

Has Abe boosted Japanese confidence enough to get out of stagnation?

An early evaluation of Abenomics

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The Japanese economy has since the beginning of the 1990's suffered from a prolonged period of economic stagnation. Known as the Lost Decade, but extending its influence well into the 2000's and beyond, many attempts has been made to reverse the stagnation. The latest of these has come to be known as Abenomics and is headed by incumbent Prime Minister Shinzō Abe. In this essay we investigate whether the economic policies under Abenomics have boosted economic confidence in Japan enough to reverse the stagnation. Our findings support that Abenomics have had strong effects on both consumer confidence as well as business confidence. Both types of confidence rose sharply in response to its policies and were accompanied by sizeable increases in both consumption as well as investment, contributing to increased growth in GDP and improvement in unemployment. Deflation has been reversed into a positive rate of inflation for the first time in decades. While it is too early to definitely say whether or not Abenomics is the cure needed to end the Japanese economic stagnation, the preliminary outlook is very promising.

Key words: Consumer confidence, Business confidence, Japan, Lost Decade, Abenomics

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1. Introduction

Japan has since the beginning of the 1990s experienced one of the most extended periods of economic recession of any advanced economy in recent times. The so-called “Lost Decade”, in which Japan experienced the lowest growth rate among the major industrialized countries of the world, lasted well into the 2000s and its lasting effects still afflict the economy today.

The purpose of this paper is to perform a preliminary evaluation of Abenomics - the economic policy strategy of current Japanese Prime Minister Shinzō Abe, and the most comprehensive economic policy strategy perhaps yet undertaken. In order to do this, we take a look at the development of the Japanese economy since the 1990’s to better understand the ailment it has suffered from.

Before the infamous bubble crash of the Japanese economy in the beginning of the 1990s, Japan had been held as the (first) East Asian miracle. Seemingly boundless economic progression had even raised concerns as to when the Japanese economy would surpass the American economy and become “Number One” in the world. The backside to this success story was that the economic growth had also fueled increasing large bubbles in the stock and asset price markets. The unparalleled thirty year golden age of economic growth culminated in unparalleled economic downturn as the economy suffered a near catastrophic crash caused by speculative mania.

The stagnation that followed would go on to become one of the longest of any country in recent memory and many different attempts to jolt the Japanese economy back into motion have been undertaken by Japanese authorities, all with at most limited results. The weakened confidence for the Japanese authorities that had led the country into this disaster was weakened still by repeated failed attempts to fix the situation, both for actors within and outside the country.

At the end of 2012, Shinzō Abe became the Prime Minister of Japan and in December the government announced it would implement his economic policy, which has become known as Abenomics. The main goal of the policy is to raise growth and end the long period of deflation that has persisted for decades. Abe's policy framework consists of three “arrows”: expansionary monetary policy, flexible fiscal policy as well as structural reforms. Combined together, these policies are meant to get the Japanese economy out of its long recession by boosting confidence, get the public finances under control and reinvigorate economic growth.

As Abenomics is still an ongoing policy strategy, it was only first implemented during early January of 2013; we look specifically at the evolution of confidence indicator data as well as early available outcome data to ascertain the effects that Abenomics have had so far. The key area of interest in this paper is whether Abenomics is likely to succeed and the question we wish to examine is: "Has Abenomics been able to restore confidence enough to end economic stagnation?"

We are interested in the challenges that Abenomics faces and how its three arrows need to be combined in order to increase the likelihood that the economy is led on a path to recovery.

The timing and combination of demand boosting policies and structural reforms are of key interest. To do this we examine both what has been done so far under Abenomics to restore confidence and what it has achieved.

Initially, we do a literature study based on economic academic literature to guide the reader on the evolution of Japanese economy since 1990 in very broad terms. We then employ simple qualitative analysis to examine the policy contents of Abenomics from a perspective of economic confidence. We examine the Abenomics strategy as a whole, and pinpoint the interaction of its three arrows and how this may affect confidence. This is then complemented by an analysis of various measures of economic confidence, as well as outcome data available at this early stage.

In this essay we will only consider the development of Abenomics and its effects on the Japanese economy from Shinzō Abe's inauguration as Japan's Prime Minister in late December 2012 until July 2014. Developments after this point fall outside the scope of this essay and will not be considered.

Many previous studies have focused on whether or not consumer or business confidence is of interest to economists, though very few seem to take advantage of the early availability of this kind of data as a measurement of economic recovery. In this essay we accept the notion that both consumer and business confidence are relevant to the development that the economy may take, and examine them as such. This allows our study to be fairly unique in that it gives us the opportunity to evaluate the effects of announcement and economic policy, a task that has rarely, if ever, been undertaken previously, making this study unique in this regard. As such the procedure in this essay may not follow any standard empirical methodology used in economics, while we believe it is well anchored in economic theory.

Our findings support that Abenomics have had strong effects on both consumer confidence as well as business confidence. Both types of confidence rose sharply in response to its policies and were accompanied by sizeable increases in both consumption as well as investment. Though considerable, the increases did not go beyond levels enjoyed previously, most recently during the temporary boom between 2004 and 2007. Consumer confidence began to dwindle following a sales tax hike, raising the need to monitor its future development before a decision is made on the proposed further tax hike in 2015. If consumer confidence doesn't continue to rebound and improve, a further tax hike might bring confidence to a new low.

This essay is structured in the following manner: In the following section we briefly go over theory on expectations and credibility and how this affects stabilization policy, as well as related issues that are relevant to the Japanese case. In section three an overview of the Japanese economy since the 1990s and up to 2012, when Abenomics has it start, is presented along with a summary of the policy contents of Abenomics. In part four we qualitatively analyze Abenomics as a comprehensive strategy and then complement this with an analysis of various measures of economic confidence as well as early accessible outcome data. Finally we draw our conclusions in part five.

2. Theory

2.1. Expectations, optimism and uncertainty

Central to most macroeconomic theories is the concept of *expectations* of various economic variables, how these are formed and how they are included in macroeconomic modeling. Expectations on future inflation are taken into account by both employers and employees when negotiating and re-negotiating wage contracts. Decisions on consumers' consumption levels today are formed by their expectations on current and future income and wealth. The investment behavior of investors is determined by their expected future income and both this and consumption in turn depends on the interest rate today as well as the interest rate tomorrow.

Various forms of modeling expectations exist and they may incorporate both forward-looking and backward-looking components. A key element to the forward looking examples above is that public expectations on the future economy will affect the behavior of consumers and businesses both today as well as in the future, leading to them frequently influencing the direction that the economy is going to take as a result. Both the expectations of consumers as well as businesses are subject to waves of optimism (or pessimism). Two components of aggregate demand may be said to be related to the level of optimism: *C* and *I* - consumption and investment.

Consumers' optimism is linked to their expectations about their future incomes as well as of the economy as a whole. A high level of optimism is indicative of that the majority views their outlooks favorably, meaning higher expected income, and this should thus be linked to consumers' propensity to consume. In line with the permanent income hypothesis, if optimism increases, this means raised trajectories of expected future income and thus an increase in permanent income. As permanent income rises, so does current as well as future consumption, due to consumption smoothing, thereby linking the state of optimism to current consumption. (Friedman 1957 pp. 20-37)

In much the same manner, businesses' optimism reflects their perceptions of the current business climate and the state of the economy, and thereby connects to their future income expectations and through that their willingness to invest. In line with the q-theory of investment, the rate of investment will rise with q , the ratio of stock prices to acquisition costs of the firms' assets, which is linked with the profitability of the firm. The rate of investment thus depends on stock prices, and will rise with increased expected future profits. This is in turn dependent on future GDP. Businesses' optimism may then enter the investment function as a variable sometimes called "state of confidence", and the rate of investment relies positively on confidence as well as output, and depends negatively on current capital stock and the interest rate. (See for example Sørensen and Whitta-Jacobsen 2010 pp. 405-406)

Exactly how bouts of optimism (or pessimism) are formed has been a matter of much debate. John Maynard Keynes (1936) said they were the results of "animal spirits", a name which emphasized their unpredictable nature, detached from purely rational decision making:

“Even apart from the instability due to speculation, there is the instability due to the characteristic of human nature that a large proportion of our positive activities depend on spontaneous optimism rather than mathematical expectations, whether moral or hedonistic or economic. Most, probably, of our decisions to do something positive, the full consequences of which will be drawn out over many days to come, can only be taken as the result of animal spirits—a spontaneous urge to action rather than inaction, and not as the outcome of a weighted average of quantitative benefits multiplied by quantitative probabilities.” (Keynes 1936 pp. 161-162)

Conventional wisdom maintains that households are aware of macroeconomic fluctuations and adjust their consumption spending accordingly, taking into account current and future disposable income and wealth. Specifically, high or low levels of optimism are the product of households’ perception of future income and the state of GDP. (Konstantinou and Tagkalakis 2011 p. 5)

Empirically, confidence indicators measure the degree of optimism among economic actors and the expression *confidence* is used as a measure of changes in future income expectations. The level of confidence that consumers and businesses have concerning their future income determines the trajectories of their expected income growth paths. A second aspect to this concerns the variance of these expectations around these trajectories and may be said to be tied to *uncertainty*. As the level of uncertainty rises, so does the variance of expected future income. As such, uncertainty too may be picked up by the empirical measure of confidence – a high level of confidence may reflect an improvement in the expected income growth path, but it may also reflect less variance around the path due to less uncertainty of that actor.

In line with the precautionary savings theory, to maintain a smoothed consumption over time, consumers facing weakening future income prospects set aside a precautionary reserve, by consuming less in the current period, to use as a buffer in case the worsened future income prospects are realized. Increased uncertainty about households anticipated future income will thus increase this precautionary motive for saving and hence result in a cut in consumption. It does this through the risk premium – higher uncertainty means that future expected income is discounted at a higher rate (real interest rate + risk premium). Consumption and investment thus depends positively on the expected income growth paths and negatively on uncertainty.

Christina Romer (1988) argues that a temporary rise in uncertainty will make consumer spending on durables decline, but should have no effect on the consumption of non-durable goods. This is because the resale market of durable goods is not perfect. If the rise in uncertainty is large, the decline in spending on durable goods should also be large. The sales of non-durable goods should however increase. Furthermore, the decrease in consumption of durable goods which are harder to resell should be greater than of those that are not. Semi-durable goods, which are normally really hard to resell, should see the greatest decrease. (Romer 1988 p. 17)

Based on this reasoning, the uncertainty hypothesis predicts a historical relationship between the volatility on the stock market and consumer spending:

“Provided that uncertainty about future income is a stable, positive function of stock market variability, it should be the case that consumer spending on durable goods and stock market variability are inversely related over long periods of time” (Romer 1988 p. 17)

Romer further argues that the effect of temporary uncertainty on future income is larger on consumers than on investors, since the relative payoff of investors’ projects is commonly not dependent on the realization of future income. This makes the effect of temporary uncertainty larger for consumers than for producers and consumer durables should thereby fall more than producer durables. (Romer 1988 p. 13)

Consumer confidence indicators are among the most closely watched and debated indicators of economic trends today. The popularity of consumer confidence indices is owed in large part due to their prompt release, meaning that for some time they are the only available data on the development of an economy. Consumer confidence indices released are soon reported on by the media and commented by economic analysts. Empirically studying the relationship between consumer confidence and output over time in eight countries, Golinelli and Parigi (2003) argue that consumer confidence is a broader concept that is subject to more than just macroeconomic variables, including psychological factors. (Golinelli and Parigi 2003 pp. 7-8)

The forecasting power of consumer confidence indices has been subject of much debate although there seems to be a general consensus that they are of use when predicting the development of economic activity, particularly in the event of turbulent economic times (See for example Bram and Ludvigson, 1998; Doms and Morin, 2004; McNabb and Taylor, 2007). Bram and Ludvigson find that consumer confidence is indicative of consumption, and that consumer attitudes may be a cause for economic fluctuations. (Bram and Ludvigson 1998 p.74) McNaab and Taylor find that both consumer and business confidence indicators are good at identifying turning points in business cycles. (McNaab and Taylor 2007 p. 203)

Atsuo Utaka (2003) argues that consumer confidence has an effect on short-term economic fluctuations in Japan. (Utaka 2003 p. 341) Some argue that confidence indices actually have greater explanatory power than other indicators. Konstantinou and Tagkalakis (2011) argue that this may be explained by confidence indices independently forming part of important macroeconomic variables and that they indicate the general condition of the economy. (Konstantinou and Tagkalakis 2011 pp. 4-5)

Previous studies have focused on whether or not confidence is connected to actual consumption and investment, and there seems to be a general consensus that this may be case. We believe that this is an important result, as this separates what we do in this essay from pure speculation.

In sum, consumers’ as well as businesses’ expectations of future income are subject to degrees of optimism that is typically measured empirically by confidence indicators. Strong confidence is indicative of high levels of optimism in the expectations of consumers and businesses (meaning higher trajectories of expected income growth paths) and will translate into increased consumption and investment today as well as tomorrow. Uncertainty is the level of variance that expectations have around their projected income growth paths for a

certain individual. Greater levels of uncertainty means increased levels of variance for that individual.

2.2. Credibility and stabilization policy

Steering the market's expectations is an important aspect of stabilization policy. By employing monetary and fiscal policy, policy makers can influence the market's expectations of future income, inflation and unemployment rates. This is an essential component when attempting to counteract a recession by affecting aggregate demand in a Keynesian fashion.

Provided that expectations are forward-looking, policy makers may influence expectations through actions but also through announcements. For instance a central bank announcing that it is getting ready to employ monetary tightening, might, if successful, see an immediate drop in stock prices even before any actions are actually undertaken. Steering market expectations through these kinds of announcement effects is known as forward guidance. (See for example Sørensen and Whitta-Jacobsen 2010 p. 640)

To create and retain the potency of such announcement effects, it is important that they be backed by the ability and willingness of the announcer to act in accordance with the announcements. Doing so will create a reputation of *credibility* of the announcing agent as capable and willing to go through with its plans once the course is set. When acting on its announcements the agent reaffirms to the public its willingness to go through with its policy decisions and this nurtures its credibility in the long run. The credibility of the actor is thus in this way an asset which, if not cared for, may erode and limit the effectiveness of announcement effect strategies.

The need to follow up announcements with actions so as to avoid eroding credibility may create potential problems if certain announcements do not generate the desired response from the market. If this is the case, the announcer is then faced with the choice of going through with its pre-announced course even if this may no longer be the optimal choice or abandoning the announced path at the risk of damaging its credibility.

A general argument is that, because of inflation bias generated by allowing discretionary policy, credibility of monetary policy may be lost. Delegating monetary policy to an independent central bank that can commit itself to a long-run target goal can help with this credibility issue. If the bank stays committed to its given rules and gains a reputation for this, its monetary policy may be more believable in the long run. (See for example Sørensen and Whitta-Jacobsen 2010 pp. 664-666) To achieve price stability in a country, it is important that the central bank is credible. A high level of central bank independence as well as a history of honesty is important for obtaining this. (Waller and de Haan 2004 p. 23)

Not only the willingness of the actor affects its credibility but also the perceived ability of the actor to do so. If the ability of the actor is seen as weak, setting a too ambitious goal may come across as unrealistic and thus not be credible. This is the case when a weak central bank adopts a too low inflation target that isn't well founded. In this case a confidence crisis may occur, meaning a lower equilibrium, with a higher than target-rate of inflation, is achieved. It

may be that in such cases a less ambitious goal which is more credible is the better choice, and so the tradeoff in doing this must be considered. (Araujo and Santos 2007 pp. 4)

As credibility builds on past history of actions and strategies, it should be that the outcomes of these matter in the formation of credibility. Just as a policy maker with a reputation for, and track record of, swift and effectual policy responses should have an easier time affecting confidence, the reverse should also be true for policy failures. If policy makers have repeatedly failed in their attempts to influence the market in some way or address a certain problem, this might potentially slow alterations in confidence. If a countermeasure has not worked before this may lead to expectations that more powerful measures are required to deal with the situation.

If a policy maker is credible, it may be beneficial to use explicit and well communicated policies in order to affect the market. The ability of automatic stabilizers to affect expectations may be lower during extraordinary times such as crises, and instead explicit fiscal stimulus packages may be necessary. Such explicit fiscal stimulus may better show the government's commitment to stimulate the economy and may increase positive expectations about the future, thereby increasing the willingness to spend and invest. (Silvia and Iqbal 2011 p. 23)

A policymaker that is perceived as credible may then affect expectations in an economy by employing fiscal and monetary policy. Such policies may directly impact confidence. Based on the idea that the aggregate level of confidence affects aggregate spending, which in turn determines aggregate output and employment, one may theorize that fiscal or monetary shocks from policymakers might signal a commitment to aggregate stability, thereby improving confidence and stimulating demand, and leading to economic expansion. In the idea of multiple equilibria, boosting confidence through policy could cause the economy to jump from a bad equilibrium to a good one. (Bachmann and Sims 2011 p. 4)

Another possible way economic policy may influence confidence could be because of informational frictions and strategic complementarities. If, following a recession there is sluggishness to the adaptations of expectations - macroeconomic fundamentals might have improved but beliefs about the fundamentals are slow to catch up, and this may delay recovery. Conducting expansionary fiscal or monetary policies may then enable the government to convince agents that the fundamentals have improved, thereby facilitating recovery. (Bachmann and Sims 2011 p. 5)

Konstantinou and Tagkalakis (2011), empirically studying the effects of fiscal policy on confidence indices, find that there is an effect of fiscal policy on confidence. They find that tax cuts and some government spending components can boost consumer as well as business confidence. Cuts in total- and personal direct taxes boost consumer confidence while lower total- and business direct taxes lead to bolstered business confidence. Similarly, increases in non-wage government consumption improve consumer confidence, but increases in government investment spending and of the government wage bill can be harmful to both consumer and business confidence. Several of these negative effects increase when the public debt ratio is high, but the effect of nonwage government consumption remains positive on

both consumer and business confidence even with a high debt ratio, reflecting that such policies should be easy to reverse. (Konstantinou and Tagkalakis 2011 p. 4)

Empirically studying the effects of both fiscal and monetary policy on confidence, Silvia and Iqbal (2011) draw the conclusion that monetary and fiscal policies have stable relationships with confidence as well as real GDP in both the short and long runs. They do this by testing confidence, using S&P 500 index as a proxy, on monetary and fiscal policy using a VECM model. Moreover, they find that real GDP and confidence move together in both the long run as well as in the short run. They further suggest that both types of policies are important in restoring confidence during crises to facilitate economic recovery. It may be necessary to employ a combination of both policies to reinstate confidence and boost economic activities. (Silvia and Iqbal 2011 p. 31)

Another type of action which may impact the economy and confidence is *structural reform*. Structural reform is different from stabilization policy in several respects. Stabilization policy is typically seen as having a short-run effect on economic activity by affecting aggregated demand. The effects are relatively quick to materialize, particularly in the case of monetary policy, but also temporary - as soon as policy is normalized the effects start to disappear. Structural reform on the other hand may target the supply side of the economy and affect the economy in the long run.

Long-run structural reforms may be slow to affect economic variables, and as such, one will not typically see change as a result of reform for some time unless the reforms also manage to change public expectations as well. If short-run expectations of output increase, this will raise aggregate demand now which has an immediate effect on output today. It should be noted that structural reform typically have various implementation costs associated with them, which is part of the reason why they are often perceived to be painful in the short run.

It may also be important that planned reforms face broad support by the public to be successfully implemented. Reforms that are seen as equitable and are well communicated are more likely to get popular support. This is especially typical of policies which promote equity in the access to good-quality education. While a reform to shift the tax burden from labor to consumption may promote growth it likely leads to widened income inequalities (OECD 2013 pp. 5-6)

In summary, stabilization policy is often used by policymakers to guide forward expectations of economic actors to steer the economy in certain directions. For this purpose the credibility of the policymakers is an important asset that must be taken care of for the strategies to retain their potency. To retain credibility it's important that: (1) announcements are followed up by action, (2) goals aren't too ambitious if there are concerns over the ability of the agent to go through with them. Expansionary policies will have direct short-run effects on confidence, while the opposite is true for contractionary policies. Structural reforms too, may impact confidence if they succeed in changing the expectations of economic actors.

Stabilization policy in the form of both monetary policy and fiscal policy are considered effective in steering expectations and thereby confidence in an economy. Sometimes however,

special circumstances may arise which limits the effectiveness of either policy. Two of these are described below: The liquidity trap, which is a situation where conventional monetary policy becomes virtually powerless, and the case of high public debt, which may limit the effectiveness of expansionary fiscal policy by raising concerns over sustainability and government solvency.

2.3. The liquidity trap – a credibility issue

The concept of the liquidity trap is not a new one. First identified by Keynes (1936) and then more formalized in by John Hicks' 1937, it was prevalent in Macroeconomic textbooks during the 1950s and 1960s before it gradually faded into obscurity. Traditional literature associated with Keynes' and Hicks' ideas of the liquidity trap were interested in the existence of positive floors for the interest rate. During 1990s, in light of the Japanese great recession and experiences in Europe and the United states of low inflation and low nominal interest rates the idea of the liquidity trap resurfaced, now concerned with the possibility of a zero lower bound on interest rates (Boianovsky 2004 pp. 92-93). Among the proponents of the more modern take on liquidity traps is Paul Krugman.

Krugman (1998) defines a liquidity trap as a peculiar state of an economy where conventional monetary policy loses its effect. In this state, nominal interest rates have reached near zero, and so injecting the monetary base with additional cash has no effect. This situation can be described as persistent deflation tendency of the economy - a tendency that monetary expansion is powerless to stop. Krugman argues that it is possible for this to occur if monetary expansions by the central bank are expected to only be temporary by the public. In order to be effective, a monetary expansion must raise prices in all future time periods as well as the current. As such, there is no reason that an increase that is not expected to be maintained will affect prices at all. (Krugman 1998 pp. 141-142)

What was unique with Krugman's approach to the liquidity trap was that it was regarded at its heart as a credibility issue. If monetary expansions are credibly expected to be sustained, and all future time periods will get the same relative increase, then Krugman argues that these expansions will always manage to affect the economy. If a monetary expansion fails to have such an effect, it is indeed a sign that the public expects that the expansion will only be temporary. (Krugman 1998 p. 142)

The key point to the modern liquidity trap is the zero lower bound. In a flexible price economy, increases in the money supply will yield a higher price level and a lower nominal interest rate. Since long-run levels are assumed to be fixed, a higher current price level creates future expected deflation - a lower nominal interest rate. This effect can only occur up to a certain point, as the nominal interest rate cannot become negative. Instead, money and bonds become perfect substitutes when the interest rate reaches zero, so any further increases in the money supply will result in excess cash holdings by the public and zero interest bonds held by the central bank. The money supply becomes irrelevant and the economy is stuck at a zero nominal interest rate no matter how big the money supply grows. Money is hoarded, not spent. (Krugman 1998 pp. 145-147)

Krugman argues that a liquidity trap can occur if the current price level is high enough compared to the long-term price level so that people expect deflation, leading to a zero nominal interest rate resulting in a high real interest rate. It can also occur if people expect a low future income - they may want to save even at a zero interest rate. It may then take a negative real interest rate to get people to spend enough now. As such, no matter what the central bank does with the current money supply, it cannot reflate the economy sufficiently. (Krugman 1998 p. 150)

Krugman's proposed solution to a liquidity trap is to employ monetary policy after convincing the public that monetary expansions will be made permanent, owing to the belief that only temporary monetary expansions are ineffective. If the changes are perceived to be permanent, they will be effective at raising prices (or output):

"If the central bank can credibly promise to be irresponsible - that is, convince the market that it will in fact allow prices to rise sufficiently - it can boot strap the economy out of the trap". (Krugman 1998 p. 161)

Since Krugman, there have been many different variations on strategies to escape a liquidity trap based on steering expectations with announcements from the central bank, which are then followed up on to ensure credibility. Lars E. O. Svensson (2003) argues that a "foolproof" way of escaping from a liquidity trap entails the central bank first announcing that they will follow an upward-sloping price-level target path, corresponding to a positive long-run inflation target above the current price level. It should then announce that the currency will be devalued and the exchange rate will be fixed at a level corresponding to a real depreciation relative to a steady-state level. The peg will be abandoned in favor of price-level targeting or inflation targeting, once the price-level target path has been reached. Finally, one has to act according to these announcements. (Svensson 2003 p. 4)

With forward-looking expectations, Sørensen and Whitta-Jacobsen (2010), argue that a central bank has two ways it can combat a liquidity trap: it can announce that it will keep interest rates low in the future as well as promising to allow higher rate of inflation than earlier. Crucial to this announcement effect strategy is that the central bank retains its credibility so that it can convince the market that it will go through with its promises. Even so, Sørensen and Whitta-Jacobsen argue that the goal of higher inflation usually conflicts with the typical long-term goals central banks to keep inflation in check, and this ambivalent duality may hinder the central bank's ability to simply "talk the economy out of the trap", leading towards the need of fiscal policy. (Sørensen and Whitta-Jacobsen 2010 pp. 638-640)

Traditionally the prescribed cure, when monetary policy has lost its ability to affect aggregated demand and is locked in a liquidity trap, has been fiscal policy. This could be done by way of fiscal expansion such as increasing public spending, and is very much in line with Keynes' reasoning. Many argue that, in an economy with backwards-looking expectations, this will affect the economy in two ways: first it raises output by and in of itself, and because the marginal cost of production goes up it also raises inflation. This, in a liquidity trap setting, has a positive effect on demand as it lowers the real rate of interest, which boosts demand. If enough to affect inflation expectations, this will also affect short-run aggregate supply,

moving us further along the demand curve to more output and inflation. (See for example Sørensen and Whitta-Jacobsen 2010 pp. 615-616)

Krugman (1998) concedes that fiscal policy should have some effect, but questions to what extent this might be capable of curing an economy from its liquidity trap condition. Conceivably a temporary increase in government spending could produce permanent effects on the economy if they were large enough to jolt it out of the liquidity trap, where monetary policy would again be effective. If insufficient however, then the fiscal expansion would have to be extended over a longer period of time, which would have consequences for public debt. (Krugman 1998 pp.158-160)

2.4. Public debt

Change in public debt in a given country can be summarized by the public debt equation:

$$\Delta d_t = d_t - d_{t-1} = (r - g)d_{t-1} + p_t$$

where d is public debt ratio against GDP, r is the real interest rate, g is the growth rate in real GDP and p is the primary government balance, excluding interest rate payments, measured as share of GDP. Note that a negative primary balance here indicates a primary surplus, while a positive denotes a deficit. As can be seen from the two terms governing the equation, the public debt ratio is affected by two main forces: (1) the difference between the real interest and the growth rate of GDP and (2) the primary balance. (See for example Fregert and Jonung 2011 p. 479)

The relative change of a ratio is equal to the difference in growth rate between its nominator and denominator. The real interest rate illustrates in growth in the public debt level if one assumes that no redemption of public debt are made and that the government borrows to pay its interest rate payments. This leads to the public debt level growing at a rate equal to the real interest rate. If the growth in real GDP matches the real interest, there will be no change to the ratio of public debt over GDP. (See for example Fregert and Jonung 2011 p. 479)

The second force that impacts the public debt ratio is the primary balance, measured as share of GDP. If the government is running a deficit it means that it is spending beyond its budget and thus has to borrow to meet the difference - which is then added to public debt. A surplus implies austerity, the government is spending less than it budget allows for and using the rest to redeem debt. The two forces together illustrate the total change in the public debt ratio. (See for example Fregert and Jonung 2011 p. 479)

One can further expand on the above dynamics by considering the effects of the primary balance on the growth rate of GDP. If one does not hold the Ricardian equivalence theorem to be true, a primary deficit by the government, if large enough, should affect aggregate demand in the economy positively and by extension cause an increase in the growth of GDP. Conversely, sharp austerity could lower aggregate demand and affect real GDP growth negatively. This much is considered “conventional wisdom” and lies in accordance with Keynesian reasoning.

Tied to discussions on public debt levels one usually finds discussions on government

solvency. A country's debt level typically becomes a topic for discussion more frequently when the sustainability of that country's public debt and fiscal policy track are put into question. Typically sustainability becomes an issue when either the public debt level and/or the primary deficit are seen as being too big by the public. If this is the case doubts may arise on whether a fiscal deficit can be maintained and voices may be raised if whether austerity is needed to decrease the level of public debt.

It is argued that if either public debt or the primary deficit is particularly high, fiscal expansion might create increased uncertainty about the sustainability and future of fiscal policy. The increased uncertainty may then instead lower the propensity to consume, offsetting the effect of the increase from the expansion on aggregate demand. It is noted that there have even been cases in which public finances were viewed to have been so out of control that fiscal tightening instead managed to increase demand. (See for example Sørensen and Whitta-Jacobsen 2010 p. 616)

Taking this reasoning further, Giavazzi and Pagano (1990) argue that while the direct effect on aggregate demand in the short run of fiscal consolidation should be contractionary, there may be an indirect expansionary effect in the medium run if the consolidation has managed to change expectations on future policy. According to this non-Keynesian expectations view, if a fiscal consolidation is understood by the private sector as an indication that the share of government spending in GDP is going to be permanently decreased, this will in turn mean lower taxes in the future, and as such will lead to an increase in the permanent disposable income of households who in response raises both current and future consumptions. Not only the size of the public spending cuts, but also their expected duration matter, as only reductions in spending that are expected to persist will result in lower permanent tax expectations. (Giavazzi and Pagano 1990 pp. 1-2, 5)

Other factors that should affect the perceived sustainability of public debt and fiscal deficits are the interest rate level, as well as the maturity of the debt held. In the case of the interest rate, it together with the debt level will determine the size of interest rate payments which must be borne by the country. A very high level of debt may be considered sustainable (at least temporarily) if it is coupled with a very low interest rate.

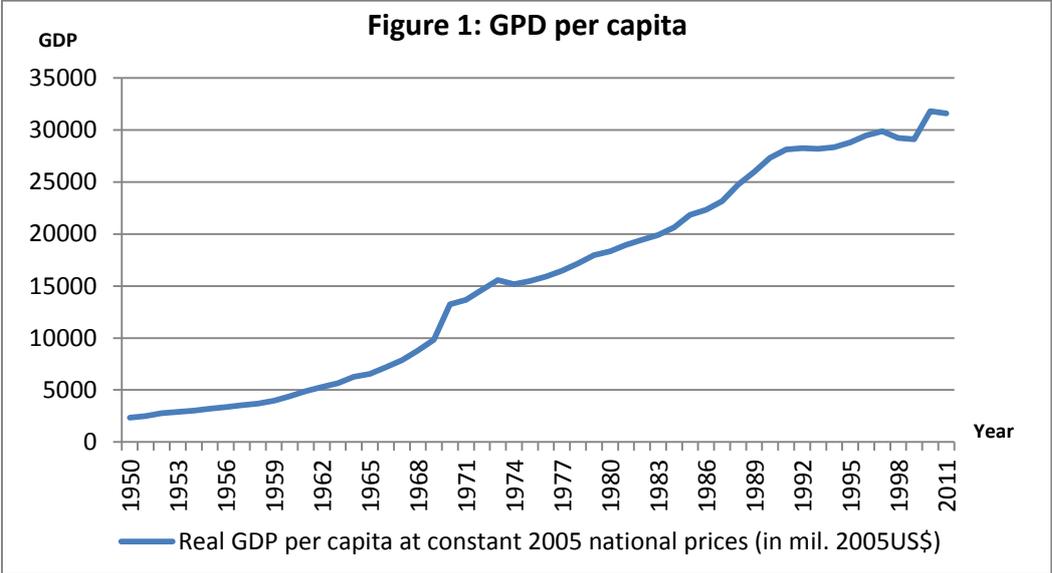
In the case of maturity, short maturity on debt may cause fear of inability to roll over maturing debt and as result the public will refuse to buy debt today and instead look towards foreign assets, leading to a self-fulfilled confidence crisis. This situation is more likely to occur if average maturity of the debt is short and it may be counteracted by lengthening and evenly distributing the maturity structure of the debt. (Alesina, Prati and Tabellini 1989 p. 1)

3. Japan and Abenomics

In this section we will present an historical overview of the Japan's economy since 1990s to familiarize the reader with the predicament it faces. We then move onto an overview of Abenomics and its policy contents.

3.1. The Japanese Economy

Japan is an island nation situated to the east of China, the Korean peninsula and Russia in East Asia. Japan occupies more than 6800 islands but more than 97% of its land mass is concentrated on the four biggest islands. Following World War 2 Japan was occupied by American troops but the country regained formal sovereignty in 1952.



Source: Penn World Tables 8.0

The Japanese income per capita has grown by an average of 5.25% annually since 1950. We can from the graph discern the start of the Japanese “miracle” during the 1960s, a period of very high average growth that lasted until the bursting of the bubble in 1991, which we can see as the slackening of the curve as GDP per capita growth grinds to a halt for several years, before continuing at a slower and shakier pace than before.

The economic growth during the post-war “miracle” would lead Japan from war torn devastation to the country becoming the second largest economy in the world by 1978, a position Japan held onto until 2010 when China supplanted it. The miracle took off in earnest during the 1960s and the breakneck pace at which the Japanese economy expanded at was only reined in by the first oil shock in 1973. (Ito 1996 p. 206)

Even so the growth rate for the following two decades would still remain considerable. Although the post-war growth rate average of 10% before 1973 was no longer possible the average growth rate after 1973 up to 1990s was still at least as high as 4%. During the 1980s land prices and the stock market would more than triple as the Japanese economy enjoyed a domestic-led boom, and peaked off near the turn of the decade. (Motonishi and Yoshikawa 1999 p. 1)

3.1.1. The bursting of the bubble and the Lost Decade

The Japanese economy took a macabre turn at the beginning of the 1990’s. At the start of 1991, the country entered the recession which would be the starting point of a prolonged

period of economic stagnation, Japan's so-called "Lost Decade", which has extended its influence considerably beyond a ten year span.

While it is tempting to categorize the Lost Decade as a single homogenous period of economic downturn it has been noted by several authors that this is not the case and that one can divide it into at least three discernable sub-periods. Syed, Kang and Tokuoka (2009) do this and write:

"Contrary to popular perception, Japan's Lost Decade was not an uninterrupted period of economic decline, but involved three distinct phases. Twice, green shoots of recovery emerged, allowing stimulus to be withdrawn. However, on both occasions, the external environment subsequently deteriorated dramatically—first during the Asian financial crisis in 1997 and then the IT bubble collapse in 2000—and the shock to the economy was amplified by a still-fragile financial system." (Syed, Kang and Tokuoka 2009 p. 4)

The Lost Decade was sparked by the collapse of bubbles in its stock and land asset markets in the beginning of the 1990s. After tripling in value during the latter half of the 1980s they came crashing down at the turn of the decade. While land prices eroded continuously during the 1990s, the stock market saw sporadic attempts to recover only to finally slide further down to new lows. (Syed, Kang and Tokuoka 2009 p. 4)

After the bubbles burst, the economy stagnated, with growth falling to an average of 1.5 percent between 1991 and 1994. Unemployment started to increase, and the rate of inflation slowed down gradually. When BOJ cut policy rates to near zero by 1995, together with a series of successive fiscal stimulus packages, it was expected that the economy would recover quickly from what was widely regarded as a cyclical bust following a prolonged boom. Signs of recovery, including improvements in growth, inflation and unemployment as well as on the stock market, meant that stimulus was withdrawn as policy focus shifted towards a fiscal consolidation in 1997 as concerns about escalating public debt mounted. (Syed, Kang and Tokuoka 2009 p. 5)

The Asian crisis then struck in 1997, pushing the economy into a second renewed phase of economic crisis. Because of the bursting of the asset bubbles Japan's financial sector had become riddled with nonperforming loans. When the external environment deteriorated, interbank trade ground to a halt as failed real estate loans and falling share prices prompted large failures in the financial sector. This prompted a credit crunch that made the Japanese economy contract for two consecutive years. The economy then seemed to recover between 1999 and 2000, as capital was injected into the banking system, larger fiscal packages were introduced and the interest rate shifted down to zero. (Syed, Kang and Tokuoka 2009 p. 6)

The Bank of Japan has been the sole legal issuer of banknotes in Japan since 1882. In 1998 new legislation increased the autonomy of the bank. The former Bank of Japan Act referred to BOJ as an instrument of the Ministry of Finance (MOF) and the Japanese government. The new law however, considers independence towards government and says that "the Bank of Japan's autonomy regarding currency and monetary control shall be respected." While the objective for the bank became stricter: maintaining price stability as well as the stability of the

financial system, (Cargill, Hutchison and Takatoshi 2001 pp. 96-97) it also led to decreased cooperation between BOJ and the government.

Then, the collapse of the worldwide IT-bubble in 2000 triggered a third phase of financial and economic tension. New stimulus packages were introduced to counteract weakening corporate profits strained by a still frail banking system. A large output gap formed as the economy barely grew the following two years. Following another credit crunch, spawned by misguided attempts at fiscal consolidation, unemployment soared along with the ratio of non-performing loans, while public debt remained resistant and instead grew because of weak economic performance. (Syed, Kang and Tokuoka 2009 pp. 6-7)

There does not seem to be a clear consensus when the “Lost Decade” ended, or if it indeed did (The Japan Revitalization Strategy, released by the government in 2013 refers to 1990's and 2000's as "two Lost Decades" (Japanese government 2013C p. 1)). Stable economic growth between 2003 and 2006, however, led Japanese economist Hiroshi Yoshikawa (2007) to declare the Lost Decade “something of the past” (Yoshikawa 2007 p. 186) Development since has been shaky however as the Japanese economy again came under fire in 2008 as a result of the global financial crisis.

The financial crisis that started in the US housing market would go on to become the most severe in recent memory, and would wreak havoc on a global scale. Japan, although relatively far from the initial crisis triggered by the subprime loan problem in the United States, would still find itself pulled into the turmoil during the final quarter of 2008. Having grown increasingly dependent on export, Japan was hit by a sudden decline in foreign demand coupled with a sharp appreciation of the yen. As a result, the Japanese economy contracted sharply during the final quarter of 2008 and beginning of 2009. (Iwaisako 2010 p. 795)

To stave off deflationary pressure and counteract declining exports, aggressive macroeconomic stimulus was employed from the latter half of 2008. Even before the crisis the interest rate had been close to the zero lower bound, meaning fiscal policy had to take a bigger role. Fiscal expansion, including several supplementary budgets, was aggressively employed to ensure “emergency economy-boosting measures for a secure and growing future economy.” The fiscal expansion resulted in a strong positive real GDP growth in the latter half of 2009. (Iwaisako 2010 pp. 798-799)

The global financial crisis primarily affected Japan through an exogenous shock on exports – the effect on the financial sector was relatively minor. Former commissioner of the Financial Services Agency, Takafumi Sato (2009) offers a few possible explanations as to why this might be. Having suffered through over a decade of economic malaise, Japanese financial firms were in the finishing stages of financial clean up and resolving a longstanding non-performing loan problem, at the time when dubious risk taking was increasing in the rest of the world. Because of this risk management practices in Japanese financial firms were improving and firms were more cautious about taking on risk. This can also be seen in the early adopting of a Basel II framework. (Sato 2009 pp. 6-7)

3.2. The economy at 2012

In this section we highlight the issues and situations that the Japanese economy was facing as of 2012 to give an indication of the starting point of Abenomics in late December 2012.

3.2.1. Japan's liquidity trap

There have been several accounts made that the Japanese economy is in fact in a liquidity trap and the Japanese experience is usually cited as the first example when arguing for the relevancy of the liquidity trap phenomena in a modern setting. Krugman (1998) argues that the Japanese great recession, with its long period of low economic growth, low inflation and low policy interest rate, fits the liquidity trap scenario quite well. He argues that the liquidity trap does account for a considerable portion of the drop in output during the slump. (Krugman 1998 p. 167)

The high propensity of the Japanese to save may be a key a factor, as Krugman argues that a liquidity trap occurs when desired savings exceed desired investment. The reason that Japan, with its low consumption rate, did in fact not fall into a liquidity trap earlier maybe because the high growth rate of the economy spurred a high investment demand. When the underlying factors to the high rate of growth and subsequent investment demand slowed down it may have pushed Japan into a liquidity trap. (Krugman 1998 pp. 172-173)

Krugman's proposed solution for Japan to get out of its liquidity trap was that BOJ engages in inflation targeting with a very clear target level of inflation (rate of inflation equal to x as opposed to x or less). Specifically he suggests they maintain an inflation rate of 4% for fifteen years. (Krugman 1998 p. 181)

Among onlookers that have long advocated that Japan deal more firmly with its countermeasures against its economic slump is the former head of the US Federal reserve, Ben Bernanke. Bernanke (1999) shares the view that Japan might be caught in a liquidity trap, but was adamant that, liquidity trap or no, there was much more that monetary policymakers could do beyond what they had, to alleviate the situation: "despite the apparent liquidity trap—monetary policy makers retain the power to increase nominal aggregate demand and the price level." (Bernanke 1999 pp. 13-14)

BOJ, as the sole legal issuer of the Japanese yen, have the ability to issue as much new money as they want, and if doing this was truly disconnected to the price level, they should in theory be able to acquire unlimited amounts of goods and assets from the money they create, which cannot be sustainable forever, the argument goes. This can be furthered to include money-financed transfers, "helicopter-drops" of newly printed yen. This must at some point raise prices or else the recipients' wealth will expand unbounded. (Bernanke 1999 pp. 14, 21)

Another suggestion offered by Bernanke is that Japan should try to induce depreciation of the yen, ideally through large open market operations. (Bernanke 1999 pp. 18-19) Bennett T. McCallum (2001) is of the same idea and argues that that even if the usual interest rate policy instrument is made immobile by a liquidity trap, monetary policy should still be able to produce stabilizing effects through the exchange-rate channel, including affecting the inflation rate. (McCallum 2001 p. 32)

Yoshikawa (2007) agrees that Japan faces a liquidity trap, but ascribes it less of an important role and instead indicates increased uncertainty as the culprit behind Japan's Lost Decade and says that Japan may have indeed been caught in what he calls an "uncertainty trap". This uncertainty trap, while not the trigger of the economic stagnation, did hinder its recovery. The other part that explains the Lost Decade, he argues, is the lack of a demand creating innovation. (Yoshikawa 2007 p. 187)

The central aspect of the uncertainty trap is that uncertainty lowers the interest rate elasticity of demand as uncertainty rises. In the limit, the elasticity becomes zero, effectively making any policy targeting the interest rate ineffective. As such policies such as inflation targeting will not work to get the economy out of the liquidity trap. Furthermore, unusual or unorthodox policy attempts may actually do harm to the economy if they come across as strange or confusing as they may increase the level of uncertainty, keeping the economy in the uncertainty trap longer. (Yoshikawa 2007 pp. 194-196)

3.2.2. Japan's public debt

The Japanese public debt ratio has been a growing concern for the Japanese economy. During the 1970s government debt was under 20 % of GDP, but then started to gradually increase. As per the public debt equation, the ratio of public debt over GDP can increase due to the following factors: *decrease in real GDP growth, increase in real interest rate and a positive primary deficit*. In the case of Japan, all three factors appear to have been relevant.

Japanese GDP has since the 1990s experienced long periods of very weak growth. Recessions have come in tandem and growth has been meager. Furthermore, while BOJ has been running a zero interest rate policy since the late 1990s, the real interest rate has remained positive because of persistent deflation pressures. Before considering the primary balance, these two factors alone may have increased the public debt ratio.

Because of the zero nominal interest rate policy, monetary policy has been effectively locked, and fiscal policy has been used to try to stimulate the economy out of recessions through fiscal expansions. After the bursting of the asset price bubbles, the Japanese government issued a large amount of fiscal stimulus packages during the following years. Recession persisted however, leading to extended fiscal deficits that continued to worsen during the 1990s and most of the 2000s, becoming the largest in the world. (Doi, Hoshi and Okimoto 2011 pp. 3, 6)

As a result, Japan's gross debt to GDP ratio reached 200 % soon after 2010, becoming the largest in the world, while the net debt to GDP was about 120 % at the same time due to the government's financial assets, among them the assets they have in social security funds. (Doi, Hoshi and Okimoto 2011 pp. 5-6) Since then, the government gross debt has continued in the same pattern, and is expected to be around 230 % during 2014. (Ministry of Finance 2013 p. 13)

Despite the excessive public debt, Japan has so far escaped problems that many countries with large debt could not run away from. As such it has been able to avoid finding itself in the same sovereign debt crisis situation as for example the PIIGS (Portugal, Ireland, Italy, Greece

and Spain) countries during the Eurozone crisis. One commonly stated reason for this is that the government debt has been absorbed domestically due to rich domestic saving and strong presence of home bias in Japan. (Horioka, Nomoto and Terada-Hagiwara 2013 pp. 1, 9)

3.2.3. Japan's labor market

Japan has had, compared to Europe, a very low level of unemployment and this has persisted throughout the Lost Decade. Unemployment has rarely gone above 5%.

Japan's labor market was characterized by so-called lifetime employment, an internally imposed long-term employment contract characterized by employment security and loyalty among workers. The institution of lifetime employment was seen by many as a unique foundation for Japan and resisted during times when economists speculated that it would collapse, with arguments that high economic growth would increase workers' outside options and thereby give them motivation to change job or that an economic recession would change the incentives among employers, who would go towards a more flexible practice. (Moriguchi and Ono 2004 pp. 2, 4-5)

While the life-time employment system is becoming a thing of the past, another peculiarity of the Japanese labor market is making itself known. Japan's has one of the highest life expectancy rates in the world and combined with declining birth rates this has resulted in the Japanese population becoming one of the oldest in the world with the effect that the labor force has been shrinking. As the ratio of working members of society to the rest of population decreases, this has serious implications for GDP growth and demand.

In summary, Japan has since the 1990's been caught in a liquidity trap like setting, with persistent inflation pressures and an interest rate policy at virtually 0%, for two decades. Attempts to escape the liquidity trap since then through expansionary fiscal policy have been fruitless and have instead further aggravated the public debt ratio which is now the highest of the advanced economies. Long-term growth prospects for the Japanese economy are complicated by a declining work force due to high life expectancy coupled with low birth rates.

3.3. Abenomics

Shinzō Abe of Japan's Liberal Democratic Party, the *Jiyū-minshutō*, first became Prime minister of Japan in 2006 but resigned just a year later in 2007 due to health concerns. Even so, because of the "revolving door" mechanism of party leader posts in Japanese political parties, such one year terms are not uncommon (between Abe's first and second terms as Prime Minister, from 2007 to 2012, five other people would hold the PM-post, all for roughly a year). During his first term as Prime minister, Abe displayed moderate interest in economic issues, contending with continuing fiscal reforms instituted by his predecessor, Junichiro Koizumi.

At the end of 2012, Abe became the Prime Minister of Japan for the second time and this time economics had been at the head of Abe's election campaign. Soon after his inauguration, Abe announced he would implement his economic strategy: "Through the collective efforts of the Cabinet, I will generate results by vigorously advancing economic policy under the three

prongs of bold monetary policy, flexible public finance policy, and a growth strategy that encourages private sector investment." (Abe 2012) The strategy was soon dubbed Abenomics.

In contrast to his earlier term of office, Abe's position this time around is considered strong, and he is expected to not go up for reelection until 2016. This is important for the ability to implement economic reform. A further potential obstacle to economic reform was then removed in 2013 when Abe's government won the Upper House elections, giving his party a majority in both houses. (Economist 2013)

Instituting reform should also be eased by the general state of the financial sector. While, for the most of the Lost Decade the financial sector had been struggling with non-performing loans, after a long cleanup process most of the problems had been resolved. The financial sector was put to a serious test with, the development of the global financial crisis, and it would come out relatively unscathed compared to those of many other countries.

3.3.1. The Three Arrows

"True, we have shot those arrows before, but only timidly, and incrementally. In my plan, the three arrows are being shot strongly, fast and all at the same time." (Abe 2013A)

The three pillars of Abenomics are called the "three arrows" - a reference to a well-known metaphor made by a medieval lord to his three sons, that while an individual arrow can be snapped easily, three held together are much more difficult to break. The three arrows are a combination of aggressive monetary policy, "flexible" fiscal policy and structural reforms aimed to reignite growth in the Japanese economy and put an end to the deflation pressure that has plagued it since the 1990s.

Boosting confidence has been stated as one of the main goals of the three arrows, by restoring the lost hope of the people, lost due to the many years of deflation combined with a large national debt. "The greatest crisis facing Japan lies in the Japanese people having lost confidence." Abe declared in a speech in February 2013. (Abe 2013B) "My job is to liberate Japan from the spell of prolonged deflation and a loss of self-confidence" Abe followed up in another speech in May 2013. (Abe 2013C) The government argues that it is important to gain trust back to achieve a sustainable growth for Japanese economy. They express a need for controlling the Japanese debt, while also maintaining the social security system. This is seen as especially important in light of the aging society, and to be able to manage this they argue that Japan needs sustainable growth. (Japanese government 2014A p. 23)

The first of the three arrows of Abenomics includes a 2 % inflation target set by BOJ and the introduction of Quantitative and Qualitative Monetary Easing (QQME). The second arrow consists of several fiscal endeavors, with the purpose of stimulating the economy while in the long run also reducing debt. The third arrow is comprised of several structural reforms aimed at expanding the workforce and improving the business climate for Japanese firms.

The First Arrow: Price Stability

Ending the persistent deflation pressures that has plagued the Japanese economy since the Lost Decade has been emphasized by the Abe-administration as one of its primary goals. In a

speech in early February Abe declared that: “Japan has been battling deflation for more than a decade. My plan, or "Abenomics," is to put an end to that, first and foremost” (Abe 2013A)

Critical of BOJ’s past actions, the Abe-administration gave them strong directives to implement bolder policies and complying with the new inflation target policy, going so far as to threaten BOJ’s independence. (Harari 2013 p. 9) In January of 2013 BOJ made the decision to restate its framework of its monetary policy. A price stability target of 2 % of the year-on-year rate of change in CPI was set, replacing the older vaguer goal formulation of "2 % or lower” positive inflation. (Bank of Japan 2013A p. 1)

At the same time, the Abe-administration decided together with BOJ to give a “Joint Statement of the Government and the Bank of Japan on Overcoming Deflation and Achieving Sustainable Economic Growth”. The joint release is intended to increase cooperation between the two parties, in order to strengthen the Japanese economy. The statement says that the government should aim at strengthening competitiveness and growth, while running flexible fiscal policy. They should also form a structure with a high rate of credibility, to uphold a well-functioning coordination with the central bank. (Ministry of Finance and Bank of Japan 2013 p. 1)

According to BOJ there is great importance of flexible monetary policy combined with stable financial systems. To this end BOJ believe there is a vital need for monitoring the development of prices as well as the economy in general over the next two years, with the focus of evaluating the Japanese development concerning price stability and growth. For the long run, risks related to monetary policy, stability and growth will be identified and examined. (Bank of Japan 2013A pp. 1-3)

QQME was introduced in April 2013 with the goal of reaching the 2% inflation target as soon as possible within 2 years. The strategy includes a doubling of the monetary base through money market operations. This will primarily be done by BOJ increasing their purchase of Japanese government bonds by 50 trillion yen yearly. This is the quantitative part of the strategy. It is stated that these bonds will be purchased for the use in monetary policy, and should not be used financing fiscal deficits. Also, purchases of exchange-traded funds (ETFs) will be doubled and Japan real estate investment trusts (J-REITs) will be purchased by BOJ at an increasing pace, with the goal of making asset prices’ risk premia decline. (Bank of Japan 2013B p. 2)

Furthermore, BOJ has stated that there will be a focus on lengthening the average maturity of these government bonds by more than twice, by buying bonds with longer maturity from banks. This illustrates the qualitative part of the strategy. (Bank of Japan 2013B p. 1) Daniel Harari (2013) argues that by removing longer bonds from the market banks will have to buy other riskier assets as well as supplying more loans to individuals or enterprises. Also, the qualitative easing should result in lower long-term interest rates, which may raise the demand for loans and thereby increasing growth. (Harari 2013 p. 9)

While BOJ has been unsuccessful in employing quantitative easing in the past (Harari 2013 p. 8) the QQME strategy engaged under Abenomics are different from past attempts by sheer

volume as well as contents. BOJ says that it will continue with its QQME strategy until and after it has reached the 2 % price stability target and will make changes to this strategy if needed, to reach the goal within the allotted time frame. (Bank of Japan 2013B p. 2)

The Second Arrow: Fiscal stimuli

Already in January 2013, the Abe-administration announced a supplementary budget, which included over 10 trillion yen in government stimulus spending. The supplementary budget was primarily directed at three areas: reconstruction efforts following the 2011 earthquake, various measures to increase growth by encouraging private investment, and various social expenditures such as medical care etc. (Harari 2013, p. 10)

In the budget plan for 2014 MOF states its goal for Japan's nearby future: to prepare for future fiscal consolidation, achieve a sound level of inflation and revitalize the economy. It expresses its intention of achieving a primary deficit equal to half the size of the 2010 deficit in 2015, as well as reaching a primary surplus in 2020. In order to decrease the deficit by 5 trillion yen in a year, MOF will restructure expenditures. Furthermore, during 2014 the number of Japanese government bonds issued will be reduced by 1.6 trillion yen from year 2013. (Ministry of Finance 2014 p. 3)

In April 2014 the consumption tax was increased from 5% to 8%. The consumption tax increase was introduced with the purpose of paying for growing social security expenses. As such, the tax hike is one of the more pronounced first steps towards consolidation and lowering of the fiscal deficit. MOF has expressed an expectation of a large increase in tax revenue, due to the tax increase. (Japanese government 2014A p. 22) A further increase from 8% to 10% has also been proposed to take place on October 1st 2015, under provision that the government, after carefully observing economic factors, deems the increase to be prudent. (Japanese government 2013B p. 5)

A further stimulus package of 5.5 trillion yen was implemented in December 2013, to counter the negative effects of the tax that were about to be increased. (Japanese government 2014A p. 22) The package was primarily focused on aiding firm competitiveness, increasing the labor pool by accessing previously unused groups, further reconstruction measures as well as supporting low income households. (Japanese government 2013A, pp. 1-4)

Intentions of lowering the Japanese corporate tax rate, at the moment one of the highest in the world at more than 35%, have been mentioned several times since January 2014. A first cut of 2.4% was implemented in April of 2014. Since then the government has announced that the corporate tax will be further reduced successively by 20-45% of its current level (to a target level under 30%) over several years starting in 2015. (Japanese government 2014C p. 5)

Third Arrow: Structural Reforms

Many different reforms for widely different areas are organized under the third arrow. However, there are two main areas that are the focus of most of these: labor market reforms and corporate sector reforms. Those of the former are primarily concerned with expanding the labor force and raising productivity, while those of the latter aim to improve the business climate for, and the competitiveness of, Japanese firms to foster investment.

In June 2013 the Abe-administration published the first version of the Japan Revitalization Strategy, the implementation plan of the structural reforms under the third arrow (Japanese Government 2013C) The Revitalization Strategy got lukewarm response, because of its vagueness in how and when exactly some of the reforms are to be implemented. (IMF 2013 p. 19) An updated version of the Revitalization Strategy was published a year later in June 2014.

The reforms aimed at expanding the work force are meant to do so by encouraging more women, elderly and young people to work, as well as reduce long-term unemployment and increase the number of international students and foreign workers. The goal is to increase productivity by making use of untapped potential labor, primarily women.

“An even graver task remains. That is to enhance Japan's productivity. It is to retool Japan's economic structure. Women should be given much greater opportunities.” (Abe 2013A)

In order to raise the rate of women participating in the work force, several reforms have been considered, including reducing the waiting list of childcare, by greatly expanding the number of day care services and afterschool childcare services by 2018 and 2020 respectively. Initiatives in order to ensure that the extra need for nursery teachers is met within this time frame as well as to educate mothers to become support staff in the daycare industry have been taken. As of 2015, listed companies will have to reveal the number of women in executive positions in their financial reports and include their actions towards increasing this number in their documentation. A new legal framework regarding the role of women at work is about to be submitted to the Diet in March 2015. By the end of 2014, the government will review the tax and social security system, and propose changes to encourage women's participation. (Japanese government 2014A pp. 11-12)

To encourage and make it easier for foreign workers to come to Japan, the approval requirements as well as requirements for getting permanent residency have been relaxed. Focus is on attracting to manufacturing, nursing and home support. (Japanese government 2014A p. 15)

The second main area of reforms is aimed at encouraging corporate investment, perform regulatory reforms and get a higher level of business startups, while reducing the closures. By enhancing corporate governance, the Abe-administration aims to promote a sustainable growth in corporate value. There are also reforms aimed at developing new markets as well as expanding the market size of health care, medical- and pharmaceutical products and related industries.

Priority goals of reform include improving the atmosphere of entrepreneurship. In January 2014 the Industrial Competitiveness Enhancement Act was adopted, involving a reduction of business regulations and a new tax system more favorable to businesses. A “Venture Business Creation Council” was planned, to strengthen the link between new and larger more experienced companies. Initiatives already taken include a reformed and now easier application process for new businesses. Another initiative on corporate governance implemented during 2014, in February, is Japan's Stewardship Code that “defines principles

for institutional investors to fulfill their fiduciary responsibility and to promote the sustainable growth of investee companies”. The code has been widely accepted among actors. A revision of the Company Act was made in June 2014, with focus on encouraging employment of external directors. (Japanese government 2014A pp. 6-8, 31)

To support changes in the business sector, the Council on Economic and Fiscal Policy was put in charge of reviewing the “conduct of macroeconomic policies including monetary policy, the current condition and future prospects of prices in the context of the price stability target under those policies, economic and fiscal situation including employment conditions, and progress in economic structural reform”. (Ministry of Finance and Bank of Japan 2013 p. 2)

Several reforms for the management of public and quasi-public funds have been adopted, including the introduction of a new equity index (April 2014). Changes in the Government Pension Investment Fund have been made with further revisions concerning asset mix and management recommended. (Japanese government 2014A p. 7)

In order to reach a higher level of scientific and technological innovation reforms of R&D Institutes have been considered, among them is a new institution that controls the medical R&D. Furthermore, legal changes have been scheduled to improve the rate at which regenerative medicine is made available commercially. (Japanese government 2014B p. 7)

Businesses and university students will get a closer connection, through research projects planned to be introduced in 2015. Focus will also be on connecting researchers with universities and R&D Institutes, by allowing them to hold posts there. The protection of trade secrets will be strengthened. By the end of 2014 the “Robotic Revolution Initiative Council” will be created, with the purpose of constructing a plan for the next five years to promote the increased use of robots in Japanese industry. (Japanese government 2014A p. 10)

There are also several other reforms including global economic integration, healthcare industry and high quality services, aggressive agricultural policy and electricity reform. Global integration reforms are aimed at increasing foreign direct investment, trade under Free Trade Agreements and number of expansions of Japanese companies abroad, for example through participation in Trans-Pacific Partnership negotiations as well as the Japan-Australia Economic Partnership Agreement. Reforms also aim to increase international tourism, by reducing the requirements of visa issuance for several countries, as well as increasing the number of international airport landings. Also, the Abe-administration plans to make it possible for some tourists to stay up to one year without the need of a visa. (Japanese government 2014B p. 10)

A discussed initiative concerns the individual effort for preventing diseases, and whether it should be connected to a public health insurance premium system, with premiums differing with the effort. Initiatives for cooperation between medical and social welfare organizations have taken place. (Japanese government 2014A p. 18)

The government aims to promote the growth of the agriculture sector and has set a target of doubling farmers’ income. An initiative in this sector is a deregulation of rice production. The

promise is that in 2015, dairy farmers will be able to select their own vendors. International cooperation will be encouraged with organizations of exporters of specific products. (Japanese government 2014A pp. 16-17)

The first reform of the electricity system in 60 years has started, containing three steps that will all be taken before 2020. The reform is supposed to liberalize the retail electricity industry, separate the generators and distributors of electricity, remove price regulations, encourage entries from other industries into the electricity industry and by this lower the prices of electricity and stabilize the supply. (Japanese government 2014B p. 9)

Most of the reforms already implemented have been corporate sector reform, particularly corporate governance and assisting entrepreneurs. Tax reforms to promote capital investment were also undertaken in January 2014. Of the reforms aimed at expanding the work force, many remain to be implemented.

4. Analysis

In this section we will examine Abenomics' policy strategy in more detail. We begin by looking at the Abenomics policy strategy as a whole in the subsection below, before moving on to examining effect that Abenomics has had on confidence and various economic variables in the following section.

4.1. The strategy of Abenomics

Abenomics is a very complex and comprehensive policy strategy; some say it is the most complex and comprehensive economic policy strategy ever undertaken, to end the long-running economic malaise that has been afflicting the Japanese economy since the 1990s. It incorporates not only monetary and fiscal policies to affect the demand side of the economy but structural reforms to affect the supply side as well.

Overall there has gone considerable marketing into the idea of Abenomics. While supposedly not chosen by Abe himself, the name Abenomics neatly packages a very diverse set of policy measures and reforms into one unified strategy to end the Japanese economic malaise. Furthermore the name links Abenomics very closely to person of Shinzō Abe himself. When campaigning before the 2012 elections, the economic policies that Abe planned to impose became the center of his election campaign. Because it is so closely linked to his person, it may important for the success of the strategy that Abe retain the Prime Minister post for a long period.

Shinzō Abe's strong position is thus of great help here. He is not up for reelection until 2016 and his coalition government with *New Komeitō* has a majority position. The Abe-administration's position was then further strengthened in 2013 when they won a majority victory in the upper house elections, giving the coalition a majority in both houses. This was important for reform as upper house could potentially block legislation from passing through. As Abe now controls a majority in both houses, reform can pass through unhindered.

4.1.1. The first arrow

Of the three arrows of Abenomics, it is the first that is most clearly aimed at getting Japan out of its liquidity trap. With the interest rate locked at near zero, the main components of the first arrow are an extensive monetary expansion, QQME, and a newly set long-run inflation target of 2%, aimed at stopping the persistent deflation. Policymakers have also stated that the monetary expansion will continue for some time, even after deflation has started to subside. This is in line with Krugman's (1998) and others' suggestions to escape the liquidity trap by altering expectations on future inflation. If these expectations can be fostered and inflation takes root, this will lower real interest rates and thereby encourage the public to spend more.

The redefined inflation target can be seen as specifying and communicating the strategy of the central bank to the public. As the bank now targets an exact level of inflation, this should increase credibility that the target level of inflation will be the inflation level achieved. This goes along with Krugman's suggestion to escape the liquidity trap as well - he suggested a precise inflation target over a vaguer goal formulation.

The inflation target Krugman suggested in 1998 was at 4% to encourage the Japanese economy to escape the liquidity trap. As the Japanese economy has suffered from deflation for even longer, such a high target might have been too ambitious and therefore not credible, in line with Araujo's and Santos' (2007) reasoning. As a country that has had long-run deflation it should be that a too high inflation target rather than a low one may be too ambitious. By setting the target at 2 % inflation, which is in use in several countries, this may have helped its credibility and also sustainability in the long run.

To increase and maintain credibility of the central bank maintain it was important that this new strategy was followed up by action. There may have been a concern that the Japanese authorities may not be able to follow through with their inflation target with respect to the Japanese economic background. Japan has suffered from deflation for a very long time, with past failed attempts to escape the situation, which makes it a challenge to convince the public that this time is different.

There is an urgent need to conduct monetary policy in a coherent and transparent manner, and BOJ in cooperation with the government needs to convince the market that it can and will continue with QQME both until and after a higher rate of inflation has been achieved. If Japan is caught in a liquidity trap, and it means to escape it through the use of an unconventional monetary policy like QQME, it is vital that the approach is seen as credible. If they fail to do so, there is a risk that a new attempt to increase inflation might be even harder to achieve.

The strategy of QQME presented by BOJ is very extensive, which should add credibility to the effort, since they give the public reason to believe that they take the situation seriously, as well as trying a different strategy than what they have before. The strong statement by BOJ that they will continue with QQME as long as it is necessary to achieve a stable inflation at its target is thus important for the credibility of the central bank, as it stresses that they will not give up.

Part of the QQME efforts was the aim of lengthening the maturity of government bonds. This

can be a way to raise the confidence by alleviating concerns of the public debt level, as a longer and more evenly distributed maturity of the debt decreases the risk of a confidence crisis occurring as discussed by Alesina, Prati and Tabellini (1989). As such this is an example of the first arrow being used aid in the combat of the public debt level which is otherwise one of the main focuses of the second arrow.

The joint statement stresses the importance of credibility, for the government as well as the central bank, and brings up cooperation as a key feature for Japanese policy actions. It may be important that this cooperation does not come at the expense of BOJ independence, as Waller and de Haan (2004) argued that credibility is most easily attained when the central bank is independent. On the other hand, it may also be important that BOJ do not reject cooperation with the government in order to demonstrate its independence, as they have done before.

4.1.2. The second arrow

The second arrow concerns the use of flexible fiscal policy under Abenomics. This includes stimulating the economy through fiscal expansion, while at the same time avoiding aggravating the public debt level. In order to do this, MOF will have to lower the debt level, while issuing fiscal stimulus packages to help maintain stability and increasing growth in the economy. The flexibility of policy has been demonstrated by the implementation of both expansionary and contractionary fiscal policy. While the first arrow had the unified goals of boosting confidence and stimulating demand as well as facilitating Japan's escape from the liquidity trap, the goals of the second arrow have been slightly more diverse.

Initially fiscal policy was employed in an expansionary manner with several large stimulus packages being issued. This may have served two purposes: first, the effects of fiscal stimulus on confidence are well documented, and as such the fiscal expansion was part of the initial strategy of boosting confidence, together with the expansionary monetary measures of the first arrow.

Secondly, fiscal expansion has, since the days of Keynes, been the traditional answer to getting out of a liquidity trap, by jolting the economy out of the trap to a position where monetary policy is again efficient and, as such, the fiscal expansion under Abenomics was likely meant to support the QQME performed by BOJ. Many have proposed the need to employ fiscal expansion along with altering future inflation expectations to escape from a liquidity trap.

In April 2014 the Abe-administration implemented the sale tax hike that had been announced in October 2013. This timing difference is very deliberate, and the aim seems to have been to see an increase in consumer spending on durable goods, before the actual implementation of the tax hike. As consumers were aware that the sales tax was to increase, this should lead to an increase in consumer durables before the tax hike is implemented. Such an increase in consumer spending would then help the economy along while other economic fundamentals may have been slowing.

A potential problem with introducing this tax hike is that it may produce effects that run counter to the goal of boosting confidence. According to the literature on the effects of fiscal

policy on confidence, austerity measures like the tax hike should have adverse effects on both consumer and business confidence. As such, there is a risk that the tax hike will undermine the efforts to boost confidence. The reason for the tax hike is clearly to alleviate concerns that may otherwise mount on public debt.

As noted by Syed, Kang and Tokuoka (2009) among others, during the Lost Decade there have been several attempts to address the mounting public debt through austerity measures. These attempts, combined with sudden and rapid deteriorations of the external economic environment would instead come to push the country into renewed periods of recession. Barring any such deterioration occurring in the near future there is still a risk that a tax hike will depress confidence and lower demand as a consequence.

A possible opposite to this scenario depends on whether the fiscal consolidation can achieve expansionary effects. Sørensen and Whitta-Jacobsen (2010) argued that this may happen if the public finances are viewed to have run amok. Japan currently has the world's largest debt ratio of advanced economies, and as such the sheer size of public debt concerning. However it should be noted that the Japanese government, due to low interest rates, has avoided feeling the full weight of the total debt.

Giavazzi and Pagano (1990) argued that economic expansion may result from austerity if, cuts in government spending convinces the public that the permanent share of government spending will decrease as this means lower taxes in the future. For this to take place it would mean that the Japanese public would have to be convinced that the sales tax hike will result in higher permanent income. Given the size of the Japanese public debt it seems reasonable to assume that austerity would have to continue for considerable amounts of time into the future. As such, it is doubtful that the Japanese public would be convinced that taxes in the foreseeable future will be lowered, as a result.

It is important to note while the sales tax hike itself is an austerity measure, it is a long-term goal, as the government did not expect to have reversed their primary deficit into a surplus until 2020. Further fiscal stimulus was released to counteract the expected negative impact of the hike, and it occurred amidst discussions of a future corporate tax cut in 2015. This tax cut has been announced well in advance, with Abe first mentioning it in a speech as early as in January 2014. As such fiscal policy is, and is planned to continue to be, expansionary for some time.

Intentions of lowering the Japanese corporate tax rate, at the moment one of the highest in the world at more than 35%, have been mentioned several times since January 2014. In a speech in June, Abe more specifically stated that the corporate tax will be reduced successively by 20-45% over several years starting in 2015. A corporate tax cut will help boost business confidence by directly impacting future profits of firms. Improving the business climate in this way may also be an important step to encourage businesses to raise salaries of employees, an integral component in raising the rate of inflation.

4.1.3. The third arrow

As the arrow which is comprised of structural reform, the third arrow is the one that is meant facilitate and sustain recovery in the long run. The effects of structural reforms are usually slow-moving, so most of these effects won't be apparent for some time. The possible exception to this is if announcements or implementations of reforms manage to affect expectations and confidence.

A problem with the first version of the Revitalization strategy put out in 2013 was that it lacked a clear time table for many of the proposed reforms, and many lacked a concrete plan of action. As such, this may lead to difficulty for the reforms to boost confidence by letting economic actors adjust their expectations of the future. Immediate effects that would boost confidence may then be lacking or entirely absent. While the revised version from 2014 of the plan improved upon these faults, the effects may not yet have become apparent.

The reforms aimed at increasing the workforce by employing women, elderly, young and foreign workers are meant to facilitate sustained growth. If successful, an increase in the workforce should see increases in GDP in the long run. However, if these reforms also manage to change businesses' expectations on future income, we might see an increase in investments today as a result. Households too, whose members see improved employment prospects and thereby increase their expectations of their permanent income, should also start to increase consumption today.

A notable amount of the reforms of the third arrow have been aimed towards improving the competitiveness of the corporate sector. The proposed successive lowering of the corporate tax of the second arrow, along with deregulation for businesses, are the most apparent moves towards this goal. This aligns with the goal of boosting business confidence. If the ease of doing business increases due to deregulation, this should translate into higher profitability. Deregulation should also improve the survival- and startup rate of firms, all of which again should lead to increased investment. Another aspect of the improved business environment may encourage firms to raise salaries of employees, which is an important component to encouraging a rise in the rate of inflation.

The assisting of R&D effort of firms is also an endeavor which is aimed at boosting the competitiveness of Japanese firms. Research breeds innovation and is thereby the engine behind growth, and may also be the most important way for Japanese firms to get a competitive edge. This may be especially important for a country which has been a world leader on many technological fronts, but whose R&D efforts may gradually have become neglected due to decades of recessions.

4.1.4. The timing, interaction and combination of the arrows

The Abe-administration wasted no time in beginning to implement Abenomics, with implementations and announcements of the first and second arrows being issued in early January 2013 and thereafter. The quick implementation of extensive expansionary monetary and fiscal policy should see an early and pronounced effect on confidence.

There seems to be several stages of Abenomics. The first stage, or the short run, is focused on raising consumer and business confidence through expansionary monetary and fiscal policy. This stage began in early 2013 and lasted for most of the year. QQME was introduced in January 2013 and has been ongoing since. The expansionary monetary policy was supplemented by expansionary fiscal policy through large stimulus packages issued throughout 2013.

In this way both of the first and second arrows were used in unison to boost confidence during 2013 and to try and jolt the economy out of the liquidity trap. Hoping that this would be achieved, the focus of the second arrow would then be gradually shifted over to combat the public debt ratio in the future, the second stage of Abenomics. This is a very long-term goal as the deadline is achieving a primary surplus by 2020. Herein lays a fundamental challenge in building credibility for Abenomics, as the Abe-administration will have to convince the markets that it will gradually shift towards fiscal austerity in the long run, while the focus of fiscal policy of the moment is expansionary.

It is important to keep in mind that while the focus of fiscal policy is to gradually shift towards austerity in the future, it will remain on the expansionary side until then, with the second stimulus package specifically designed to combat a slowdown that may result from the first tax hike. Also, the focus of monetary policy will remain expansionary, with QQME being expected to be continued for some time into the foreseeable future. This means that on its own, the sales tax hike does not on its own constitute austerity. Rather, its implementation now, is part of a medium-run plan to ease concerns on the public debt. Without any effort towards this end, extensive fiscal expansion may aggravate these concerns and jeopardize the public's faith in the policy.

It has been stated by the Abe-administration that to ensure that the effects of the first two arrows endure, the reforms of the third arrow must be implemented to foster growth so as to bring about a permanent change in the economy. If austerity is to eventually be the focus of fiscal policy and the expansionary monetary policy will subside sometime after price stability is achieved at 2% inflation, boosting confidence through structural reform may be necessary to maintain confidence. Otherwise there will be a risk that slowly moving inflation expectations results in a situation where the government has to issue additional stimulus packages, which eventually will threaten financial stability. While fiscal austerity damages confidence in the short run it may necessary to ensure long-term confidence on public finances.

Given Japan's relatively low unemployment rate, there is comparatively little to be gained from decreasing unemployment. A large share of the female population is still outside the workforce, meaning there is a large untapped labor supply not in use. By increasing the workforce GDP in the long run will improve. This will in and of itself improve the public debt ratio, as the economy grows so does its ability to repay debt, but a larger workforce will also translate into higher tax revenues. This will further improve the public debt ratio and also to lessen the individual tax burden held by the public. As such increasing the workforce will be

an important tool in combating public debt, even without raising taxes, and should be very important in maintaining confidence.

4.2. How has Abenomics performed so far

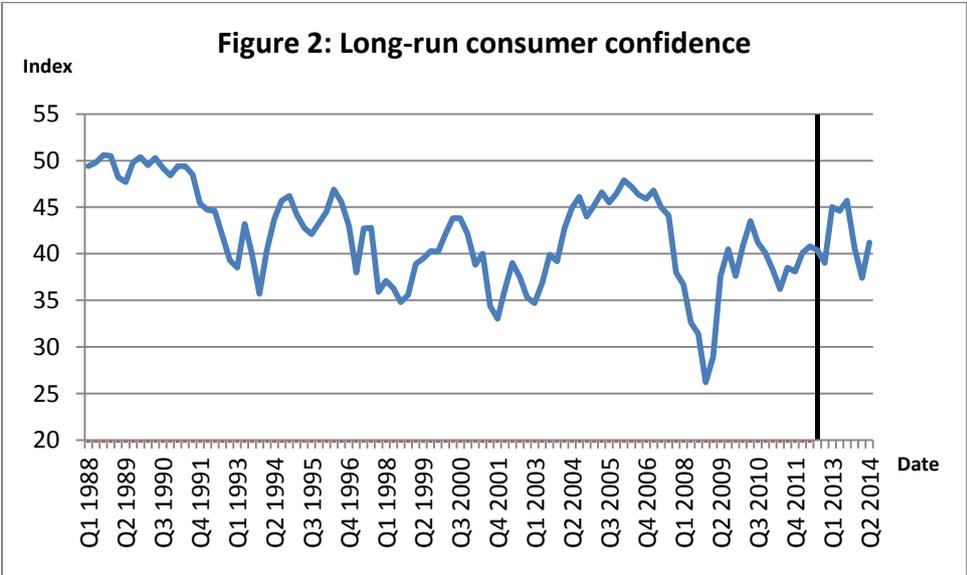
In this section we supplement the analysis above by examining the development of our various measures of confidence as well as some outcome data to create an overview of how Abenomics has succeeded so far.

We mainly examine two confidence indices: the *Consumer Confidence Survey*, a monthly survey conducted by the Economic and Social Research Institute (ESRI) and The *Short-Term Economic Survey of Enterprises in Japan - the Tankan Survey*, produced quarterly by the BOJ, as well as related outcome data.

4.2.1. Consumer side

We start by looking at the development of consumer confidence over a longer period to determine whether any of the changes in confidence due to Abenomics may be viewed as exceptional.

The consumer confidence index follows the optimism that Japanese consumers have about their economic situation. In the survey, respondents evaluate on a one to five scale their beliefs of the prospects for five subjects over the next half year. Points are assigned for each of four categories (overall livelihood, income growth, employment, willingness to buy durable goods), given the expected effects on consumption, and the weighted average of the points of the results (component ratio) is then calculated.



Source: Economic and Social Research Institute (ESRI). The vertical line marks the inauguration of Shinzō Abe.

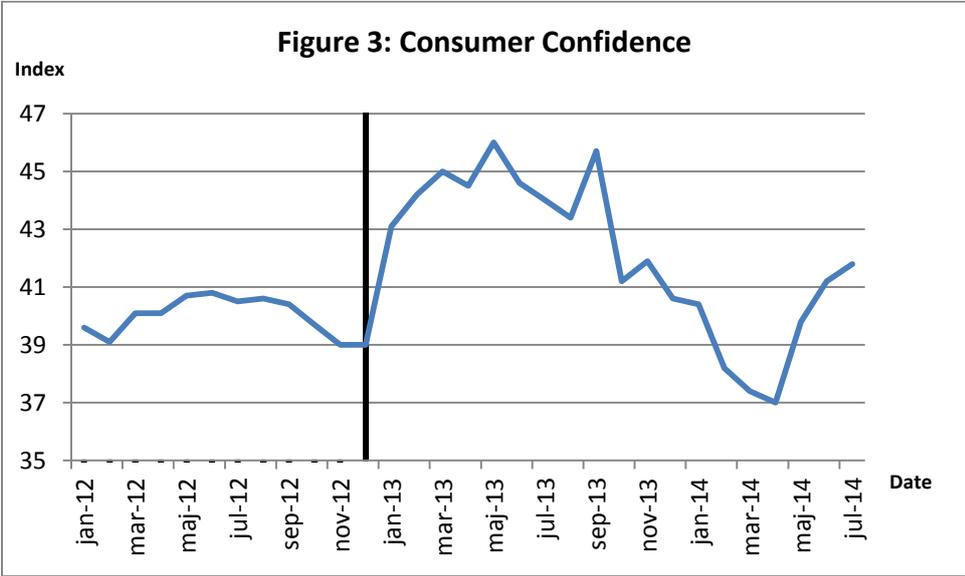
Figure 2 above shows the development of consumer confidence since 1988 using quarterly data. As we can see, consumer confidence does rise considerably during the beginning of 2013, following Abe’s inauguration. The increase seems to taper off however already in late 2013, early 2014. The levels of confidence achieved are not unprecedented either, as similar and even higher levels were enjoyed 2003 and 2006, just half a decade earlier.

Consumer confidence was at its highest just before and during the start of the 1990s, which should hardly be surprising if one takes into consideration that at this point the Japanese economy had been performing very well for decades. During the Lost Decade, from the 1990s until the beginning of the 2000s, the confidence index has continuously shifted below the 40 mark in clearly distinguishable periods that closely matches the recessions (the 1991-1994 recession, the Asian Crisis 1997 and the IT bubble collapse in 2000) pointed out by Syed, Kang and Tokuoka (2009).

The several-year-long period of strong growth and positive economic outlook, which prompted Yoshikawa (2007) to declare that the Lost Decade was over, was also matched by a high and stable level of consumer confidence. This period ended with the sharpest dip in the history of the series, brought on by the outbreak of the global financial crisis. The extreme dip is temporary and as the initial crisis concludes, the index rebounds somewhat and this is the setting where Abenomics enters the stage.

Following Shinzō Abe’s inauguration as Prime Minister in 2012, confidence rose considerably in early 2013 and stayed there for most of the year. However confidence has been shaken notably beginning from 2014. As such the levels of confidence attained under Abenomics cannot be said to be exceptional in their level or longevity, but may be remarkable in that they appear to be boosts created entirely from economic policy.

Looking at figure 3, which shows the recent developments of consumer confidence in more detail using monthly data, we can see the effects of Abenomics on consumers’ confidence more clearly.



Source: Economic and Social Research Institute (ESRI). The vertical line marks the inauguration of Shinzō Abe.

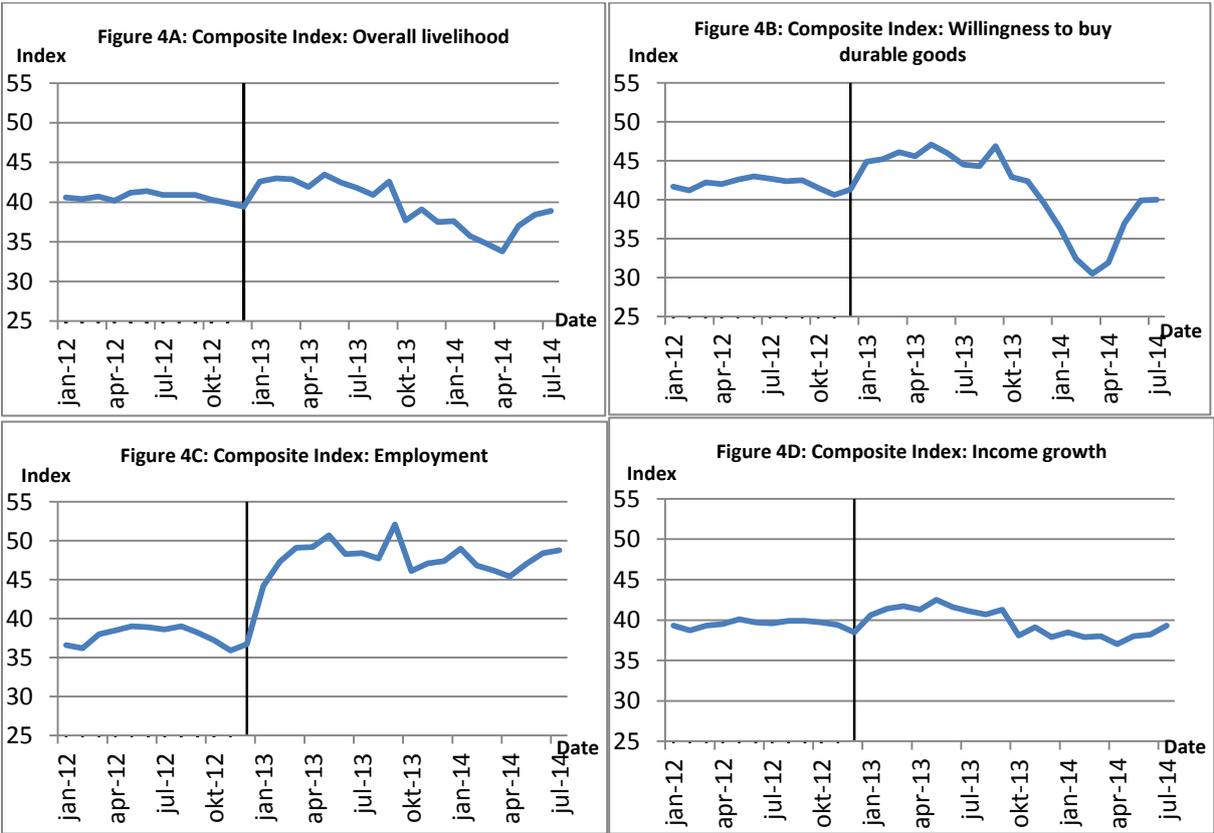
Following a modest dip in confidence during the fall of 2012, most likely an effect of uncertainty over who will lead the next government as elections were drawing close, we see a sharp increase in consumer confidence following Abe’s victory and subsequent inauguration in December. This heightened level of confidence persists for the better part of the year until

October in 2013 with peaks in May and September, as the focus of Abenomics at this stage is boosting confidence through expansionary monetary and fiscal policy.

The relatively steep fall in October coincides with the Abe-administration’s announcement that they would come to raise the sales tax from 5 to 8 percent in April 2014. Following this, confidence steadily decreases from November 2013 until the implementation in April reaching levels lower than even before Abe was elected. Following the implementation confidence begins to rebound confidently, reaching a level similar to that of October before the series ends.

The drop in confidence following the tax hike announcement was considerable, as it occurred in the midst of otherwise expansionary policy, both fiscal and monetary. The effect of tax shocks seems greater than spending shocks on consumer confidence. The normalizing of confidence after the implementation of the tax hike is important and may have a bearing on if and when the further sales tax hike to 10% will be implemented.

Looking at the individual composite indices (Figures 4A through 4D) that are used to create the consumer confidence index, we see the development of respondents’ beliefs on future overall livelihood, income growth, employment prospects and willingness to buy durable goods.



Source: Economic and Social Research Institute (ESRI). The vertical lines mark the inauguration of Shinzō Abe.

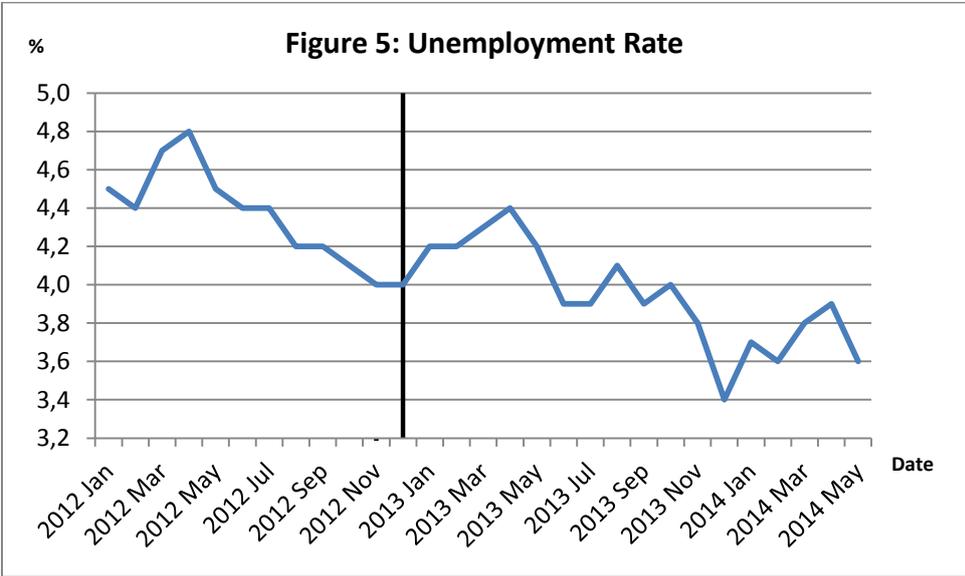
All confidence indices share similar initial positions, situated near the 40 mark, with employment perception being slightly lower. All indices react positively to Abe’s

inauguration, though the effects differ in magnitude between the different indices with respondents' beliefs on employment followed by willingness to buy durable goods both showing the greatest increase. Belief in employment also remains stable when many other confidence indices fall. It would appear that Abenomics has managed to instill a robust optimism about the likelihood of finding a job among the population.

We see that though the different confidence indices reacted differently, most responded in a similar manner to the announcement and implementation of the sale tax increase. All indices take a noticeable dip following the announcement of the tax hike. Following the announcement, willingness to buy durable goods in particular makes a pronounced decline, followed by the perception of overall livelihood. Overall, the indices for employment and income growth react little to both the announcement and implementation of sale tax hike.

Following the tax hike, all confidence indices appear to recover, with again willingness to buy goods displaying the largest movement followed by perception of overall livelihood and employment having remained high throughout.

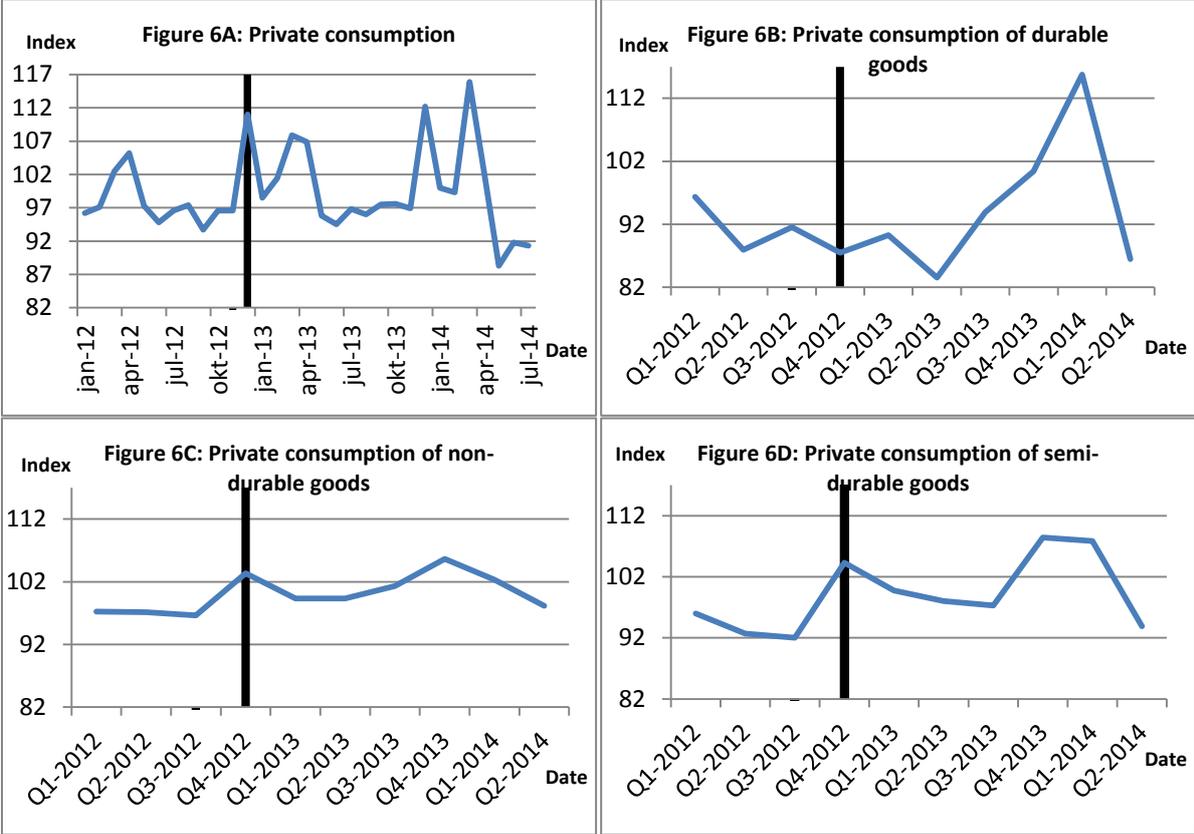
Taken together, it would appear that the expectations on the likelihood of finding a job and the willingness to buy durable goods were the main drivers of the change in consumer confidence, with likelihood of finding a job accounting for most of the increase following Abe's inauguration and willingness to buy durable goods causing the fall following the announcement of the tax hike. We proceed by looking at actual figures for consumption and employment, beginning with unemployment shown in figure 5 below:



Source: International Financial Statistics (IFS). The vertical line marks the inauguration of Shinzō Abe.

Following a small rise during the first quarter of 2013, unemployment would fall throughout most of the year, reaching its lowest point in December. Unemployment has slightly risen and fallen since, but remaining at level below of that when Abe took office. On the whole, unemployment has fallen since Abe took office, matching somewhat the robust increase in optimism on the likelihood of finding a new job.

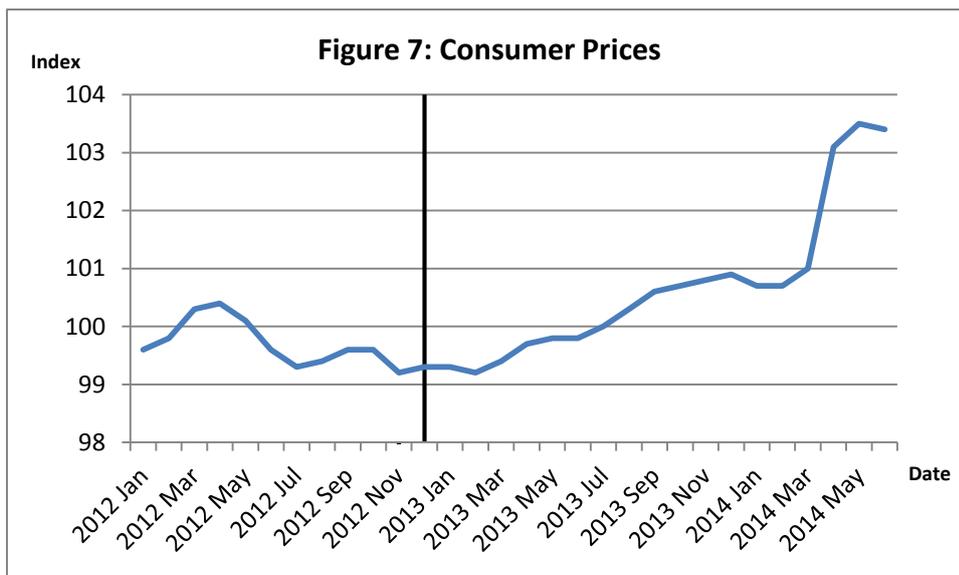
Figures 6A through 6D below show total consumption as well as total consumption divided into durable, non-durable as well as semi-durable goods. We can see that preceding the tax hike there was indeed an increase in consumption, particularly in the case of durable goods. Thus, the consumption of durable goods did not entirely match the drop in willingness to buy durables from the survey.



Source: Statistics Bureau of Japan, OECD iLibrary. The vertical lines mark the inauguration of Shinzō Abe.

We can observe several peaks in consumption since the start of Abenomics. The large twin peaks at the end of 2013 and beginning of 2014 seem to be a result of primarily a large increase in in the consumption of primarily durable goods. We see that there is a large peak in the consumption of durable goods as well as a not insignificant increase in the consumption of semi-durable goods and a noticeable increase of non-durable goods during this time. This coincides with the announcement and later implementation of the consumption tax hike.

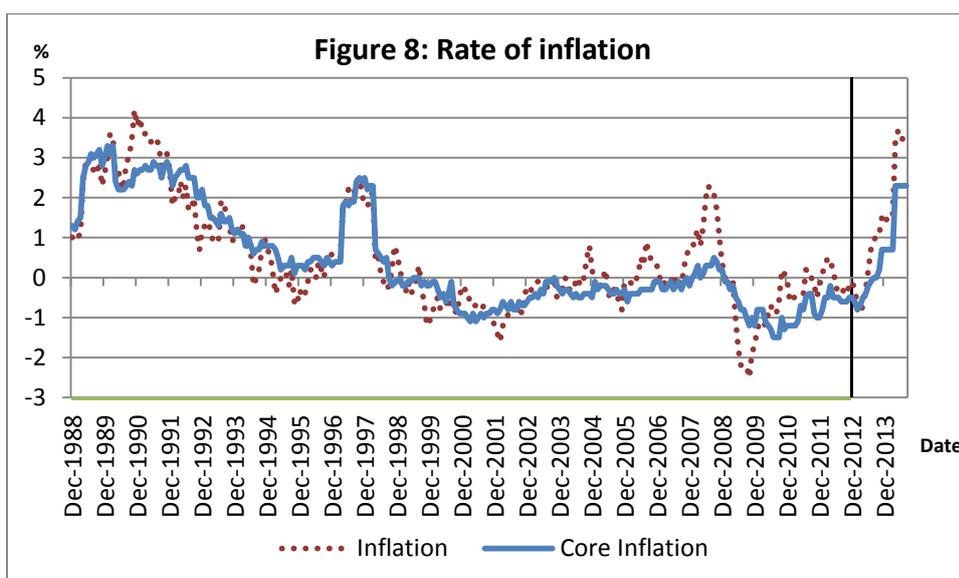
The increased consumption will have helped the economy along by raising aggregate demand, thereby boosting output. As such, the strategy of announcing the hike well in advance of its implementation seems to have paid off well. If the tax had simply been implemented without a prior announcement, it is unlikely that there would have been such a temporary boost in consumption. These increases in consumption occurred despite a steady increase in consumer prices, as can be seen in figure 7 below shows the



Source: International Financial Statistics (IFS). The vertical line marks the inauguration of Shinzō Abe.

We can see that there has been fairly stable increase in consumer prices since early 2013. This should be the effects of the QQME-strategy that was employed by BOJ under the first arrow. As the monetary base is extended by BOJ purchasing government bonds the market is flooded with more money which begins to push up prices. The large increase in early 2014, of course, corresponds to the implementation of the consumption tax hike.

This rise in consumer prices is a necessary step to escape the liquidity trap. A rise in consumer prices should indicate that people’s inflation expectations have shifted upwards. Unfortunately, we were unable to obtain reliable survey data reflecting the Japanese people’s inflation expectations. Most surveys we looked at showed respondents having high expectations on inflation, despite having lived through decades of deflation. As such we proceed straight on to actual rate of inflation in figure 8, below.

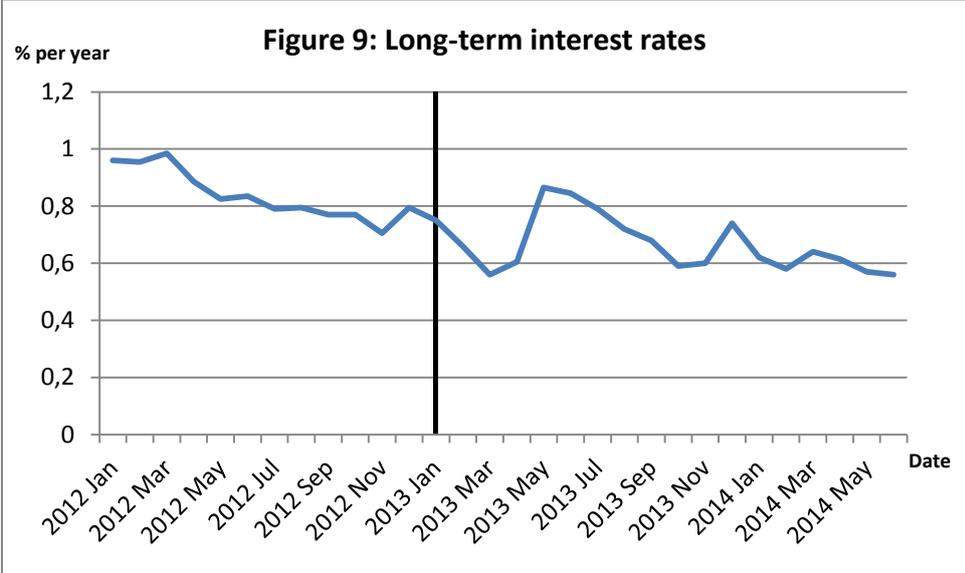


Source: OECD Statistics. The vertical line marks the inauguration of Shinzō Abe.

Figure 8 shows the rate of inflation, as well as inflation that has been adjusted to not include temporary effects (core inflation), since the start of the Lost Decade. We can see that, once adjusted for temporary effects, the rate of inflation in Japan has indeed been negative for almost two decades. Since the introduction of Abenomics however, deflation has been reversed to a rate of inflation of just over 2%, very close to BOJ’s price stability target.

If inflation increases this means that the real interest rate is decreasing. As prices have indeed been rising, this should be an indication that BOJ has appeared credible when they said that they would continue with QQME for some time. Krugman argued that unless an increase in the money supply is perceived by the public to be permanent, it cannot affect the economy. As the real interest rate decreases, this will dissuade people from saving and instead spend it on consumption.

Looking at the interest rate of 10 year government bonds, shown in Figure 9, we can see that it has on the whole been decreasing since the implementation of Abenomics. This is indicative that the real interest rate is indeed decreasing.

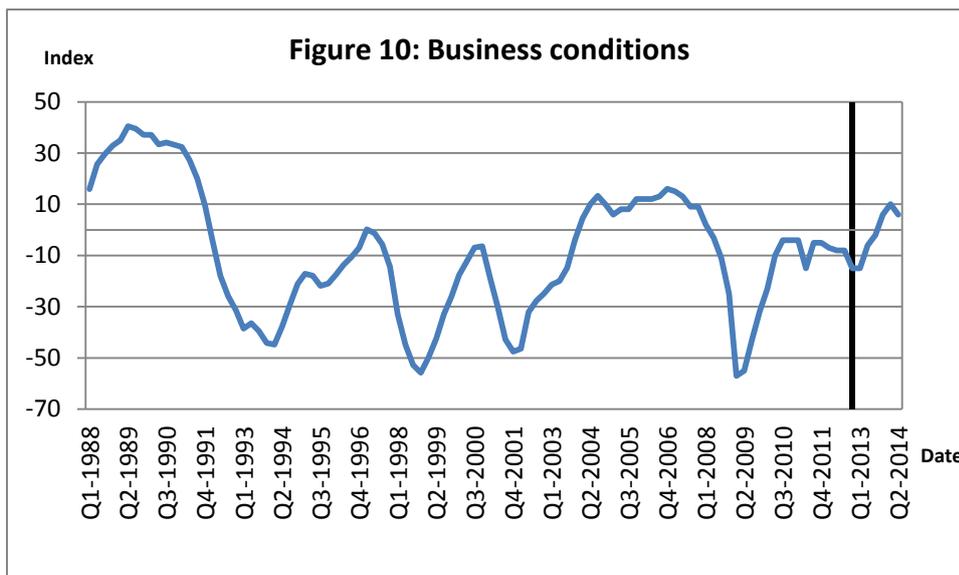


Source: International Financial Statistics (IFS). The vertical line marks the inauguration of Shinzō Abe.

4.2.2. Business side

The *Tankan Survey* evaluates business conditions for large, medium-sized and small enterprises, for manufacturing as well as non-manufacturing enterprises. The respondents chose one of the alternatives: “favorable”, “not so favorable” or “unfavorable”. The percentage share of “favorable” minus the share who answered “unfavorable” creates a diffusion index.

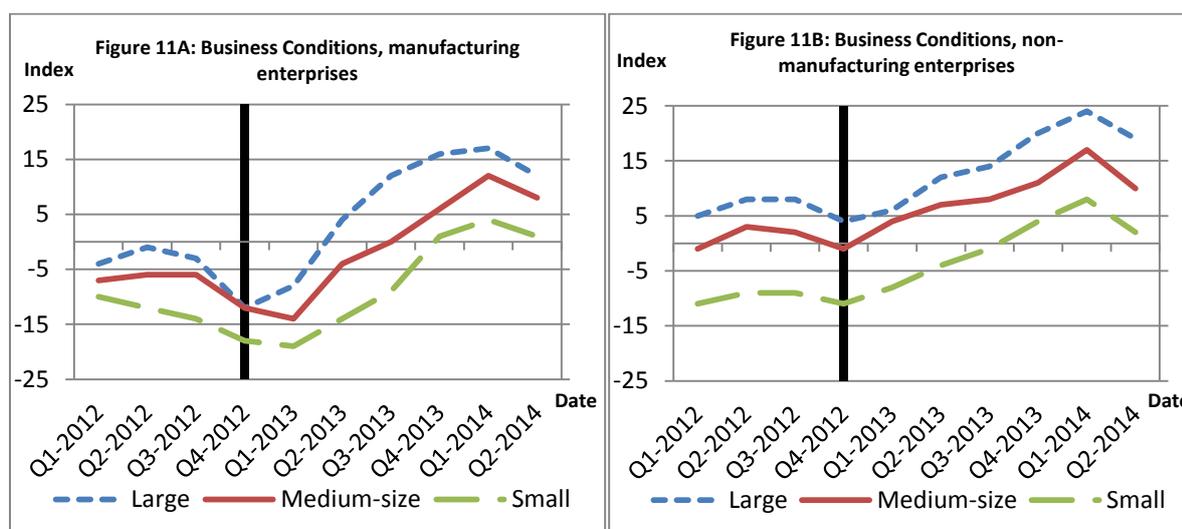
Figure 10 shows the development of business confidence since 1988. Examining it, we can see that the evolution of business confidence has been very similar to that of consumer confidence since the 1990’s.



Source: Bank of Japan. The vertical line marks the inauguration of Shinzō Abe.

The development of long-run business confidence shows that confidence among businesses too, has followed the ups and downs of recessions since the Lost Decade. There is a noticeable and steady increase in business confidence after Abenomics. The levels achieved are not unprecedented either, with confidence at similar or even higher levels only a few years earlier.

Figures 11A and 11B below show the recent development of business confidence for manufacturing and non-manufacturing enterprises in more detail, by firm size. Examining them we see that the positive increase due to Abenomics seems to be shared by businesses of all sizes in both manufacturing and non-manufacturing sectors. As with consumer confidence, business confidence also decreases as the parliamentary election draws near. Following the installment of the Abe-administration, businesses of all sizes in both manufacturing- and non-manufacturing sectors experience noticeable rising trend in business confidence.



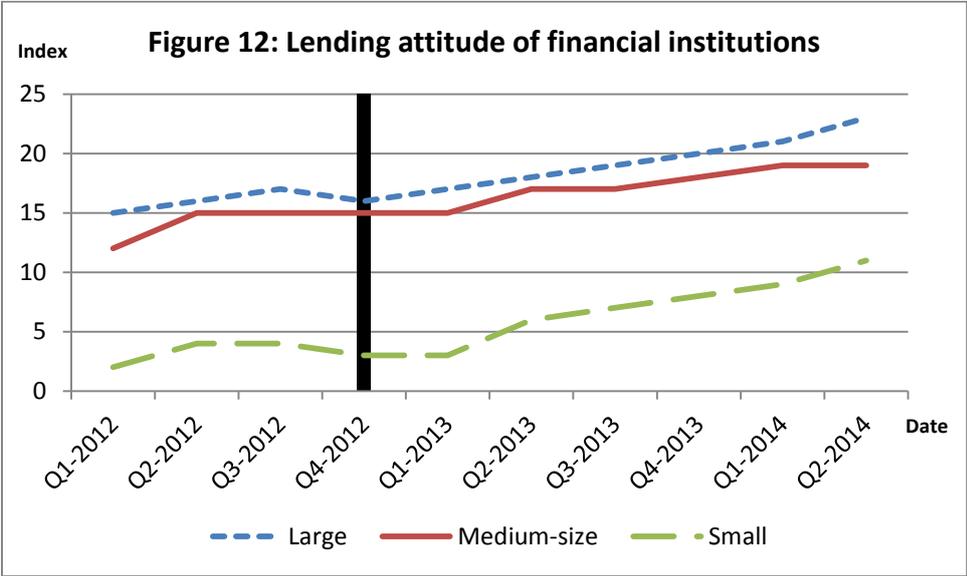
Source: Bank of Japan. The vertical lines mark the inauguration of Shinzō Abe.

While initial positions for manufacturing enterprises of all sizes are comparatively worse off than those of their non-manufacturing counterparts, manufacturing enterprises experience the stronger boost in their respective confidence indices in response to the implementation of Abenomics. In the case of small and medium-sized enterprises, the positive effects seem to be delayed until the second quarter, while large enterprises enjoy an immediate boost. Though immediate for all sizes, the effect for non-manufacturing enterprises is comparatively slower, perhaps owing to their initially more optimistic positions.

The increase in confidence continues uninterrupted for most of 2013 and beyond, for all businesses until the second quarter of 2014, when there is a slight decrease for all indices. This we believe should be the effects of the implementation of the sales tax hike in April. While it is too early to determine whether this decrease will continue in following quarters or not, we can say that business confidence for now remains at a higher level than before Abenomics, for enterprises of all sizes in both sectors. The positive effects of Abenomics on business confidence thus appear to have been especially pronounced.

In another part of the *Tankan Survey*, the responding enterprises were asked to give a judgment of financial institutions' attitude towards lending at the time of the survey. The alternatives were: “Accommodative” (1), “not so severe” (2) and “severe” (3). The diffusion index of alternative 1 minus alternative 3 is created.

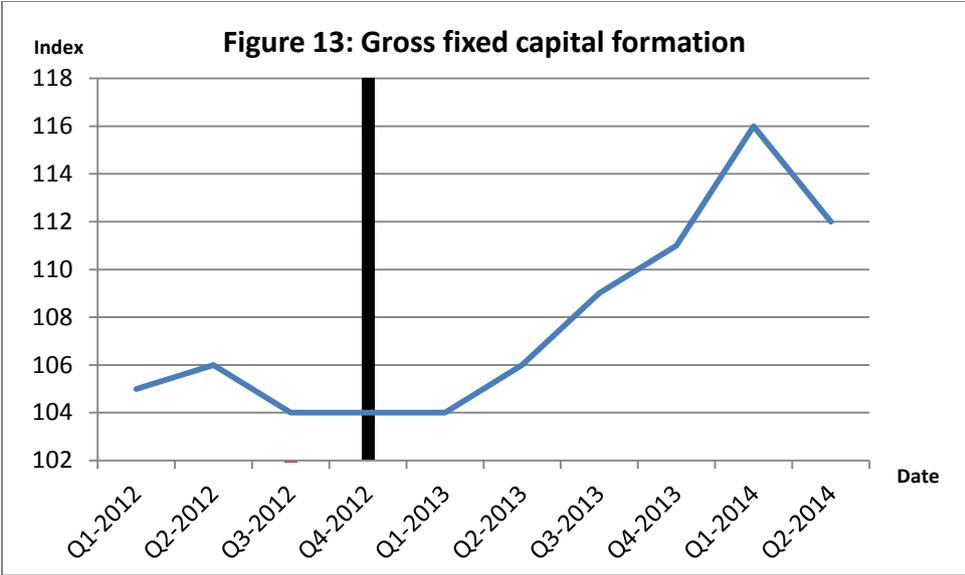
Looking at the development of businesses’ perceptions of lending attitude among financial institutions shown in figure 12, we also see a positive development following the implementation of Abenomics.



Source: Bank of Japan. The vertical line marks the inauguration of Shinzō Abe.

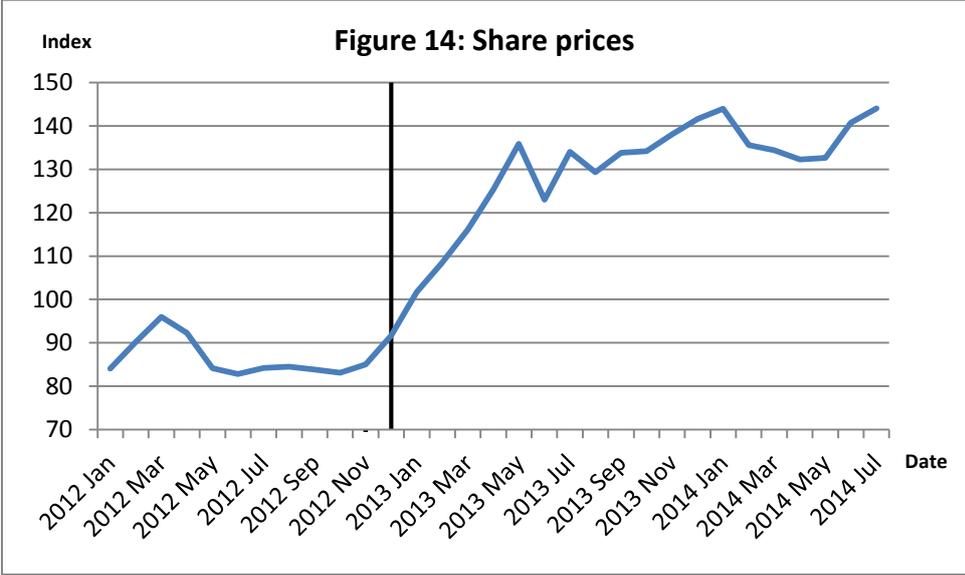
The trend is noticeably increasing for enterprises of all sizes, though large enterprises are the first to notice. As with business confidence, we see that the level of the outlook is remarkably higher for large- and medium-sized enterprises than for smaller.

The increased optimism among businesses that have been fostered by Abenomics should lead to a higher willingness to invest among firms. Improved access to loans should further assist this. Looking at the rate of investment, shown in figure 13, we can indeed see that increase in business confidence has been matched by a considerable increase in investment:



Source: OECD Statistics. The vertical line marks the inauguration of Shinzō Abe.

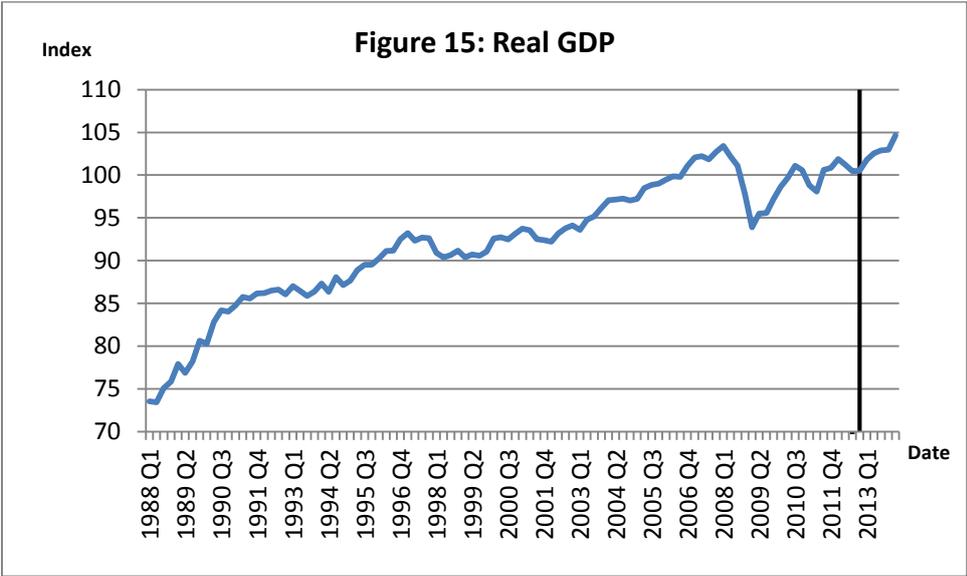
Following the second quarter of 2013, there is a very strong increase in the rate of investment which persists for the rest of the year, peaking off during the first quarter of 2014, and then decreasing slightly. These movements closely match the development of business confidence which we examined earlier. The very large increase in investments may be one of the more noteworthy successes of Abenomics. As investments increase, this increases aggregate demand in the economy promoting a rise in GDP. Firm’s increase their rate of investments because of increase optimism on future profits. The improvement of the business climate is also visible in the evolution of the stock market, shown in figure 14.



Source: International Financial Statistics (IFS). The vertical line marks the inauguration of Shinzō Abe.

As we can see, the stock market began a steady rise even a couple of months before Abe was installed as Prime Minister. The rise continued uninterrupted well into 2013, where the development slowed down considerably, but remained high. It has consistently remained at a considerably higher level since the implementation of Abenomics.

The increase in stock price should reflect an increase in the expected future profits of Japanese firms. This in turn depends on future GDP. Examining the development of real GDP, we see that it too increased in response to policies of Abenomics. As both consumption and investment increased as result of these policies, this raised aggregate demand translating into increased in the growth of GDP. Figure 15 shows the development of real GDP.

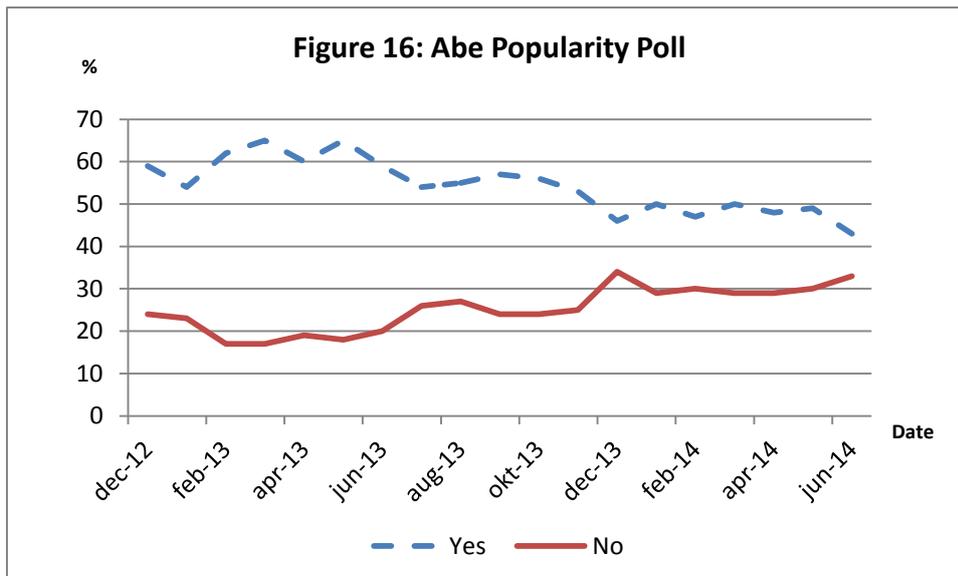


Source: International Financial Statistics (IFS). The vertical line marks the inauguration of Shinzō Abe.

An increase in the growth rate GDP will mean that an increase in the growth of the ability to pay back public government debt. It may be important to keep in mind that, as consumption, and to a lesser degree investment, has fallen since the implementation of the sales tax hike, it will mean that the growth of GDP will slow down. This may then affect the future development of the stock market as well.

4.2.3. Other measures of confidence

We now move on to another measure of confidence, the popularity of the prime minister himself, and by extension his administration, as this should to some degree reflect the confidence that the population holds for him and his economic policy in general. For this purpose we look at the monthly *Regular Public Opinion Poll* conducted by *Asahi Shimbun*, one of the five major daily newspapers in Japan. In the poll, the following question is asked: “Do you support the Abe cabinet?” Figure 16 below plots the respondents’ responses.



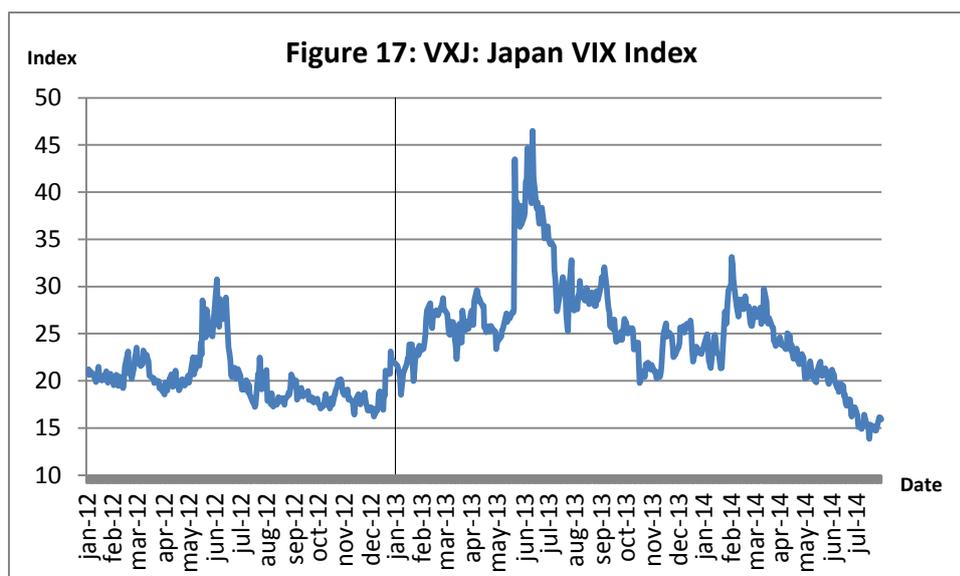
Source: Asahi Shimbun

The initial decline among supporters as well as detractors of Shinzō Abe in January likely reflects uncertainty over Abenomics before the government has had time to present any concrete policy proposals. Following the gradual unveiling of Abenomics, as its policies begin to take effect the popularity of Abe increased in the early half of 2013. This, we believe, is likely tied entirely to the performance of Abenomics, as Abe at this point had not driven through any other agendas.

Following the publishing of outline of the third arrow, the Japan Revitalization Strategy, in May and early June 2013, Abe’s popularity waned visibly despite him winning the upper house election, reflecting the market’s lukewarm response to the still vague strategy proposition. The clear dip in his popularity around December 2013 is most likely best explained by his decision to push through a controversial and unpopular bill on state secret, rather than economic performance. The same is likely true of the dip in June 2014, corresponding to a controversial move to amend the pacifist constitution, though the sales tax increase likely also plays a part.

It would thus appear that most the drops in Abe’s popularity can be tied to non-economic politics rather than the economic performance of Abenomics. As such, while there may be wide-spread support for Abenomics we may also conclude it is perhaps also important that Abe does not jeopardize his popularity too much by dabbling in controversial non-economic agendas. It is next to impossible to say how the situation would progress if Abe were to be displaced.

Finally, we examine if there have been any uncertainty effects since the start of Abenomics. The *VXJ* is a market volatility index (VIX index) for Japan measures the implied volatility of S&P 500 Index options. The index is composed by the Center for the study of Finance and Insurance (CSFI). A VIX index represents one measure of the market's expectation of stock market volatility over the coming month. As such it measures perceived uncertainty in the market. Figure 17 shows the development of the *VXJ* index since 2012.



Source: Center for the study of Finance and Insurance (CFSI). The vertical line marks the inauguration of Shinzō Abe.

Observing the VIX index for Japan we can see that uncertainty has risen marginally since Abe’s inauguration. There is a distinct peak in uncertainty during the second quarter of 2013. The general rise in uncertainty is likely an effect of Abenomics. Since the policy strategy includes many different types of policies that bring upheavals and changes in the economic situation for most within the country, it is to be expected that this be accompanied by a general increase of uncertainty about the future.

The particular peak in uncertainty during the second quarter of 2013 may coincide with the lukewarm response to the publishing of the first Japan Revitalization Strategy. The peak in uncertainty was also matched by a decrease in consumption of consumer durables (See figure 6) in accordance with Romer’s (1998) uncertainty hypothesis, but this movement is then completely dwarfed by the subsequent increase in consumption following the announcement of the sales tax hike. Overall, we cannot pinpoint any specific uncertainty effect during this time period beyond this.

4.2.4. Summary

Abenomics had an initially very strong effect on confidence. Both consumer and business confidence rose steadily as Abenomics was introduced and remained high for most of 2013. This is clearly, mainly the effects of the first and second arrows at work.

During 2014 a sales tax hike seems to have been the main cause for a drop in consumer confidence. Consumer confidence fell noticeably as the hike was announced in late 2013 and continued to drop steadily until the implementation in April of 2014, after which it has rebounded slightly. While it also affected business confidence, the effects have been far less pronounced and only appeared after the actual implementation of the hike.

As the adverse effects of the tax hike on consumer confidence were considerable, there is a risk that it may come to undermine the efforts to raise confidence that have been made through the other measures of Abenomics. Consumer confidence was as of July 2014 not considerably higher than before Abe took office. During the Lost Decade several attempts to fix the public finances were undertaken, including a sales tax hike, with the result that these attempts were partly responsible for pushing the country into renewed recession.

Whether consumer confidence continues to rebound, or remains at its current position from this point on, may come to be a deciding factor on whether or not the proposed future further increase of the tax from 8% to 10% in October 2015 should take place. If consumer confidence doesn't improve before then, a further increase may cause it to deteriorate to further lower levels. If this should lead to lowered consumption due to increased precautionary savings it may lead to the risk of Abenomics losing momentum.

On the reverse side however, not going through with the second hike might cause the credibility of Abenomics to be shaken. While, the negative effects on confidence of the tax hike itself will then be avoided - if policy makers are seen as being unable to go through with their planned policy changes, it may harm the credibility of future policies. It should be noted that the government made clear they would evaluate the economy continuously and left the door open to altering or even canceling the planned hike. Depending on the development of confidence it may be prudent of exercising either of these options.

It should also be noted that most of the increase in consumption, due to the increase in consumption of durable consumer goods as a result of the prior announcement of the hike, is likely not a repeatable, or at the very least, not likely to yield the same increase again for some time. As durable goods will typically last 5 to 10 years, a lot of consumers will now have stocked up on durable goods and such aren't as likely purchase durable goods for a while. A prior announcement of a further tax hike is thus not likely to yield the same increase in consumption again this soon.

To maintain the momentum of Abenomics, amid the gradually slowing fiscal expansion and a possible further sales tax hike, it may be important to hurry along many of the proposed structural reforms of the third arrow. If the workforce is bolstered, due to higher participation of women and elderly this will cause an increase in GDP in the long run. It will also help facilitate improvement in the public debt ratio as larger work force means increased tax revenue, as well as ease of the tax burden on each individual member of the workforce.

4. Conclusion

Abenomics seems to have had strong effects on both consumer as well as business confidence. Both types of confidence rose sharply in response to the policies of the first and second arrows. The rises in confidence were accompanied by sizeable increases of both consumption as well as investment. These increases were considerable, but did not bring confidence up beyond levels enjoyed previously, most recently during the temporary economic boom between 2004 and 2007.

However, because of the decrease in consumer confidence following the sales tax hike there is a need to monitor the future development of consumer confidence before a decision is made on the proposed further tax hike in 2015. If consumer confidence doesn't continue to rebound and improve a further tax hike might bring confidence to a new low. It may also be necessary implement further efforts aimed at boosting consumer confidence.

Abenomics is still at an early stage of implementation, currently on its second year. An ongoing challenge posed to the Abe-administration is to convince markets that many of the changes and policies introduced under Abenomics will continue for some time in a democratic society. While Abe has his post as Prime minister secured until 2016, several of the Abe-administrations plans stretch into 2020 and possibly further. It may therefore be useful to also introduce institutional reforms to safe guard some changes from possible shifts of government in manner similar to what was done in regards to budgetary consolidation in Sweden during the 1990's.

Herein may also lies a problem in that Abenomics is so strongly tied to the person of Shinzō Abe himself. The rise and fall of Abenomics may there be the analogous to the rise and fall of the second Abe-administration. Because of this, it may be important for the success of Abenomics that Shinzō Abe not jeopardizes his popularity too much by pushing unpopular non-economic agendas.

To escape the liquidity trap, either a credible expansion of the money supply, or a fiscal 'jolt' in the form of expansionary policy was necessary. Abenomics has provided both. The monetary expansion performed by BOJ under its QQME strategy has been unprecedented in both scope and contents and seems to have appeared credible by the market. Fiscal stimulus has also been provided as a part of Abenomics, to further assist moving away from the liquidity trap.

As a result, the persistent deflation has been reversed into a positive rate of inflation of just over 2%. This leads to a decrease in real interest rates. It is important that BOJ continues with its QQME strategy. The fiscal expansion that is underway is planned to be successively decreased, shifting to contraction by 2020. As such it falls on the monetary expansion of QQME to keep the economy out of the trap.

Japan's public debt ratio remains the highest of the advanced economies. In order not to aggravate concerns about government solvency, it has been necessary reign in fiscal expansion so that the level of debt does not swell beyond control. A clear time table for decreasing the primary deficit has been given and the implementation of a tax hike. The public debt situation has also been alleviated by increased growth of GDP (increasing the ability to repay debt), lowering the real interest rate as well as lengthening the average debt maturity.

Concerning the decreasing labor force several different reforms have been proposed to counter this development. Few of these labor market reforms have been had their effects seen or have even been implemented yet at this early stage. We believe it may therefore be advisable to hurry up the implementation of these reforms to counter the decline in labor.

Doing so will also improve confidence by raising GDP and will also further assist in combating the public debt ratio.

Overall, Abenomics has increased both consumer and business confidence, raising investment as well as causing a large temporary boost in consumption, which contributed to increased growth in GDP. This has had effects on unemployment. Deflation has been reversed into a positive rate of inflation for the first time in decades. While it is too early to definitely say whether or not Abenomics is the cure needed to end the Japanese economic stagnation, the preliminary outlook is very promising.

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Appendix 1 – Timeline

2012, October: The Liberal Democratic Party with Shinzō Abe starts its election campaign, with a focus on economic policy, that will become known as Abenomics.

2012, 26 December: Abe became prime minister.

2013 January:

- The government presents a first supplementary budget of 13.1 trillion yen, with more than 10 trillion to government spending stimulus.
- BOJ restated its framework for Japanese monetary policy, with a price stability target of 2 %.
- “Joint Statement of the Government and the Bank of Japan on Overcoming Deflation and Achieving Sustainable Economic Growth”

2013 March:

- Haruhiko Kuroda becomes new head of BOJ.
- Announcement of intention to join the Trans Pacific Partnership.

2013 April: QQME was introduced. BOJ will reach the goal of double monetary base in 2 years with increased purchase of long maturity JGBs, corporate bonds, ETFs, and REITS.

2013 May-June: Abe presents the details of the third arrow with its Revitalization Strategy and gives out the details of structural reforms that are about to be implemented.

2013 July: The government wins upper house elections.

2013 September: It is announced that Japan will host the 2020 Olympics.

2013 October: Abe confirmed that the government will raise the consumption tax rate from 5 to 8 % from April 2014.

2013 December: A 5.5 trillion yen supplementary budget is announced by the government.

2014 April:

- Consumption tax increase from 5% to 8%
- Corporate tax cut of 2.4%

2014, 13 June: Revised revitalization strategy: cut the corporate tax rate below 30 percent in stages; reduce by 20-45 % over several years starting from 2015.

2014 July 1: Abe announced a “reinterpretation” of the constitution to allow for military action in conjunction with allies.