their higher labor participation that caused their later age at marriage.

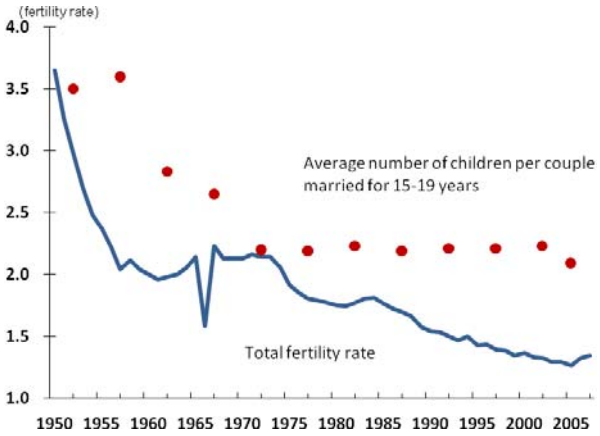
Figure 8. Why women delay marriage--1997 survey responses by men and women aged 20 and above



Source: Nomura, based on Cabinet Office.

When to marry is, of course, a personal choice. From the business point of view, however, later marriage is a problem, because it is the major factor in the decline in the total fertility rate (TFR) in Japan. Once they are married, Japanese couples tend to have two or more children. Since the 1980s, the average number of children per married couple has been very stable at slightly above two (figure 9). It must be, then, that fewer marriages are responsible for the decline in overall TFR.

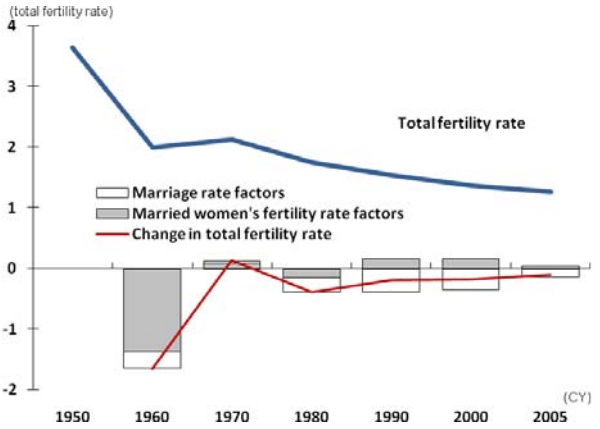
Figure 9. Fertility rates in Japan



Source: Nomura, based on Ministry of Health, Labor and Welfare, and National Institute of Population and Social Security Research.

An analysis by the Institute of Population and Social Security Research (IPSS) also suggests that the major source of the decline in Japan's TFR has been the declining number of marriages since the 1980s (figure 10). The number of children per marriage actually made a positive contribution to TFR during that period.

Figure 10. Factors affecting the total fertility rate



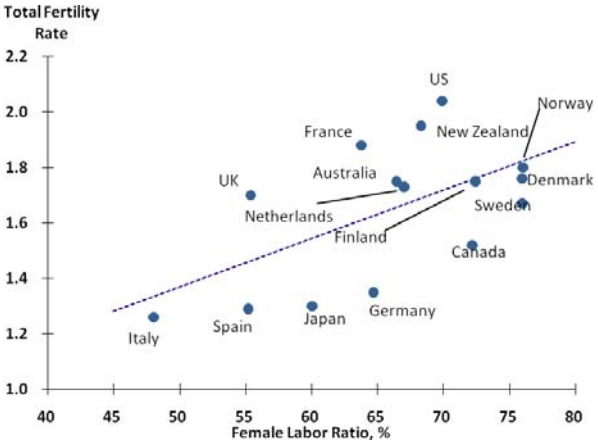
Source: Nomura based on National Institute of Population and Social Security Research.

So far, we have established, informally, a chain of causation from greater female labor force participation to later marriage, and from later marriage to a lower fertility rate. Greater female labor force participation has been the *cause* of Japan's declining fertility rate over the past few decades. On the other hand, we are now calling for greater female labor participation to *cure* economic problems caused by declining fertility. Here, we face an obvious policy dilemma, or possibly a vicious circle. Ironically, clamoring for more women to work based on the logic of equal opportunity or women's rights or whatever other justification, could lead to further decreases in the fertility rate!

What is going on? It seems to me that Japanese women are facing serious tradeoff between work and marriage. They are forced to choose either to keep their job or to get married, but not both. This hypothesis, for which I have no theoretical or empirical proof, nevertheless reflects my personal experience.

This is not to say that it is impossible to raise female labor participation without further decreasing TFR. In fact, an international comparison reveals a *positive* correlation between the female labor participation rate and TFR (figure 11). This relationship does not imply causality, but it does indicate that high female labor participation and high fertility can coexist in a same country. The vicious circle between labor participation and fertility does not always have to kick in. What we have to do is to eliminate the tradeoff Japanese women face.

Figure 11. Total fertility rate vs. female labor force participation ratio in selected countries



Note: TFR and labor force ratios are averages for 2000-2005. Labor ratio covers ages 15-65 except UK which covers age 15 and older.
Source: Nomura, based on United Nations and International Labor Organization

5. A suggestion to achieve greater female labor participation and higher total fertility

What exactly makes it so difficult for Japanese women to choose both work and marriage? The answers are likely to involve not only economic but also social, psychological, cultural, and environmental dimensions. I do not attempt to provide a comprehensive discussion here, but instead propose looking at data and thinking about what we can tell.

Of the 3.16 million females aged 15-64, whom the 2008 *Labor Force Survey* found wished to work but were not in the labor market, 1.14 million, more than one-third, gave housekeeping and childcare responsibilities as their reason for not working (table 2). Therefore, to make it easier for women to both work and marry we should somehow lighten the burden of their household jobs. One way to do this is to make husbands watch less TV and contribute more to household chores, but I doubt that this is a realistic policy objective.

Table 2. Number of females wishing to work but not in the labor force by reason, millions

		Age group				
	Total	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**
Total all reasons	3.16	0.57	0.84	0.96	0.43	0.36
No job prospects	0.98	0.16	0.14	0.30	0.20	0.18
Location	0.18	0.02	0.02	0.04	0.04	0.06
Skills or knowledge	0.11	0.02	0.02	0.03	0.02	0.02
Hours or pay	0.45	0.06	0.07	0.19	0.09	0.04
Economic or seasonal cycle	0.06	0.00	0.01	0.01	0.02	0.02
Other	0.17	0.06	0.02	0.03	0.03	0.03
Housekeeping or childcare responsibilities	1.14	0.05	0.54	0.47	0.06	0.02
Health problems	0.38	0.03	0.08	0.09	0.09	0.09
Other	0.57	0.27	0.07	0.09	0.08	0.06

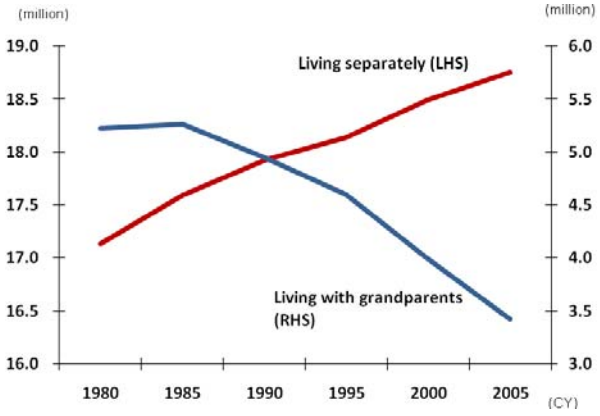
Source: Nomura, based on Ministry of Internal Affairs and Communications *Labor Force Survey*, 2008.

An alternative is to encourage a sufficient supply for outsourcing household services in the market. I already claimed that higher female labor participation will create outsourcing demand for household work. Here, I claim that development of household service industries would enhance female labor participation. That is, female labor participation and household service industries are in a mutually reinforcing relationship.

Many types of household activities could be outsourced. The market already provides many opportunities to outsource food preparation, at least in Tokyo. There are restaurants, ready-made dishes sold in the basement floors of department stores, home delivered pizza, sushi, Chinese noodles, Italian pastas, and French courses that can be ordered by phone or over the internet. In contrast, there are not many opportunities to outsource cleaning or laundry chores. Japanese still seem hesitant to ask strangers to come into our homes to clean dirty floors, kitchens, or bathrooms or to wash our dirty shirts, although it is gradually becoming more common.

An obvious shortage of outsourcing service provision can be observed in the childcare industry. In 2008, the number of children aged 0-5 was about 6.5 million while the capacity of daycare centers was a mere 2.1 million children.[3] If all mothers of children aged 0-5 wanted to work, there would simply not be daycare centers available for two-thirds of their children. Of course, not all mothers choose to work, and daycare centers are not the only option for caring for children. However, since more and more couples choose to live separately from their parents (figure 12), daycare services are becoming more and more important to support female labor participation.

Figure 12. Households with children living together with and apart from grandparents



Source: Nomura, based on Ministry of Internal Affairs and Communications *Population Census*.

[3] Roughly speaking, there are two kinds of daycare center in Japan: those with government approval and those without. Government-approved centers are heavily subsidized and therefore affordable for a wide range of households. Daycare centers that do not meet the standards set by the government cannot be approved and subsidized, and therefore they are often prohibitively expensive. In this paper I discuss government-approved daycare centers.

In fact, in 2009, the number of children waiting for spaces at daycare centers amounted to 25 thousand, which is equivalent to 1.1 percent of the existing daycare capacity. Furthermore, many more children likely did not even apply because the possibility of a place was so low. This is why the daycare shortage problem has been a big debate in Japan's political scene.

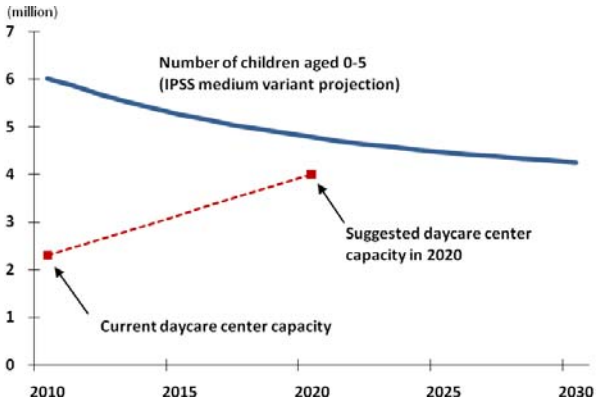
How much more daycare center capacity do we need?

To provide sufficient places for all children aged 0-5 right now, more than six million children, we would need three times the existing capacity. It is not possible to achieve such an increase instantaneously, so we have to set a schedule for future expansion of daycare supply. The difficulty is that there will be fewer and fewer children. We are short of daycare supply right now, but if we build too many daycare centers, there will be over supply. This is a complicated dynamic problem, which I do not attempt to establish and solve here.

Let's just say that our policy perspective is ten years. According to the medium-variant population projection provided by IPSS, in 2020 the number of children aged 0-5 will be 4.7 million, down from the current level of 6.5 million. To provide enough daycare services for every child in 2020, we would need to increase daycare capacity by 2.6 million spaces on top of the current capacity. However, not all children will utilize daycare centers. In addition, since the number of children will continue to decrease, the optimal level of daycare capacity is likely to be less than the total number of children at any point of time.

Therefore, my policy suggestion would be to keep increasing daycare capacity, aiming at four million in 2020, which is about two million more spaces than exist today (figure 13). To achieve this goal, the capacity needs to expand by 200,000 spaces each year. Assuming that capacity per daycare center is 100 children, an increment of 200,000 spaces translates to 2,000 additional daycare centers. Along the way, we must keep our eyes on actual demographic developments and modify the supply schedule, since it is possible that the policy action itself could affect the total fertility rate, and since population projections are not always accurate.

Figure 13. How much daycare capacity do we need?



Source: Nomura, based on National Institute of Population and Social Security Research, and Ministry of Health, Labor and Welfare.

6. Changing behavior of Japanese women

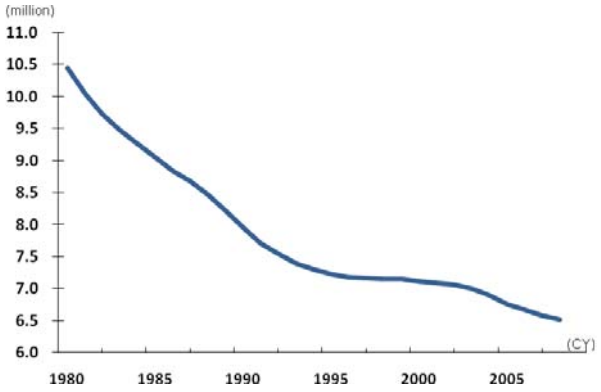
Japan's population is decreasing; we need aggressive policy responses, especially more daycare centers, to eliminate the tradeoff between work and marriage. This seems to be the general consensus in Japan, and the current paper has discussed the issue along the same lines.

This view has become so widespread, however, that I fear it is becoming a stereotyped image. While gathering data to tackle this issue, I came to realize that some significant changes in household behavior seem not to have drawn as much attention as they should. Those changes seem to imply that Japanese women are heading in the direction of more work and more children at the same time. Of course, these changes may not be big enough to reverse the declining trend of Japanese population. They may even be only temporary phenomena. But at the same time, they could be permanent. I could not identify the cause, so the possibilities are still open. I would like to point out what I found, and leave the rest to future discussion.

1) Increasing demand for daycare

I already mentioned the severe shortage in daycare spaces. But one may wonder why there is insufficient day care capacity in Japan, especially since the number of children started decreasing many years ago. In fact, we have 40 percent fewer children aged 0-5 now than in the 1980s (figure 14). How can we have a shortage in daycare?

Figure 14. Number of children aged 0-5, 1980-2008



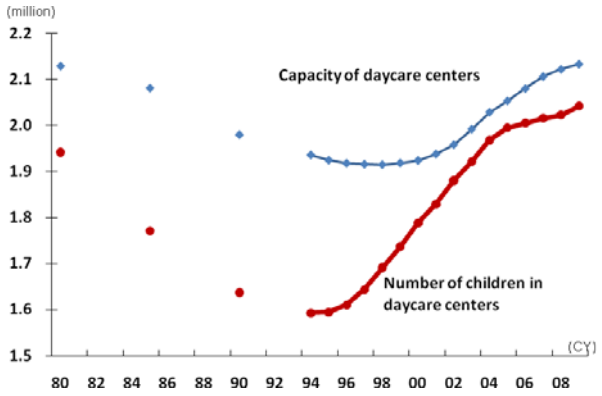
Source: Nomura, based on Ministry of Internal Affairs and Communications.

The general consensus seems to be that this is a policy failure. There are many kinds of regulations on the operation of daycare centers, such as minimum floor area per child, minimum number of caregivers per child, maximum hours of operation, and so on. It is argued that those requirements are so strict that they limit the supply of daycare services. And, since those regulations have existed for a long time, they argue as if there has always been severe daycare shortage for a long time.

Although I agree that the situation would be better with less regulation, I also want to call attention to the sudden change in demand for daycare services. The number of children in daycare centers was decreasing until 1994 when it fell just under 1.6 million. It is natural that daycare capacity was shrinking in response to the declining demand as the population of children fell.

What is surprising is that the number of children in daycare centers suddenly started *increasing* from 1995, despite the continued *declining* trend in the total number of children. Demand for daycare has continued to increase since then, and now there are 28 percent more children in daycare centers than in 1994 (figure 15). The number even *exceeds* the level in 1980. The dramatic turn in daycare demand should have been difficult to foresee, alongside the decreasing trend in the total number of children.

Figure 15. Capacity and enrolment in daycare centers in Japan, 1980-2008

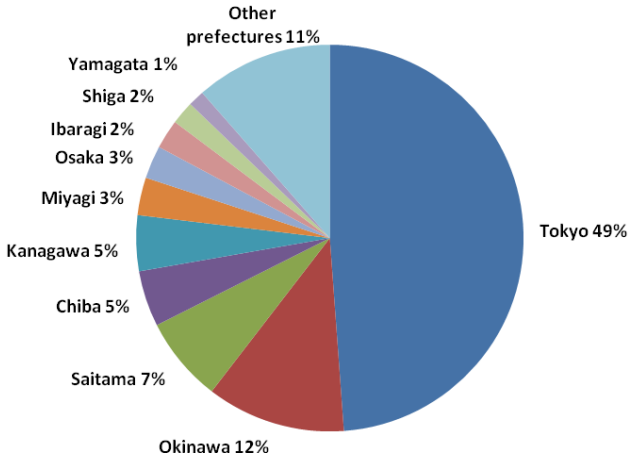


Source: Nomura, based on Ministry of Health, Labor and Welfare.

Following the major turn in the demand trend, total capacity of daycare centers started increasing as well. However, the occupancy rate is still close to 100 percent and the list of children waiting to enter daycare centers amounts to 25 thousand children, or 1.1 percent of the existing capacity, as mentioned already. Again, with less regulation, more daycare capacity would be provided. However, the most important source of the current daycare shortage seems to be the unexpected burst of demand that somehow occurred in the middle of the 1990s. The policy debate tends to ignore this point.

It is often emphasized that the shortage of daycare services is particularly severe in Tokyo. This is undoubtedly true; almost half of the children on the waiting list are located in Tokyo. In terms of the size of the waiting list relative to daycare capacity, Tokyo still ranks second behind only Okinawa (figure 16).

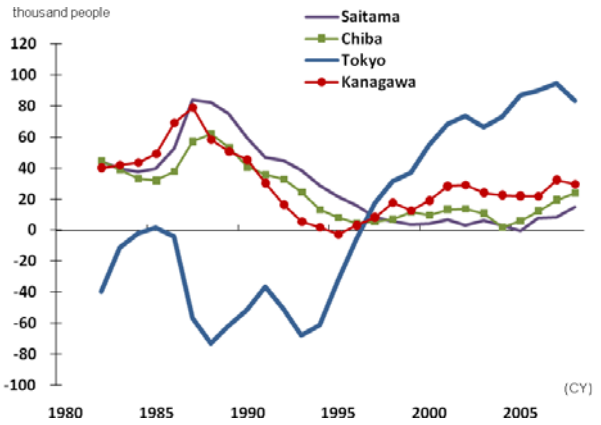
Figure 16. Prefectural share of all children waiting to enter daycare centers (2009)



Note: Twelve prefectures have no children waiting to enter.
Source: Nomura, based on Ministry of Health, Labor and Welfare.

The reason why Tokyo performs so poorly in providing daycare services is not clear. Perhaps it was particularly difficult for Tokyo to foresee the sudden increase in daycare demand. Tokyo had been experiencing net outflow of population until the mid-1990s. Interestingly, despite its high average income, Tokyo was a base of emigration. However, the net flow of population turned positive in 1997. Since then, more and more people have been moving into Tokyo (figure 17). Perhaps people who relocate to Tokyo tend to be younger and have more young children and are therefore more likely to need daycare. It is possible that the surprise increase in daycare demand has been particularly big in Tokyo.

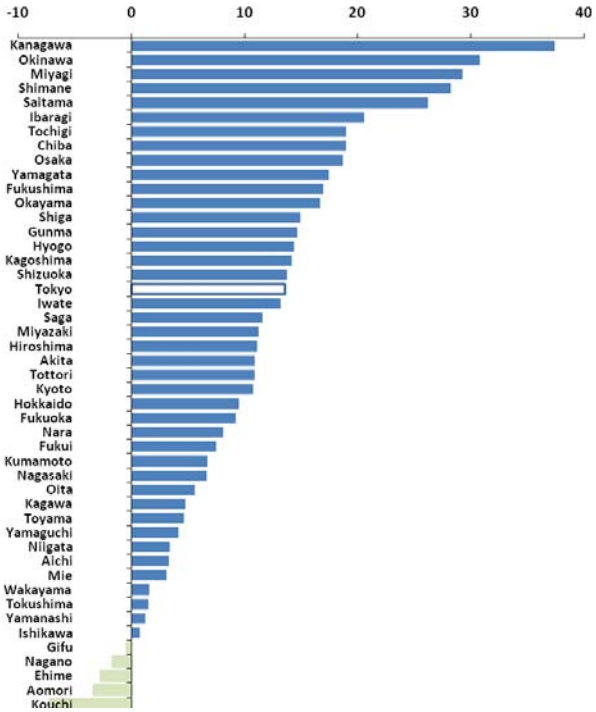
Figure 17. Population inflow to the greater Tokyo metropolitan area, 1980-2008



Source: Nomura, based on Ministry of Internal Affairs and Communications.

However, we should remember that Tokyo is not the only place where childcare demand is growing. Between 2001 and 2009, the number of children in daycare centers has increased in all but five of Japan's prefectures (figure 18). The largest increment during that period was in Kanagawa, followed by Osaka, and then Tokyo. Tokyo ranked 18th in terms of the rate of increase in children in daycare centers. Thus, rising demand for daycare is not a Tokyo-only phenomenon. Instead, it seems to be a trend all over Japan. Tokyo's supply shortage probably appears extreme because the sudden swing in population flow made the demand increase particularly difficult to foresee.

Figure 18. Percent change between 2001 and 2009 in number of children in daycare centers, by prefecture



Source: Nomura, based on Ministry of Health, Labor and Welfare.

Why did daycare demand increase despite the decrease in the number of children?

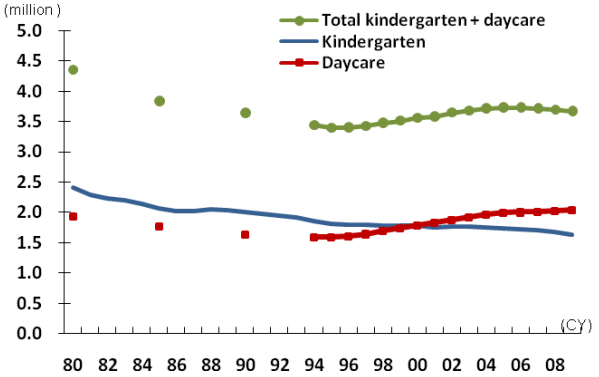
As always, there are many possible explanations. One is the substitution between daycare and kindergarten services.[4] Kindergartens in Japan resemble preschools in the United States. They are not so much about study but mostly about playing, and what children do in daycare centers and kindergartens is not distinctively different. Therefore, daycare services can substitute for kindergarten services to some extent. There would be little surprise if there had been a large demand shift from kindergartens to daycare centers.

While we cannot ignore this possibility, it is difficult to see that such substitution actually occurred. The number of students in kindergartens has been in a stable declining trend since 1980 (figure 19). There is no particularly observable change in that trend around

[4] In Japan, kindergartens and daycare centers are supposed to be distinct institutions. Kindergarten is intended to be a part of the system of formal education that encompasses elementary and higher schools. Daycare centers are for children whose parents both must work and therefore cannot take care of them. In other words, kindergartens are in the category of educational policy while daycare centers are in the realm of welfare policy. That is why daycare centers require both parents to have jobs, but kindergarten do not. On the other hand, daycare centers offer longer hours than do kindergartens.

the time when the number of children in daycare centers started to increase. Also, the total number of children in daycare centers and kindergartens began to increase in the latter half of the 1990s. Therefore, it is not possible to explain the dramatic increase in daycare demand only by substitution between daycare services and kindergarten services. What children do is similar, but two institutions that have such different goals cannot be perfect substitutes.

Figure 19. Number of children in kindergartens and daycare centers, 1980-2008



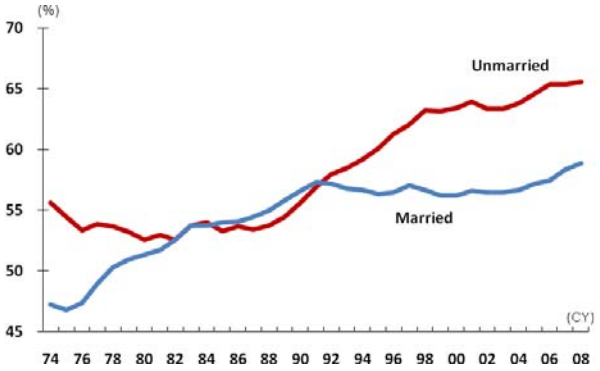
Source: Nomura, based on Ministry of Health, Labor and Welfare and Ministry of Education, Culture, Sports, Science and Technology.

2) Rising female labor participation and total fertility rate

One may wonder if the reason for the growth in demand for daycare services is that more mothers are working than before. The Japanese economy was in the middle of its so-called lost decade when the number of children in daycare started to increase. Perhaps more mothers started to work to supplement the declines in their husbands' salaries. Though it makes a reasonable story, I could not find evidence to support this view. The labor force ratio for married women stayed more or less at the same level during the mid-1990s (figure 20).

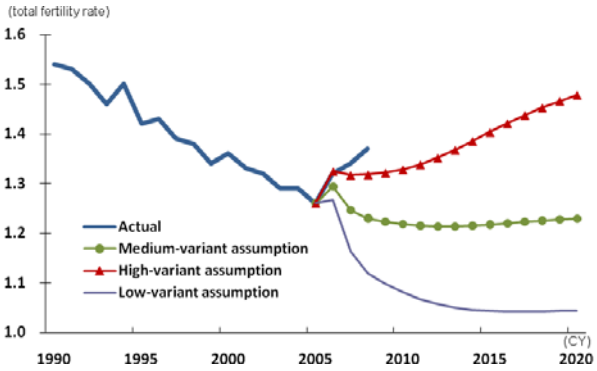
Instead, what I would like to point out here is that the labor force ratio for married women began to rise more recently, especially from the middle of the current decade. This is interesting because it seems to have coincided with a rise in fertility rate (figure 21). My argument that rising female labor participation was the cause of declining fertility does not seem to apply to the last three years.

Figure 20. Female labor force ratio age 15-64 by marital status, 1974-2008



Source: Nomura, based on Ministry of Internal Affairs and Communications *Labor Force Survey*.

Figure 21. Total fertility rate in Japan, 1990-2020

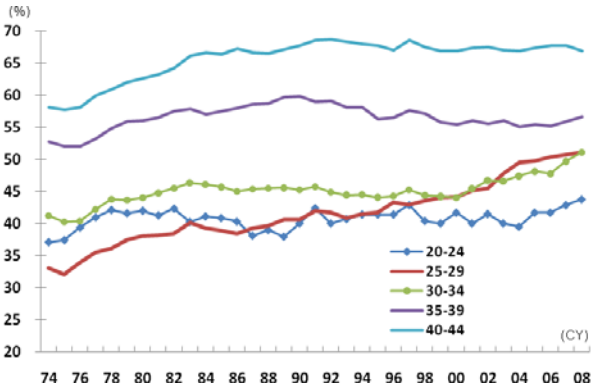


Note: Assumptions are those used in IPSS population projection.
Source: Nomura, based on Ministry of Health, Labor and Welfare, and National Institute of Population and Social Security Research.

The rising female labor participation may not be surprising, given the economic boom of the latest several years; it must have been easier for women to get a job. On the other hand, the rise in the fertility rate must have been a surprise. As of 2006, the medium-variant population projection provided by IPSS expected the TFR to stay between 1.20 and 1.25 at least until 2020. The actual TFR so far has exceeded not only the assumed TFR in this medium-variant estimate, but also that in high-variant case (figure 21).

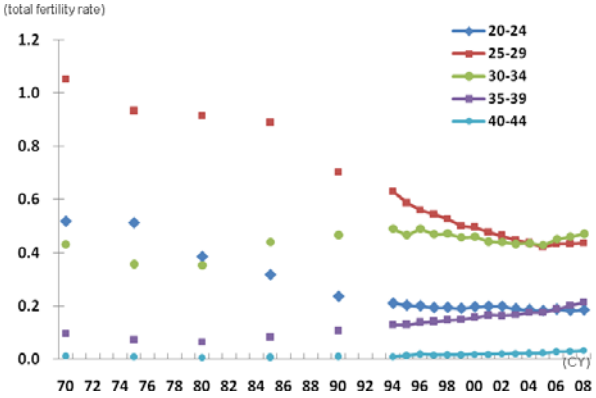
The rise in female labor participation and TFR are not confined to certain age groups. Between 2005 and 2008 the labor force ratio for married women increased for every age group from 20 to 49 except for those aged 40-44 (figure 22). Also, the TFR was unchanged or rose in all age groups during the same period (figure 23).

Figure 22. Labor force ratio of married females by age, 1974-2008



Source: Nomura, based on Ministry of Internal Affairs and Communications *Labor Force Survey*.

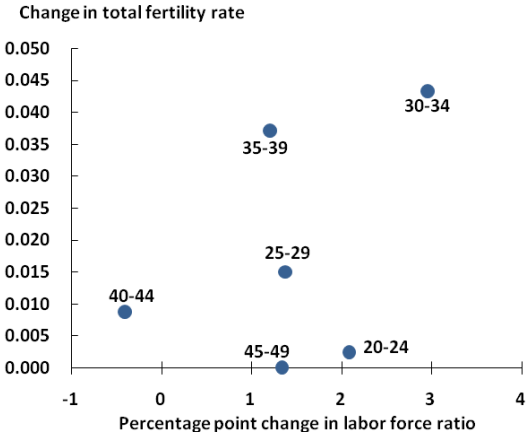
Figure 23. Total fertility rate by age, 1970-2008



Source: Nomura, based on Ministry of Health, Labor and Welfare.

The labor force ratio for married women aged 30-34 has risen by close to 3 percentage points since 2005, the biggest gain among all age groups. Interestingly, this age group also showed the largest gain in TFR during the same period. Furthermore, we can even observe a hint of positive correlation between gains in the labor force ratio and in TFR among age groups since 2005 (figure 24). Again, my argument that higher labor participation causes fertility to fall does not seem to apply.

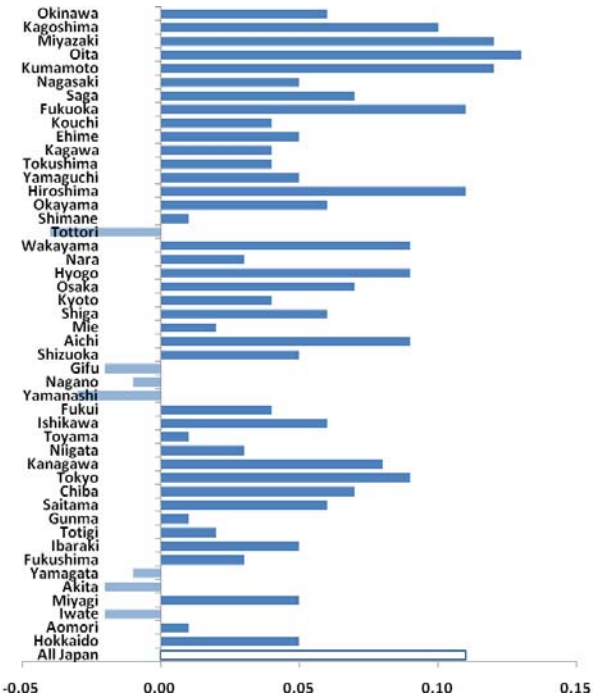
Figure 24. Change in labor force ratio for married females vs. TFR from 2005 to 2008



Source: Nomura, based on Ministry of Health, Labor and Welfare, and Ministry of Internal Affairs and Communications.

Is there any geographical bias to these changes? I have not constructed regional labor participation data, but the recent upturn in TFR, at least, seems to be a fairly nationwide phenomenon, not one reflecting particular regional shocks. Since 2005, the TFR declined in only seven of Japan's 47 prefectures (figure 25).

Figure 25. Change in TFR from 2005 to 2008 by prefecture



Source: Nomura, based on Ministry of Health, Labor and Welfare.

7. A slightly brighter future?

Demand for daycare centers is growing in Japan. The labor force ratio for married women and the fertility rate are both rising at the same time. Why? I don't have good explanations yet. But at least it appears that the behavior of women in Japan is changing. And all these changes seem to me to point in the desirable direction of greater labor participation and more children.

Of course, those changes may not be big enough to reverse declining trend in population or to eliminate its adverse economic effects. They may even be only temporary. But that is exactly why we have to be aware of the favorable changes that are happening in front of us, and try to help them change further. I already proposed expanding provision of daycare centers. Also, private enterprises can work on creating a better environment for women, for example, by providing daycare services in office buildings. We have worried enough. It is time to move.

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