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CAN ABENOMICS RESTORE JAPAN'S GROWTH?

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Abstract

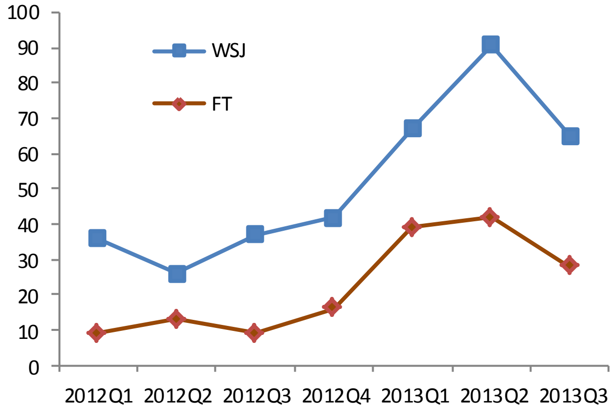
'Abenomics,' the economic policy pursued by Japan since the Abe government took office at the end of 2012, has been discussed frequently inside and outside the country. Many observers of the Japanese economy apparently hope that Abenomics may finally end Japan's economic stagnation. Can Abenomics restore Japan's growth?

After describing the policy's three 'arrows,' this paper addresses the question by reviewing why Japan fell into a prolonged stagnation and then examining how--and whether--each of the three elements will hit their targets and restore dynamism to the economy. The conclusion is that while it is promising, Abenomics cannot succeed unless the government refocuses the growth strategy 'arrow' on the programs that are indeed likely to raise the long-term growth rate.

1. Introduction

Since Shinzo Abe returned as Japan's prime minister, the rest of the world has been paying more attention to the country's economic policy. Figure 1 shows how the number of articles in the *Wall Street Journal* and the *Financial Times* that include the words 'Japanese economy' jumped after the Abe government took office. The economic policy pursued by the Abe government, dubbed 'Abenomics,' has been discussed frequently inside and outside Japan. Many observers apparently hope that Abenomics finally ends Japan's economic stagnation and restarts its growth.

Figure 1: Number of articles that include "Japanese economy" on *WSJ.com* and *FT.com*



Source: www.wsj.com and www.ft.com. Author's calculation.

Will Abenomics do so as many hope? That is the question this paper asks. To answer it, we need to understand why Japan's growth slowed down to start with, why the Japanese economy has stagnated for most of the last two decades, and how Abenomics could change these conditions.

The next section starts by describing the three elements of Abenomics and reviews how much has been implemented as of this writing (October 2013). Section 3 reviews the major factors that pushed Japan into the long stagnation, drawing heavily on policy reports written by the author and Anil Kashyap for the National Institute for Research Advancement (Hoshi and Kashyap, 2011 and 2012). Sections 4 through 6 examine each of the three elements of Abenomics and discuss how (or if) they can benefit Japan's economic growth. Section 7 concludes.

2. What is Abenomics?

What is Abenomics and what is new about it? Abenomics is the economic policy introduced when Shinzo Abe formed a cabinet following the LDP's victory in the Lower House Election in December 2012.[1] Abenomics consists of three components, referred to as 'arrows.' The first arrow is expansionary monetary policy. The second is flexible fiscal policy, which is supposed to mean fiscal expansion in the short run but

[1] The LDP came back as the governing party after three years under the Democratic Party of Japan (DPJ). It was also a comeback for Abe, who had followed Junichiro Koizumi as prime minister in 2006 but resigned after less than a year in office.

fiscal consolidation in the medium run. The third arrow is a growth strategy aimed at increasing the long-term growth rate of the Japanese economy.

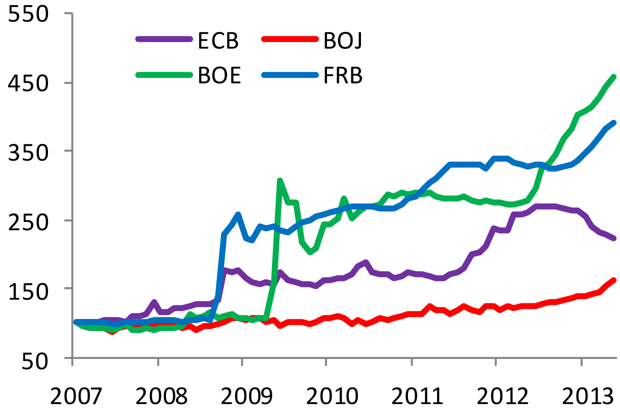
Thus, Abenomics is a mix of expansionary macroeconomic policy and supply-side policy to stimulate long-term economic growth. In this sense, it is nothing new. It is a standard policy mix designed to counter a recession and to stimulate growth at the same time. Why, then, is it called Abenomics, as if it were a radical new idea?

Political marketing, in which the Abe administration has been more successful than its immediate predecessors, is an important part of the answer, but there is more. Although Abenomics is a standard economic policy to combat recession, such a standard policy is new to Japan because its monetary policy component differs from the policy Japan pursued before Abenomics.

As many observers have noted, the Bank of Japan (BOJ) was reluctant to adopt radically expansionary monetary policy. This was especially clear after the global financial crisis of 2007-09: the Bank of Japan was not as aggressive as other major central banks in purchasing assets as a way to stimulate the economy. Figure 2 shows how the balance sheets for major central banks increased following the global financial crisis. In the figure, the assets of each central bank in January 2007 are normalized to 100. The US Federal Reserve's (FRB) balance sheet more than doubled over two months in late 2008 and continued to grow thereafter. The Bank of England (BOE) followed by almost tripling its balance sheet in mid-2009. The European Central Bank (ECB) did not move so drastically, but its balance sheet had more than doubled by the end of 2011. In contrast to these cases, the Bank of Japan's balance sheet hardly changed until late 2010. It started to increase from 2011, but the rate of increase was much lower until the Abe administration.

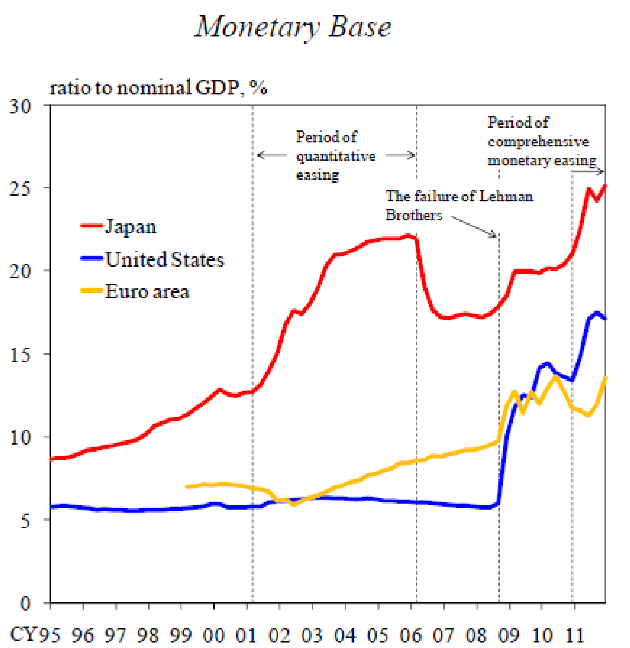
The BOJ has often contested the view that it did not pursue sufficiently expansionary monetary policy compared to the other major central banks. For example, in a 2012 speech when he was still BOJ governor, Masaaki Shirakawa pointed out that Japan's monetary base normalized by nominal GDP was the largest of major economies, and he indicated several episodes when the ratio increased as dramatically as in the US (Shirakawa, 2012). Thus, he suggested that the BOJ had actually acted more aggressively than the Federal Reserve after the global financial crisis.

FIGURE 2: CENTRAL BANK ASSETS (JANUARY 2007 = 100)



Source: Federal Reserve Bank of St. Louis (http://research.stlouisfed.org/fred2). Author's calculation.

FIGURE 3: COMPARISON OF MONETARY BASE TO NOMINAL GDP RATIO IN JAPAN, THE UNITED STATES, AND EURO AREA



Source: Shirakawa (2012).

It is problematic, however, to use the ratio of the monetary base to nominal GDP to compare the extent of monetary expansion between Japan and the US First, the ratio was higher in Japan than in the US even before the financial crisis, perhaps reflecting Japan's wider use of cash (rather than personal checks or credit cards). Second, more importantly, the ratio typically increases sharply when nominal GDP contracts, even if monetary policy does not turn expansionary. Indeed, in figure 3, three of the four episodes when Japan's ratio increased sharply happened when nominal GDP suddenly shrank. In the episode from the first quarter of 2001 to the first quarter of 2002 nominal GDP fell 3.0%; in the episode from the first quarter of 2008 to the first quarter of 2009, it fell 8.8%; and in the episode from the second quarter of 2010 to the second quarter of 2011 it fell 3.9%. The only case when the increase in the ratio may be primarily due to monetary expansion is the episode from 2002 to 2003, when the nominal GDP growth rate was -1.0%.

Why was the BOJ reluctant to expand monetary policy as aggressively as the Federal Reserve? Hoshi (2011) presents a possible answer by considering a simple game theoretic model of the behavior of the BOJ and the government financial regulator (the Financial Services Agency after 2000). The model assumes that both policy authorities value structural reform of the economy as well as low unemployment. Structural reform is assumed to be accelerated by the costly effort of the government financial regulator but slowed by inflation. Unemployment is assumed to be reduced by inflation but increased by efforts to advance structural reform. The unique Nash equilibrium occurs when both the inflation rate and structural reform efforts fall below levels that the two policy authorities consider optimal. Given extremely low inflation, the government is reluctant to step up structural reform efforts because that would raise the unemployment rate unacceptably. Given the government's weak structural reform efforts, the BOJ is reluctant to inflate the economy because it would further slow the structural reform.

Suggestive support for this model comes from the BOJ's repeated references, whenever it adopted more expansionary monetary policy, to the importance of structural reform led by the government. For example, when the BOJ expanded its Quantitative Easing program on February 28, 2002, by increasing the target level of the outstanding current account balance to over ¥15 trillion and increasing its purchase of Japanese government bonds (JGBs) to ¥1 trillion per month, it announced:

> To realize the full permeation of the effects of strong monetary easing, it is essential to strengthen a financial system and ensure its stability by making a swift move to resolve the non-performing loan problem. It is also vital to make progress in structural reform on the economic and industrial fronts through tax reform, streamlining of public financial institutions, and deregulation. The Bank strongly hopes that both the Government and the private sector, in particular financial institutions, will take more determined and effective steps in this regard. ("On Today's Decision at the Monetary Policy Meeting," February 28, 2002.)

More recently, on October 30, 2012, when the BOJ increased the size of the Asset Purchase Program and introduced the Stimulating Bank Lending Facility (which lends long-term funds to financial institutions at low interest rates) its policy announcement was accompanied by a joint statement with the government on "overcoming deflation." The statement started by declaring overcoming deflation to be the aim of both the BOJ and the government.

> The Government and the Bank share the recognition that the critical challenge for Japan's economy is to overcome deflation as early as possible and to return to a sustainable growth path with price stability. The Government and the Bank will work together and make their utmost efforts to address this challenge. ("Measures Aimed at Overcoming Deflation," October 30, 2012.)

Then, the statement presented the BOJ's understanding of what it takes to overcome deflation.

> The Bank recognizes that the challenge mentioned above will be met through the combination of (i) efforts by a wide range of economic agents to strengthen the economy's growth potential and (ii) support from the financial side. The Bank strongly expects the Government to vigorously promote measures for strengthening Japan's growth potential. ("Measures Aimed at Overcoming Deflation," October 30, 2012.)

The document was signed by then-BOJ Governor Shirakawa, Minister of State for Economic and Fiscal Policy Seiji Maehara, and Minister of Finance Koriki Jojima. Toward the end of the DPJ government, its pressure on the BOJ to expand monetary policy aggressively was already mounting. The BOJ agreed to do more if the government promised to undertake more structural reform, as the statement shows.

Thus, the expansionary monetary policy part of Abenomics does appear to be new for Japan (although not unprecedented) because for many years until the Abe administration,the BOJ had been reluctant to pursue monetary expansion as aggressively as other major central banks. On the other hand, the fiscal policy and growth strategy parts of Abenomics are not new, even in Japan. The fiscal policy approach, particularly increasing fiscal expenditures before undertaking serious efforts at long-term budget consolidation, had been tried repeatedly over the past two decades by both the LDP and the DPJ. Fiscal policy turned especially expansionary after the 2008 global financial crisis, measured by the size of budget deficits.[2]

Neither is a growth strategy that includes structural reforms a new idea. At least as far back as Ryutaro Hashimoto's premiership (1996-98), the Japanese government created numerous reform plans and growth strategies. Only a few of them were successful in enhancing the potential growth of the economy. Thus, it becomes important to compare Abe's growth strategy to these past policies to decide whether the result will be different this time.

Abenomics thus far

Before we ask if Abenomics will succeed, let us look at how much of the program has been implemented as of this writing (October 2013).

Arrow One: Monetary Policy

On the monetary policy front, pressure on the BOJ to do more to stop deflation was already mounting before the LDP recaptured power in December 2012. As mentioned, in October 2012 the BOJ published a joint statement with the government on overcoming deflation as it eased monetary policy. After taking office, the Abe administration intensified the pressure, even suggesting changing the Bank of Japan Act to take away the BOJ's legal independence.

On January 22, 2013, the BOJ introduced the price stability target of a 2% CPI (Consumer Price Index) inflation rate. In Feburary 2012, it had introduced a price stability goal of 0 to 2 percent CPI inflation, but now it replaced the word "goal" (*mokuto*) by "target" (*mokuhyō*).[3] The BOJ also expanded the Asset Purchase Program by introducing the "open-ended asset purchasing method," in which it would buy a certain amount of financial assets (about ¥13 trillion initially) without any termination date. Once again, these policy changes were announced with a new joint statement with the government. In addition to the reaffirmation of the BOJ's commitment to price stability, the statement spelled out the commitment on the government side as follows:

> The Government will, in order to revitalize Japan's economy, not only flexibly manage macroeconomic policy but also formulate measures for strengthening competitiveness and growth potential of Japan's economy, and promote them strongly under the leadership of the Headquarters for Japan's Economic Revitalization. Those measures include all possible decisive policy actions for reforming the economic structure, such as concentrating resources on innovative research and development, strengthening the foundation for innovation, carrying out bold regulatory and institutional reforms and better utilizing the tax system. ("Joint Statement of the Government and the Bank of Japan on Overcoming Deflation and Achieving Sustainable Economic Growth," January 22, 2013.)

Thus, the BOJ still seemed to be playing a game with the government: the BOJ expands monetary policy if the government commits to structural reform.

Haruhiko Kuroda was appointed the new BOJ Governor on March 20, 2013.[4] In the first monetary policy meeting under Governor Kuroda on April 4, 2013, the BOJ introduced "quantitative and qualitative monetary easing" (QQE) and announced the bank would achieve price stability (2% inflation) in two years' time. The monetary base would increase at a pace of ¥60 trillion to ¥70 trillion a year and would double in two years. Long-term JGB holdings and ETF holdings would also be doubled in two years. The policy announcement ended with the following sentences.

> The quantitative and qualitative monetary easing . . . is expected not only to work through such transmission channels like longer-term interest rates and asset prices but also to drastically change the expectations of markets and economic entities. These effects will

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[2] Fiscal expansion in Abenomics would be new in many European countries as Krugman (2013) and Stiglitz (2013) argue.

[3] The BOJ seems to believe that the word change is significant. "Switching from a "goal" to a "target" reflects an increasing awareness regarding the importance of flexibility in the conduct of monetary policy in Japan . . . The conduct of monetary policy has to be flexible by examining various risk factors, including those related to financial imbalances, in addition to the assessment of current developments and outlook for economic activity and prices, from the perspective of achieving sustainable growth with price stability. . . .Over the last year, there has been an increasing awareness of such understanding in Japan as well. In such circumstances, it is judged transparent and appropriate to use the expression, "target," in order to explain the Bank's thinking on price stability." ("The 'Price Stability Target' under the Framework for the Conduct of Monetary Policy," January 22, 2013) In other words, the BOJ had avoided using the term "target" because the Japanese people would have misunderstood it to mean something the BOJ committed to achieve no matter what. Now that the Japanese people know better, the BOJ argues, they can safely use the word "target."

[4] Governor Shirakawa resigned on March 19 before his term expired on April 8. Some speculated his early departure was a result of pressure from the government, but it was more likely just to coincide with the end of the terms of two vice governors, thereby allowing all the new governors to start at the same time, as Governor Shirakawa himself explained.

> support the positive movements that have started to appear in economic activity and financial markets, contribute to a further pick-up in inflation expectations that appear to have risen, and lead Japan's economy to overcome deflation that has lasted for nearly 15 years. ("Introduction of the 'Quantitative and Qualitative Monetary Easing'," April 4, 2013.)

This optimistic statement contrasts with announcements under past BOJ governors, which often undermined the expectation channel by stressing that monetary expansion alone could not end the deflation.

The shift in monetary policy under Governor Kuroda completed implementation of the first arrow of Abenomics. The BOJ has not changed its monetary policy stance in any significant way since (as of this writing).

Arrow Two: Fiscal Policy

On the fiscal policy front, the first move to implement the Abenomics program was to increase government spending. The Abe government quickly put together a supplementary budget for fiscal year 2012 (April 2012 to March 2013) and submitted it to the Diet on January 15, 2013. The supplementary budget, which passed the Diet on February 26, amounted to ¥13.1 trillion additional spending. The majority went to public works in the name of reconstruction (after the earthquake, tsunami, and nuclear disaster of 2011), disaster prevention (¥3.8 trillion), and growth policy (¥3.1 trillion, including ¥946 billion of farm and SME subsidies). More than half of the supplementary budget (¥7.8 trillion) was financed by issuing government bonds.

The budget for fiscal year 2013, which received final approval on May 15, 2013, is also expansionary. Total spending amounts to ¥92.6 trillion, ¥2.3 trillion more than in the fiscal 2012 budget (not including the supplementary budget). According to the government, new bond issues will amount to ¥42.9 trillion, which is slightly less than expected tax revenue (¥43.1 trillion). However, the government figure does not include ¥2.6 trillion of Special Case Bonds for Pensions, which are used to finance transfers from the central government to the social security account. Including this new borrowing means the Japanese government still expects to borrow more in fiscal 2013 than it takes in in tax revenue.

As the second arrow of Abenomics, "flexible" fiscal policy is supposed to mean not only spending more to lift the economy in the short run but also returning to fiscal responsibility by reducing the budget deficit in the medium run. In fact, however, the plan for the medium run fiscal consolidation has been slow to be developed. On August 8, 2013, the government finally published the Medium-Term Fiscal Plan, which aims at halving the budget deficit by fiscal year 2015 (compared to fiscal year 2010) and eliminating the deficit by fiscal year 2020.

On the same day, the government also published "Trial Calculation Concerning the Economy and Public Finance in the Medium to Long Term," which examines whether the fiscal plan can achieve its goals. The scenarios used for calculations assume the consumption tax rate is raised from 5% to 8% in April 2014 and then to 10% in October 2015 as planned. If the real growth rate recovers to an average 3.4% per annum between fiscal 2013 and 2022, the government can achieve the goal of halving the budget deficit by fiscal 2015, but it cannot eliminate the deficit by fiscal 2020. The debt-to-GDP ratio will stop rising and but it will not fall. If the economic recovery turns out to be weaker and the economy grows at only 1.3% per annum on average between fiscal 2013 and 2022, the government will miss the goal of halving the budget deficits by 2015 as well. In this case, the government debt-to-GDP ratio is expected to continue to increase.

Arrow Three: Growth Strategy

The Abe government was a little bit faster in coming up with the third arrow of Abenomics. On June 14, 2013, the Cabinet approved a growth strategy titled "Japan Revitalization Strategy: JAPAN is BACK." The strategy aims at achieving (i) 3% average annual nominal growth, (ii) a 2% average annual real growth rate, and (iii) a ¥1.5 million increase in nominal national income per capita over the next 10 years.

The major components of the growth strategy are three "action plans" called Industry Revitalization Plan, Strategic Market Creation Plan, and Strategy of Global Outreach. In section 6, we look at the details of each action plan to evaluate the likelihood of success for Abenomics.

3. Why Did Japan Stop Growing?

The stated goal of Abenomics is to overcome deflation. Deflation in this context is not limited to the narrow definition of persistent decline in the price level. It also refers to the general economic stagnation that Japan has experienced for most of the last twenty years. Thus, both aggregate demand policy (the first two arrows) and supply side policy (the third arrow) are necessary to overcome deflation.

To examine whether Abenomics is likely to succeed in overcoming deflation in this broad sense, we need to understand why Japan entered a long period of stagnation to start with. Drawing from Hoshi and Kashyap (2011 and 2012), this section identifies the major factors that started and prolonged the stagnation of the Japanese economy.

The Japanese economy used to grow very rapidly. From 1955 to 1973, the real rate of growth averaged over 9% per year. Then it fell below 4% from the mid-1970s to 1990. Growth during the last two decades has been especially dismal, with the real growth rate averaging only 0.9% from 1994 to 2012. Since Japan also suffered from deflation during this period, nominal GDP in 2012 was actually 4.1% lower in 2012 than it was in 1994.

End of Catching-up

Why did Japan stop growing? In part, it was simply a result of convergence. At the end of World War II, Japan's level of economic activity and state of technology were much lower than those of more advanced economies such as the United States. From this starting point, Japan grew rapidly, and over time substantially closed the gap with the advanced economies. It was inevitable that the growth rate would come down from this extremely high level.

When Japan was still in the catch-up phase, it was able to grow by importing and imitating the technology of more advanced economies. It was relatively easy to identify which were likely to be growth industries by looking at the experiences of advanced economies. A relatively young and growing population contributed to the country's high growth rate as well. Once the economy started growing rapidly, this population structure ensured a high rate of household saving, which helped to finance increasing capital investment without relying on foreign borrowing. The stable international financial regime with a fixed and somewhat undervalued yen also made it possible for Japan to adopt an export-led growth strategy.

Around the mid-1970s, all of these favorable conditions started to disappear. As the gap with the advanced economies closed it became more difficult for Japan to grow just by imitating technology from abroad or steering more resources to promising industries. The rapid fall in the fertility rate and an increase in longevity combined with restrictive immigration policy started to skew Japan's demographic structure toward the elderly sooner than in advanced economies. This aging of the population lowered Japan's potential growth rate by reducing the growth of (quality adjusted) labor input. Finally, the Bretton Woods system, which had supported the favorable yen exchange rate, gave way to a floating exchange rate system and made it difficult for Japan to maintain its export-led growth strategy.

This growth strategy would have become ineffective even without the collapse of the Bretton Woods system. When an economy is small relative to the rest of the world, it may be possible to grow rapidly by relying just on external demand. As the economy grows bigger, however, it becomes increasingly hard to find sufficient markets for exports. In addition, an export-led growth strategy often involves protecting domestic firms so that they can develop the organizational capacity to compete internationally, as Rajan (2010) points out. This retards development of market forces within the economy, which plays a critical role in reallocating resources from inefficient to more efficient production arrangements and in raising productivity in mature economies.

What Japan needed to respond to these challenges was structural reform. To continue to grow in the post catch-up phase, it needed to move away from the export-led strategy supported by industrial policies and to encourage development of market forces. Industrial policies, in which the government intervenes in markets and steers resources to promising industries, may have worked during the catch-up phase, but once Japan reached the technological frontier in many areas, it was impossible for the government (or anyone else) to accurately identify the promising industries or products of the near future.

To maintain growth in an aging economy, productivity needs to increase. Thus, Japan faced a difficult challenge of increasing productivity just at the time when the ending of the catch-up phase of growth made it more difficult. Since a major part of productivity growth in mature economies is achieved through reallocation of resources to more efficient production units by market forces, encouraging market forces would have been an effective response for Japan. Other reforms to counteract negative impacts of aging on economic growth include those to increase participation in the labor force, especially that of female workers, who were traditionally underutilized in Japan. Relaxing the immigration policy to attract workers from abroad would have been useful, too.

Since the 1980s, the Japanese government often mentioned the necessity of structural reforms. For example, the *Maekawa Report* prepared for the Nakasone government in 1986 was one of the earliest public documents calling for a shift away from the strategy of export-led growth, although the main concern of the report was not economic growth but reducing Japan's trade surplus. Many subsequent governments talked about structural reforms, but many of them lacked action. Even when the reforms were actually tried, most comprehensively under the Hashimoto administration in the mid-1990s and the Koizumi administration in the early 2000s, they were incomplete. To this day, Japan has not effectively responded to the fundamental growth challenges that emerged in the mid-1970s.

Policy Mistakes

To make matters worse, the Japanese government often chose policies that ended up further reducing Japan's growth rate. Hoshi and Kashyap (2011) identify three such policy mistakes.

First, the government often adopted policies to support troubled firms. For example, from the early 1990s it encouraged banks to assist troubled customers by 'ever-greening' their loans and/or giving interest concessions. In return, bank regulators allowed banks to carry those loans on their balance sheets without recognizing the likely losses. Many of those borrowers were severely distressed companies or "zombie firms" which would have been forced out of business or to shrink drastically if normal market forces had been working. Caballero, Hoshi, and Kashyap (2008) estimate the number and the asset share of zombie firms in Japan increased sharply from the mid-1990s to the early 2000s, especially in non-manufacturing industries. As they have shown, protection of zombie firms ends up hurting productivity growth because it slows the process of economic restructuring. The zombie problem is costly not only because resources are wasted to support zombie firms but also because the congestion generated by zombie firms discourages more efficient competitors from expanding and new firms from entering the market.

The intention of this policy was presumably to help firms whose profitability was temporarily hurt during the cyclical downturn after the late 1980s. Indeed, the policy was successful in limiting the number of corporate failures and job losses, although the unemployment rate gradually increased in the 1990s into the early 2000s. A serious unintended consequence, however, was to hamper economic growth by interfering with the process of creative destruction.

The Japanese government stepped up efforts to protect troubled firms once again after the global recession that followed the 2007-09 financial crisis. This time, the focus was on the protection of small and medium-sized enterprises (SMEs). The SME Financing Smoothing Act of 2009 strongly encouraged banks to restructure loans to troubled SME customers when they applied for such restructuring. The law allowed banks to classify the restructured loans as normal loans (rather than troubled debt restructuring) to avoid accumulating loan loss reserves, as long as the firms planned to come up with restructuring plans. Although the law expired at the end of March 2013 (after a couple of extensions), the Financial Services Agency (FSA), Japan's bank regulator, still encourages banks to assist those troubled firms by giving extra credit for such efforts during bank examinations.[5]

A second policy mistake was that the Japanese government continued many regulations that end up limiting new entrants or increasing costs of introducing new products and services. Some regulations are necessary to ensure safety and soundness of business or products, but others are the legacy of industrial policies that would be removed by a serious structural reform. There were occasional attempts to lift those regulations. The Hashimoto administration in the late 1990s was the first to call for a comprehensive effort to advance deregulation. Although the Hashimoto government indeed removed many regulations, the process soon slowed down. Hoshi and Kashyap (2011) documented the slowdown, especially for non-manufacturing industries, by examining indices of licensing and approval regulations compiled by the Cabinet Office (2006).

Government regulations such as entry restrictions can have a similar effect to allowing zombies to survive. Discouraging entry of new firms, which are often more efficient than incumbents, retards productivity growth. Moreover, heavy regulation can make it easier for the government to protect zombies. It is not a coincidence that protection of zombies in Japan was tasked to the banking industry, which is one of the most heavily regulated industries.

The third policy mistake by Japan was in the area of macroeconomic policy. As we discussed, unitl Governor Kuroda took office, the Bank of Japan was often reluctant to expand monetary policy. Past BOJ policy can be called expansionary in the traditional sense because the target interest rate was lowered eventually to zero during the 1990s and it remained at zero during the most of the last 20 years. The BOJ, however, was hesitant to go further by expanding its balance sheet as fast as other major central banks did after the global financial crisis. In this way, the BOJ allowed the

[5] "Japanese Banks Urged to Lend in Fight against Deflation," *Wall Street Journal* (Japan Real Time), May 2, 2013. (http://blogs.wsj.com/japanrealtime/2013/05/02/japanese-banks-urged-to-lend-in-fight-against-deflation/)

deflation (in the narrow sense of persistent decline in the price level) to continue. More expansionary monetary policy alone would not have fully restored economic growth, but the reluctance of the BOJ to expand slowed the recovery of aggregate demand and failed to create economic conditions more conducive to structural reform.

Fiscal policy was more successful in stimulating aggregate demand. With the notable exception of 1997, fiscal policy has generally been expansionary since the bursting of the bubble. In 1997, the government reversed this expansionary stance, phasing out an income tax cut, increasing the consumption tax rate, and raising the premium for national health insurance all at the same time, sending the economy back into recession. Even this mistake is somewhat understandable given the circumstances. In 1996 the economy showed a clear sign of recovery. The real growth rate for fiscal 1996 was estimated to be 2.5%, and even considering fiscal tightening, the growth rate for fiscal 1997 was forecasted to be 1.9% (Ministry of Finance Policy Research Institute, 1997). It must have seemed a good opportunity to start reducing the budget deficit, which was as high as 7.3% of GDP, and to slow the accumulation of government debt, which was approaching 50% of GDP. With hindsight, the policy change was a mistake, but it did not look reckless *ex ante*.

A more serious problem of fiscal policy was that spending was allocated to areas that did not enhance the growth capacity of the economy. For example, Hoshi and Kashyap (2011) find that close to 90% of public works spending, which comprised the majority of the increase in government expenditure during the 1990s, went to areas such as roads, airports, and agriculture-related public capital. These were areas in which productivity had already declined to very low levels by the beginning of the 1990s, according to estimates by Doi and Ihori (2009).

During the 2000s, the proportion of spending going to public works declined and social security-related expenditures (such as pension benefits and medical expenditures) became the fastest growing category of government expenditure. Since social security-related expenditures are essentially income transfers, they are not growth enhancing, either. Government spending would have been more growth-friendly during this period if it had been used to support the reallocation of labor that resulted from economic restructuring. Such a spending policy would have reduced the need to rely on zombie firms to protect employment.

Fiscal policy over the last two decades failed to enhance the growth potential of Japan's economy. It may have helped stimulate demand, but it also led to an enormous increase in government debt. The (gross) debt-to-GDP ratio now exceeds 230% and the budget deficit is around 9% of GDP. The situation today is much more serious than it was in 1996. Many recent research papers conclude that Japan's current fiscal situation is not sustainable. For example, Doi, Hoshi, and Okimoto (2011) find that a large tax increase and/or spending cut is necessary to stabilize the debt-to-GDP ratio. They estimate that an immediate and permanent increase in tax revenues of about 9% of GDP would stabilize the debt ratio. To generate such an increase in revenues through the consumption tax alone would require raising the rate from the current 5% to 23%, even ignoring the impact of the rate hike on the tax base.

Hoshi and Ito (2013) argue that Japan has been able to accumulate debt with very low interest rates because financial markets expect the government, eventually, to make such a drastic move to stabilize the debt ratio (by increasing taxes and/or cutting expenditures). They warn, however, that this expectation can change quickly and it is important for the Japanese government to put together a credible fiscal consolidation plan.

In summary, Japan's economic stagnation was a result of the failure to respond to several growth challenges that started to emerge when the catch-up phase of growth ended. The problem was then exacerbated by policy failures during the last two decades. Can Abenomics correct the past trend and restore economic growth for Japan? Let us take up this question in the next three sections, each of which focuses on one of Abenomics' three arrows.

4. Will Quantitative and Qualitative Easing Work?

Under QQE, the Bank of Japan plans to increase the monetary base to ¥270 trillion by the end of 2014. This is ¥132 trillion larger the monetary base at the end of 2012 and ¥182 trillion more than its level in January 2007. Even if we assume the money multiplier is one, with this increase in the monetary base BOJ's balance sheet will be 259% as large as in January 2007, a level comparable to that when the Federal Reserve and the Bank of England introduced Quantitative Easing (QE) in the late 2000s.

On the asset side, the BOJ plans to increase its holdings of JGBs to ¥190 trillion by the end of 2014. This is ¥101 trillion more than at the end of 2012 and ¥138 trillion more than in January 2007. Together with increases in ETF and J-REIT holdings, the QQE asset purchases will put the BOJ's balance sheet at 224% of its level in January 2007.

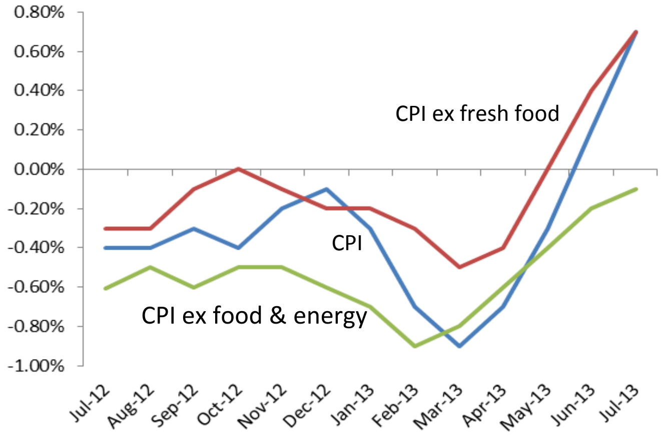
Thus, the scale of the BOJ's QQE program is comparable to that of QE. However, it is still being debated whether QE succeeded in stimulating the US or UK economies. On the other hand, both countries did successfully avoid deflation and there is also evidence that their QE programs at least contributed to the reduction of the long-term interest rate. For example, Christensen and Rudebusch (2012) find that QE in the US and the UK contributed to declines in government bond yields, although, as they point out, the mechanisms differed in the two countries.

In Japan, the QQE policy seems to have been successful in raising inflation expectations in the financial market. For example, a BOJ chart shows that the break-even inflation rate calculated from inflation-indexed JGB yields has increased from below 1% to above 1% and came close to 2% at one point (BOJ 2013b, Chart 28). Market participants and economists have also revised their inflation expectations upward. The same BOJ chart also shows that consumers adjusted their inflation expectations upward following the start of Abenomics.

As Mandel and Barnes (2013) point out, a potential problem of using the break-even inflation rate for inflation-indexed JGBs is that the market is thin and the price may not be reliable. They propose another way to calculate inflation expectations for Japan using the break even inflation rate for the US, which has a thick market for inflation-indexed government securities, and yen-dollar swap rates, assuming purchasing power parity. Importantly, this measure also shows that inflation expectations climbed after Abenomics was introduced.

The realized inflation rate has also be rising. Figure 4 shows the inflation rates for (1) general CPI, (2) CPI excluding fresh food, and (3) CPI excluding food (other than alcoholic beverages) and energy. The second definition of the inflation rate (excluding fresh food) is called "core inflation" in Japan and it is what the BOJ targets. The third definition (excluding food and energy) is comparable to the US definition of the core inflation rate and is called "core-core inflation" in Japan. Figure 4 shows that all of these rates bottomed out around March of 2013.

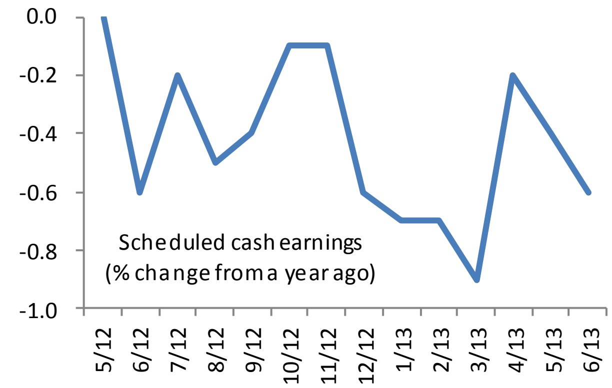
FIGURE 4: CPI INFLATION: JULY 2012 – JULY 2013



Note: CPI excluding food & energy does not exclude alcoholic beverages.
Source: Statistics Bureau, Ministry of Internal Affairs and Communication (http://www.stat.go.jp/data/cpi/index.htm).

Inflation expectations have not yet shown up in wage increases, however. Figure 5 shows the annual growth of employee earnings (excluding bonuses and overtime pays) since May 2012. Wages continued to decline even after the adoption of Abenomics and have not shown any sign of recovery. There was no sign of rising inflation expectations in the outcome of the annual labor contract negotiations in spring 2013. The 1.80% wage increase contracted for 2013 was not much different from result in 2012 (1.78%) or 2011 (1.83%).[6]

FIGURE 5: WAGE INFLATION IN JAPAN: MAY 2012-JUNE 2013



Source: Ministry of Health, Labor, and Welfare, *Monthly Labor Survey*.

Thus, with inflation expectations rising, at least in the financial market, and with actual inflation starting to rise, the first arrow of Abenomics seems to be working

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[6] Ministry of Health, Labor, and Welfare, "Heisei 25 nen Minkan Shuyō Kigyō Shunki Chinage Yōkyū Daketsu Jokyō (The status of major private companies' demands for wage increase and settlement in Spring 2013)" (in Japanese) (http://www.mhlw.go.jp/stf/houdou/0000013192.html)

toward the desired direction of exiting from the deflationary environment. The outstanding question is when expectations of higher inflation will show up in wage determination.

5. Is Flexible Fiscal Policy (A Part of) the Answer?

The second arrow of Abenomics, so-called flexible fiscal policy, is supposed to combine short-term fiscal stimulus with medium-term fiscal consolidation. As we saw above, the government was quick to implement the short-term stimulus part, but started formulating the fiscal consolidation plan only recently.

Expansionary fiscal policy can be a useful tool in a recession. It is especially useful when the effectiveness of monetary policy is constrained by the zero bound for nominal interest rates. By the time Abenomics was introduced in Japan, however, fiscal stimulus had already been applied repeatedly over the previous two decades.

Unlike Europe today, where fiscal austerity is a major problem, a serious risk for the Japanese economy comes from the accumulation of government debt that resulted from expansionary fiscal policies. As mentioned in Section 3, many recent research papers conclude that Japan's fiscal situation is unsustainable without increasing tax revenue and/or cutting government spending. High inflation may also help in reducing the real value of the outstanding government debt, but, as Doi, Hoshi, and Okimoto (2011) show, the majority of Japan's fiscal problem comes from future expected deficits, which cannot be wiped away by inflation.

So far, financial markets have supported the country's fiscal largesse, allowing Japan to continue issuing public debt without demanding high interest rates because they expect the government to act to consolidate the budget before it is too late, as Hoshi and Ito (2013) argue. By starting with fiscal stimulus alone and without a clear commitment to fiscal consolidation, however, the implementation of the second arrow of Abenomics risks causing a sudden jump in government bond yields if the markets interpret this move as a signal that the government does not really plan to reduce the budget deficit in time.

Fortunately Japan has dodged this shock so far. Figure 6 shows the 10-year JGB yield jumped in May 2013, but subsequently came down to a very low level.

The government finally disclosed its Medium-Term Fiscal Plan on August 8, 2013, but the extent of fiscal consolidation in the plan is not sufficient to stabilize the government debt. Indeed, a simulation done by the government shows that the goal of eliminating the budget deficit by fiscal year 2020 cannot be achieved with the economy growing at 2.1% (real terms) on average between 2013 and 2022.

Figure 6: JGB Yield: July 2012-August 2013

Source: Ministry of Finance
http://www.mof.go.jp/jgbs/reference/interest_rate.

A jump in market interest rates would create another problem–for the banking sector. Japanese banks hold a large amount of JGBs on their balance sheets, and even a small increase in interest rates would reduce the market value of their assets substantially. As of the end of March 2012, Japanese banks held about ¥180 trillion of government bonds (including local government bonds). This was 21% of their total assets and 4.6 times bank capital. The Bank of Japan (2013a) reports the average remaining maturity (which should be very close to duration under the low interest rate environment) of bond holdings (including some non-government bonds) was 2.5 years for major banks and 4 years for regional banks as of the end of December 2012. If we assume the duration of the government bonds for the banking sector is 3 years, a 2% increase in interest rates would generate a loss of ¥10.8 trillion, which is 28% of bank capital.

So far, Abenomics has not caused a sudden jump in government bond yields, but the risk exists until the government comes up with a credible plan for fiscal consolidation. The Medium-Term Fiscal Plan of August 2013 is not sufficient. In this sense, the second arrow of Abenomics is still incomplete.

Moreover, simply stimulating demand without causing a jump in government bond yields would not be sufficient in order for the second arrow of Abenomics to restore economic growth. The content of government spending has to be growth-enhancing. As we saw in Section 3, the majority of Japan's public spending in the past was used in ways that are not likely to increase growth capacity. This was also the case for the supplementary budget for fiscal 2012, which, as the first installment of the second arrow, aimed the majority of spending on public works and subsidizing farms and SMEs. In order to promote growth, the spending part of the second arrow must be tied to a well-designed growth strategy, which is the third arrow of Abenomics.

6. Will the Growth Strategy be Successful?

As discussed in Section 3, Japan's economic stagnation is not just a cyclical downturn that followed the global financial crisis of 2007-09, Japan's own banking crisis in the 1990s, or the collapse of speculative bubbles in the early 1990s. There are structural problems at the roots of the stagnation, and those impediments must be removed in order for Japan to regain its growth momentum. This is the significance of the third arrow of Abenomics. Even if the monetary and fiscal policies succeed in stimulating aggregate demand and stopping deflation in the narrow sense, sustained economic growth would not be achieved without structural reforms.

The Japan Revitalization Strategy of June 2013 describes the third arrow of Abenomics.[7] The strategy aims at

(i) 3% average annual nominal growth,

(ii) 2% average annual real growth rate, and

(iii) ¥1.5 million increase in nominal national income per capita in the next 10 years.

Four basic principles tie together the various policies included in the strategy according to the document. First, the strategy tries to rely on private sector initiatives. Thus, the emphasis is on economic restructuring and encouraging venture firms. The strategy also includes deregulation to allow private entities to enter areas that were traditionally limited to public entities (such as healthcare, nursing, and childcare). Second, the strategy seeks wider participation of the Japanese population. Thus, various policies try to improve support for women with children so that they can work outside the home. Some policy reforms aim at creating more opportunities for the young as well as the old. The strategy also includes measures to make Japanese youth more competitive internationally. Third, the strategy attempts to create new economic frontiers. A major stated objective here is to revive Japan's high-tech industries. The policies in the strategy also aim to assist international expansion of Japanese firms and promote foreign direct investment (FDI) into Japan. Finally, the strategy pursues the growth that benefits all the people. Some policies try to ensure a fair distribution of the benefits of economic growth among diverse people and regions.

The document claims that the growth strategy will be implemented with "unprecedented" speed. A key tool to implement the strategy is the framework of National Strategic Special Zones, which are to "serve as a gateway for the execution of bold regulatory reform and other measures." The National Strategic Special Zones are supposed to be different from special economic zones that were established in the past, most notably under the Koizumi government.

> Under the system of National Strategic Special Zones, the Government, municipalities, and the private sector will work as one rather than in conflict with each other. The system will be applied only to projects which have a big enough impact to attract foreign investment and will be implemented in a timely manner. This is an impact which could not be expected from the special zones that have been established to date. ("Japan Revitalization Strategy: JAPAN IS BACK," pp. 10-11.)

The growth strategy also introduces targets and Key Performance Indicators (KPI) for many reforms and stresses the importance of the PDCA (Plan-Do-Check-Act) cycle.

The Action Plans

The core of the Japan Revitalization Strategy consists of three so-called action plans: the Industry Revitalization Plan, the Strategic Market Creation Plan, and the Strategy of Global Outreach. Each action plan consists of several programs (or themes in the Strategic Market Creation Plan), and each program includes several reform areas. Finally, each reform area includes various lower level reform policies. Tables 1 to 3 summarize the programs, reform areas, and selected policies in the three action plans.

All told, the three action plans include thirteen reform programs and fifty-two unique reform areas. Counting the number of individual policies they propose no less than 170 unique policies.

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[7] The English version of the strategy document is found at http://www.kantei.go.jp/jp/singi/keizaisaisei/pdf/en_saikou_jpn_hon.pdf.

TABLE 1: THE INDUSTRY REVITALIZATION PLAN—PROGRAMS AND REFORM AREAS

PROGRAMS	REFORM AREAS
Emergency Structural Reform Program	Stimulate business investment
	Establish a system to remove anxiety from challenges to frontiers
	Increase entry and exit of firms to 10% (from the current 5%)
	Encourage corporate restructuring
	Encourage globalization of Japanese companies
Employment System Reform	Shift policy focus from employment stability to labor fluidity
	Use private sector employment/recruitment agencies
	Diversify employment contracts
	Promote advancement of women in the job market
	Promote employment of the young and the old
	Reform universities
	Strengthen development of human capital capable of operating globally
	Utilize more high-skilled foreign workers
Promotion of Scientific and Technological Innovation	Strengthen the Council for Science and Technology Policy's headquarters functions
	Establish a Strategic Innovation Program
	Establish Innovative Research and Development Support Program
	Enhance the function of national research institutes
	Fund research support staff at research institutes
	Encourage Public-Private Joint Research and Development
	Improve intellectual property and standardization strategies
Creation of the World's Leading IT Society	Promote deregulation in IT industries
	Allow private sector use of public databases and online public administrative services
	Utilize IT to improve safety and convenience in government projects
	Develop the world's best communication infrastructure
	Promote cyber-security
	Develop human capital with IT skills
Improve Japan's International Competitiveness as a Business Hub/Improve Japan's Competitiveness as a Hub of International Business	Establish National Strategy Special Zones
	Utilize Public Private Partnership and Private Finance Initiatives
	Invest in industrial infrastructure such as airports and harbors
	Improve the competitiveness of cities
	Invigorate financial and capital markets
	Reform public pension fund management
	Adopt new energy policy; reformulate environmental policy
Small and Medium Enterprise Reform	Introduce network and brand strategies for under-utilized resources in regional economies
	Increase entry and exit of small and medium-sized enterprises
	Provide support for SMEs that enter growth markets
	Provide support for SMEs that expand internationally

TABLE 2: THE STRATEGIC MARKET CREATION PLAN—THEMES, REFORM AREAS, AND POLICIES

THEMES	REFORM AREAS	SAMPLE POLICIES
Lengthen healthy life expectancy[a]	Enhance effective preventive care services and health management	Promote digitization of medical and nursing care information
		Institute online distribution of non-prescription drugs
		Introduce an identification number system, etc.
	Promote medicine-related industries	Establish a Japanese version of the NIH
		Accelerate assessment procedures for advanced medical treatment
		Promote global deployment of Japanese medical technologies and services, etc.
	Establish access to better medical care and nursing care	Enhance provision of lifestyle services and housing to the elderly
		Build communities where people live and work in walking distance
		Develop nursing care robots, etc.
Realize clean and economical energy demand and supply[b]	Promote supply of clean and economical energy	Reform regulations to introduce renewable energy
		Promote offshore floating wind power generation
		Develop maritime resources such as methane hydrate, etc.
	Support efficient distribution of energy through competition	Reform the electric power system
		Develop technology and international standards for storage batteries
		Commercialize next generation devices, etc.
	Promote wise consumption of energy	Expand Smart Communities and establish energy management industry
		Introduce energy-saving standards for housing and commercial buildings
		Support next generation automobiles, etc.
Build safe, convenient and economical next-generation infrastructure[c]	Provide safe and resilient infrastructure at low cost	Formulate basic plan for longer life of infrastructure
		Construct IT-based inspection and diagnosis systems for infrastructures
		Develop new materials, etc.
	Build safe and comfortable transportation systems for people and goods	Develop driving safety support and self-driving system,
		Create traffic information system using big data,
		Improve distribution system, etc.
Build regional communities that use their unique local resources to appeal to the world[d]	Promote production of highest quality agricultural, forestry and fishery products and food stuffs	Develop 'AFFrinnovation (the sixth industry)'
		Promote export of agricultural, forestry, and fishery products
		Consolidate farmland among active users
	Use each region's potential to attract international tourists	Relax visa requirements for tourists
		Institute a Visit Japan Promotion
		Attract large scale international events

Notes: Market size and employment goals for 2020 and 2030 are specified for target industries under each Theme. Target industries are:
[a] healthcare services, elderly care, pharmaceutical, medical equipment, senior housing industries;
[b] reproducible energy, high efficiency generators, batteries, next generation devices/materials, energy management systems, next generation cars, energy saving home appliances, energy saving housing;
[c] infrastructure management, safe driving support system, outer space infrastructure;
and [d] agriculture and tourism.

TABLE 3: THE STRATEGY OF GLOBAL OUTREACH—PROGRAMS, REFORM AREAS, AND SAMPLE POLICIES

PROGRAMS	REFORM AREAS	SAMPLE POLICIES
Build strategic trading relations and promote economic partnerships	Promote economic partnerships such as TPP and FTAs	Engage in economic partnership negotiations that benefit Japan
		Reform investment agreements and tax treaties
		Accept more foreign nurses and care workers, etc.
Adopt strategic initiatives to obtain overseas markets	Export infrastructure and secure natural resources	Dispatch prime minister and other government leaders to make sales pitches
		Implement ODA strategically
		Support Japanese companies advancement into new overseas areas, etc.
	Support potentially international SMEs	Establish "one stop overseas consultation offices,"
		Establish government program to assist companies sending advance teams of employees overseas
		Dispatch senior government officials with international skills to SMEs
	Promote Cool Japan	Establish government-led Cool Japan Promotion Council to disseminate information
		Establish Japan Brand Fund
		Promote export of Japanese alcoholic beverages
Improve funding for infrastructure and human resources to support economic growth	Promote inward FDI	
	Strengthen development of human capital capable of operating globally	

Given this large number of reform areas and policies, it is easy to find some that are likely to have direct positive impacts on Japan's growth capacity. For example, encouraging corporate restructuring and increasing entry and exit (table 1, Emergency Structural Reform Program) are promising ideas for promoting growth. In the past, protection of zombie firms slowed economic restructuring and hampered economic growth. Any reform to encourage economic restructuring would lead to higher economic growth by increasing the growth rate of total factor productivity (TFP), because a significant part of TFP growth in a mature economy comes from economic restructuring.

Changing the emphasis of labor market policy from employment stability to labor fluidity (table 1, Employment System Reform) would also further economic restructuring and raise TFP growth. Similarly, establishing a system to make challenges to frontiers less apprehensive (table 1, Emergency Structural Reform Program) would also increase TFP growth by encouraging innovation. Promoting women's participation in the job market, employment of the young and the old, and increased use of high skilled foreign workers (table 1, Employment System Reform) are all appropriate policies to counter the negative impact of aging on labor supply and restore growth. Deregulating IT industries, improving communication infrastructure, and promoting cyber-security (table 1, Creation of the World's Leading IT Society) can stimulate capital investment in the private sector and contribute to growth.

At the same time, however, many policies proposed in the action plans can be expected to make only indirect or hard-to-measure contributions to growth. For example, developing human capital capable of operating globally (table 1, Employment System Reform) and improving infrastructure funding and human resources to support economic growth (table 3, Strategy of Global Outreach) are probably growth-enhancing policies, but their impact will not be visible for a long time.

Worse, much of the Strategic Market Creation Plan (table 2) is simply old-fashioned industrial policy in which the government tries to promote the development of promising industries—such as medical technology, alternative energy, and transportation. As we discussed in Section 3, such industrial policy may have worked during the catch-up phase, when it was relatively easy to identify promising industries, but now that Japan has become an advanced economy, nobody can be sure which industry to promote.

Some aspects of the Strategy of Global Outreach (table 3), such as reforms to open to the rest of the world, should improve Japan's future growth prospects. In particular, by increasing Japanese companies' exposure to global competition, reforms to promote free trade areas (FTAs) will create incentives for firms to be more productive, raise overall TFP growth, and expand the economy. On the other hand, however, the Strategy of Global Outreach also proposes pure export promoting industrial policies which are likely to distort resource allocation across industries and contribute little to overall economic growth. For instance, successfully increasing exports of Japanese alcoholic beverages (table 3, Cool Japan) may lead more resources (physical and human capital) into *shōchū* companies, but it would have only minimal economy-wide impact.

In addition, in some cases, the action plans omit significant policies that would achieve the targeted reform. The Industry Revitalization Plan (table 1) for example identifies increasing entry and exit of SMEs as an area for reform, but proposes only subsidies and support for SMEs to enter new markets, neglecting altogether policies to increase exit of failing firms.

Finally, perhaps the most important problem with Abenomics' growth strategy is lack of focus. It covers too many reform areas and proposes too many policies. Implementing any economic reform uses up political capital to overcome resistance from the beneficiaries of the current situation (and hence the potential losers from the refom). It is hard to imagine that it would be politically possible for the Abe administration to implement reforms in all 52 areas of the action plans. Trying to win support for each would run the risk of failing in most. Instead, focusing more narrowly on a fewer number of priority reforms that directly contribute to improving conditions for economic growth would increase the probability that the third arrow of Abenomics will succeed.

7. Conclusion

The paper has reviewed Prime Minister Abe's economic policy called Abenomics and the likely success of each of its three arrows. The first arrow (monetary policy) seems to be flying toward the target. The BOJ expanded monetary policy substantially and inflation expectations (at least in the financial market) seem to be rising. The direction of the second arrow (fiscal policy) is not entirely clear. The fiscal stimulus part has been implemented, but the government does not yet have a credible plan for budget consolidation. The Medium-Term Fiscal Plan of August 2013 is not enough to eliminate the budget deficits in the medium term, as the government's own calculation shows.

Even if the first and the second arrows hit the target–ending deflation in the narrow sense–Japan's economy may not return to dynamic growth. The key will be Abenomics' third arrow (growth strategy). The Japan Revitalization Strategy disclosed in June 2013 includes some promising ideas but it also proposes some policies that would not improve conditions for economic growth or that are outright counter-productive. The most serious concern with this aspect of Abenomics is its lack of focus. In order for Abenomics to truly succeed, the government will have to come up with a more focused version of the growth strategy.

References

Bank of Japan (2013a). *Financial System Report*, April 2013. (http://www.boj.or.jp/en/research/brp/fsr/fsr130417.htm/)

Bank of Japan (2013b). *Monthly Report of Recent Economic and Financial Developments: August 2013.* (http://www.boj.or.jp/en/mopo/gp_2013)

Caballero, Ricardo, Takeo Hoshi, and Anil K Kashyap (2008) "Zombie Lending and Depressed Restructuring in Japan," *American Economic Review*, Vol. 98 (5), pp.1943-1977

Cabinet Office (2006) Kōzō Kaikaku Hyōka Hōkokusho 6: Kinnen no Kisei Kaikaku no Shinchoku to Seisansei no Kankei (Structural Reform Evaluation Report No.6: Relation between Recent Progress in Deregulation and Productivity) Hoshi, Takeo (2011). "Role of Central Banks in Financial Stability: Lessons from the Experience of the Bank of Japan"

Christensen, Jens H.E. and Glenn D. Rudebusch (2012). "The Response of Interest Rates to US and U.K. Quantitative Easing," Federal Reserve Bank of San Francisco Working Paper 2012-06.

Doi, Takero, Takeo Hoshi, and Tatsuyoshi Okimoto (2011). "Japanese Government Debt and Sustainability of Fiscal Policy," *Journal of the Japanese and International Economies,* 25(4), 414-433.

Doi, Takero and Toshihiro Ihori (2009). *The Public Sector in Japan.* Cheltenham, UK: Edward Elgar Publishing.

Hoshi, Takeo and Takatoshi Ito (2013). “Defying Gravity: Can Japanese sovereign debt continue to increase without a crisis?” *Economic Policy*, forthcoming.

Hoshi, Takeo and Anil K Kashyap (2011). *Why Did Japan Stop Growing?* NIRA Report. (http://www.nira.or.jp/pdf/1002english_report.pdf)

Hoshi, Takeo and Anil K Kashyap (2012). *Policy Options for Japan’s Revival.* NIRA Report (http://www.nira.or.jp/english/papers/e_120608.html).

Krugman, Paul (2013). “Japan the Model,” *New York Times*, May 23, 2013. (http://www.nytimes.com/2013/05/24/opinion/krugman-japan-the-model.html)

Mandel, Benjamin R. and Geoffrey Barnes (2013). “Japanese Inflation Expectations, Revisited” in Liberty Street Economics (New York Federal Reserve Bank Website) (http://libertystreeteconomics.newyorkfed.org/2013/04/japanese-inflation-expectations-revisited.html)

Ministry of Finance Policy Research Institute (1997). *Zaisei Kin’yū Tōkei Geppo (Public Finance Statistics Monthly)* No. 541. (http://www.mof.go.jp/pri/publication/zaikin_geppo/hyou/g541/541.htm)

Rajan, Raghuram (2010). *Fault Lines: How Hidden Fractures Still Threaten the World Economy.* Princeton, NJ: Princeton University Press.

Shirakawa, Masaaki (2012). “The Bank of Japan's Efforts toward Overcoming Deflation,” Speech at the Japan National Press Club in Tokyo, February 17, 2012. (http://www.boj.or.jp/en/announcements/press/koen_2012/ko120217a.htm/)

Stiglitz, Joseph (2013). “The Promise of Abenomics,” *Project Syndicate*. (http://www.project-syndicate.org/commentary/shinzo-abe-and-soaring-confidence-in-japan-by-joseph-e--stiglitz)

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