

HEALTHCARE REFORM IN TIMES OF ECONOMIC TURMOIL IN JAPAN: THE ERA OF COST CONTAINMENT FROM 1990 TO ABENOMICS

BY

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Ever since the economic crisis hit the world in 2008, most European countries, including Belgium, have been focused on keeping government spending and budgets under control. In Belgium this has led the current government, for instance, to take the decision to halve the allowed growth rates for the healthcare budget. Other European countries have even had reductions in their healthcare budgets overall. After eight years of budgetary efforts, the European economy still does not seem to have reached calmer waters. Unfortunately, for Belgium, Germany, Italy, France, Spain, the UK, Poland and others, the challenge of our populations becoming greyer is added to the mix of government budget deficits, looming deflation, a monetary policy running out of weaponry and a lack of growth.

Whilst the economic challenges limit the available fiscal space, population ageing, but also new technologies, increase the demand for and the cost of healthcare. In its efforts to respond to these “unparalleled” crises, Europe mainly looks inward to identify solutions.

Yet, the combination of deflation, population ageing, lack of economic growth, austerity measures and a seemingly blocked monetary policy does remind us an awful lot of Japan’s situation. Japan has been facing a similar crisis for decades and Europe is starting to look a lot like Japan. Not only is the situation similar, but historically the Japanese healthcare system was, just like the Belgian system, based on the Bismarck model to which aspects of the Beveridge model were added over time. Although significant differences remain, there is a common ground that allows us to learn from the Japanese experience.

Analysis of how Japan dealt with its healthcare system during more than two decades of economic turmoil and its consequences for public health, healthcare quality and economic sustainability could provide us with helpful insights for Belgium and

Europe. Moreover, it provides useful guidance for countries that are setting up a healthcare system. The Japanese system embeds mechanisms that allow almost constant adaptation of its system without the need for radical reforms, crucial for the long-term sustainability of its system.

1. THE LAND OF THE RISING SUN: INTRODUCTION TO JAPAN'S DEMOGRAPHY, ECONOMIC SITUATION AND HEALTHCARE SYSTEM

1.1. JAPAN'S DEMOGRAPHY

Japan's demography is extraordinary to say the least. Japan counts around 126 million citizens (Statistics Japan, Ministry of Internal Affairs and Communications) all speaking one language and ethnically very homogenous (CIA, World Factbook, Japan). More than 30% of its population is 60 years of age or older: the highest percentage for any country in the world. Leaving aside the very specific case of Monaco, it also boasts the highest median age in the world at 46 years. With half of its population expected to be older than 53 years of age by 2050 it is the most rapidly ageing developed country in the world (United Nations, 2013; CIA, World Factbook, Median age). The more detailed figures are even more startling.

First of all, there is the projected decline of the population of Japan. From the current 126 million it is expected to fall below 100 million in 2048 and towards around 86 million in 2060. This means that, owing to low fertility rates, the population size is expected to shrink by more than 30% in less than 50 years (National Institute of Population and Social Security Research in Japan, 2012).

The decline in the size of the population is combined with drastic changes in the age composition of its population. To start with, there is a steady decline in the number of young people (aged under 15 years). While in the early eighties there were still 27 million young people, this number has been dropping ever since towards barely 17 million in 2010 and is projected to go below 10 million in 2046 and below 8 million in 2060. Next, there is an even more dramatic decline in the number of people of working age (aged from 15 to 64 years). The size of the working-age group grew steadily towards its peak of 87 million in 1995 followed by a decline towards 81 million in 2010 and is predicted to drop to 44 million in 2060. Lastly, there is an increase in the number of old people (65 years and over). Since the aftermath of the Second World War, the number of old-aged people in Japan has increased to nearly 30 million in 2010. This age group is anticipated to peak at almost 39 million in 2042. Thereafter it is anticipated to decline towards 35 million in 2060 (*ibid.*).

Finally, Table 1 shows the consequence of this demography on health expenditure. It confirms that medical expenditure in general is higher for the later stages of life.

Further, ageing is definitely increasing the proportion of expenditure on the +65 age group. From 2003 onwards, half of the healthcare budget went to the +65 age category and this proportion is still rising. It is no surprise that spending on people in the later stages of life is growing (MHLW, 2011a).

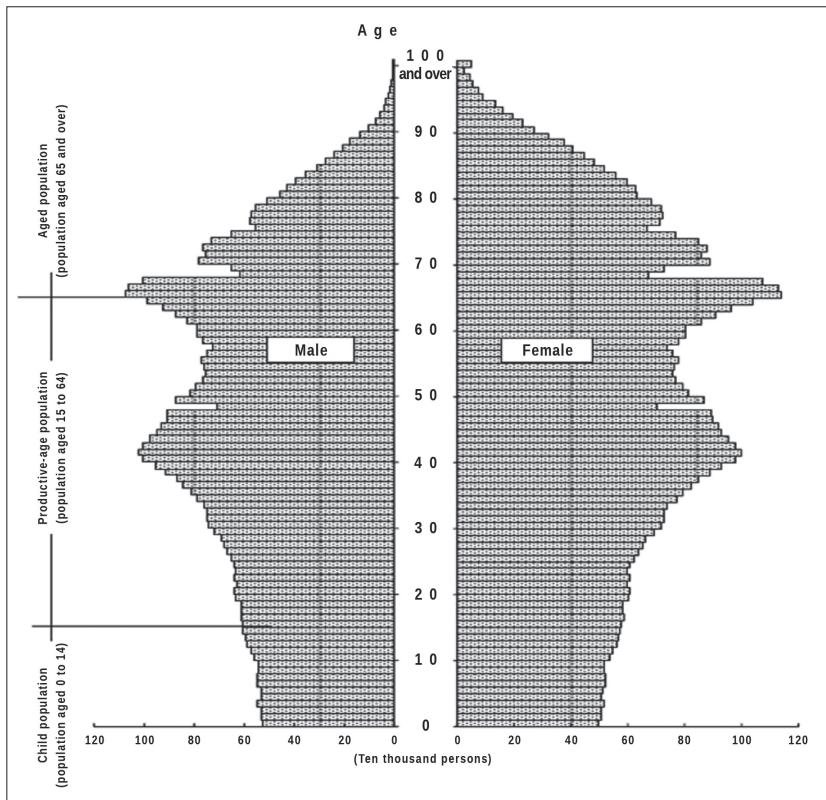
TABLE 1: MEDICAL EXPENDITURE BY AGE GROUP AS A PROPORTION OF TOTAL MEDICAL EXPENDITURE

	1997	2000	2005	2011
Less than 65 years	53.3%	51.7%	48%	44.4%
0-14 years	6.2%	6.9%	6.6%	6.4%
15-44 years	16.8%	16.1%	14.9%	13.3%
45-64 years	30.2%	28.6%	26.4%	24.7%
65 years or more	46.7%	48.3%	52.0%	55.6%
70 years or more (as a % of total medical expenditure)	36.2%	37.4%	42.1%	45.8%
75 years or more (as a % of total medical expenditure)	25.0%	25.1%	29.4%	34.0%

Source of data: MHLW, 2011a.

The overall picture of the impact on the healthcare system in the long-term becomes more visually clear when looking at the population pyramid. In the case of Japan one should rather speak of the “population mushroom” (see Figure 1). The first baby boomers (born from 1947 to 1949) reached the age of 65 in 2013 and the second baby boomers (born from 1971 to 1974) will join the +65 age category within less than 20 years. Whereas the top of the mushroom will continue to grow over the next 25 years, the base will grow thinner and thinner over the coming decades because of the low fertility rates. Even if the fertility rate and the life expectancy would be respectively higher and lower than can be reasonably assumed¹, this would still be insufficient to offset the basic evolutions. Though in 2010 there were already only 1.8 persons of working age supporting one young or old citizen, this will drop even further to almost one person of working age for one young or old person in 2060 (National Institute of Population and Social Security Research in Japan, 2012).

(1) The fertility rate and life expectancy assumptions can be found at: National Institute of Population and Social Security Research in Japan, 2012.

FIGURE 1: POPULATION PYRAMID 2014

Source: Ministry of Internal Affairs and Communications (2014).

The surge in demand for healthcare in Japan will most certainly continue. Within 15 years, 20% more persons will be older than 65. This surging demand will be confronted with an increasing pressure on financial means by reason of its even more rapidly dwindling working-age population. In 45 years' time, Japan will count half as many potential workers as today (*Ibid.*). By comparison: Belgium is also rapidly ageing, yet, there will still be more than 1.5 persons of working-age supporting 1 young or old dependant in 2060 (European Commission, 2014) or 50% more human shoulders to bare the weight than Japan.

Last but not least, these numbers and figures show that one should always be aware of well-established perceptions. A lot of articles focus on the challenge of the ageing population. But the pace at which Japan's number of old-aged people grows is in reality slowing down and challenges are at least as significant at the base and middle of Japan's demographic "mushroom".

1.2. ECONOMIC TURMOIL IN JAPAN: FROM THE LOST DECADE TO THE FUKUSHIMA DISASTER

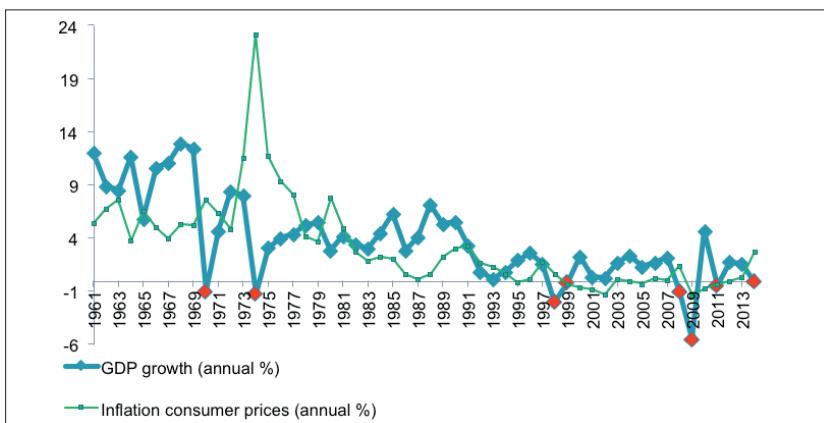
To understand the healthcare reforms of Japan over the past 25 years, a basic understanding is necessary of the economic challenges that Japan has been and is facing. The underlying logic is of course that economic crisis leads to countries making deficits and in an attempt to control public spending they induce governments to cut public health budgets or at least control their increase.

The growth rates of the Japanese economy in the post Second World War era made many people believe that Japan was going to put up some serious competition with the USA for the first place as economic leader (Vogel, 1979). As Figure 2 demonstrates, there are basically three periods we can identify in Japan's economic growth until the crisis of 2008. Up until the sixties, the economy grew at a very high speed with growth rates above 10% for four consecutive years in the second half of the sixties. During the seventies, growth was offset by the oil crises and started to slow down. The economy continued to grow, however, at more than 4% on average per year in the following decade and a half. Japan's golden age ended abruptly in 1991, heralding a period of deep economic crisis.

The underlying reasons for this crisis are explained by previous periods. Up until the eighties, the Japanese economy had mainly been a centrally directed economy. Companies were guided by the government towards certain sectors, first protecting them from foreign competitors, then helping them assure market share and eventually dominance abroad with a low price policy. This process was then repeated in a new sector. This policy was facilitated by the financing of Japanese companies through massive loans from banks that were part of their keiretsu – a group of companies organised around a government guaranteed bank – which also avoided shareholder influence. For quite some time this was very effective. Growing deregulation in the 1980s combined with loose monetary policy, nonetheless, created a two-sided bubble: the asset market and real estate prices soared. The massive savings of the Japanese were in turn pumped into the bubble by an unchecked lending policy of the Japanese banks. When the Bank of Japan tried to cool the heating economy a little, the bubble exploded. A first rise in interest rates in 1990 did not have the desired effect, however, a year later this policy led to a crumbling asset market and plunging real estate prices. The whole banking system was thrown into deep crisis. Investment and consumption dropped and the economy fell into recession. The traditional

response followed: The Bank of Japan cut interest rates. But it did not have the desired effect as consumers simply were not willing to spend their money. The core reasons for Japan to fall into this “liquidity trap” were linked to the lack of confidence and the ageing population which induced saving (Krugman and Obstfeld, 2006, p. 532; Krugman, 2009, pp. 56-77). In any case it was reinforced by the looming and actual deflation (see Figure 2).

FIGURE 2: JAPAN GDP GROWTH (ANNUAL %) AND INFLATION CONSUMER PRICES (ANNUAL %)
1961-2014

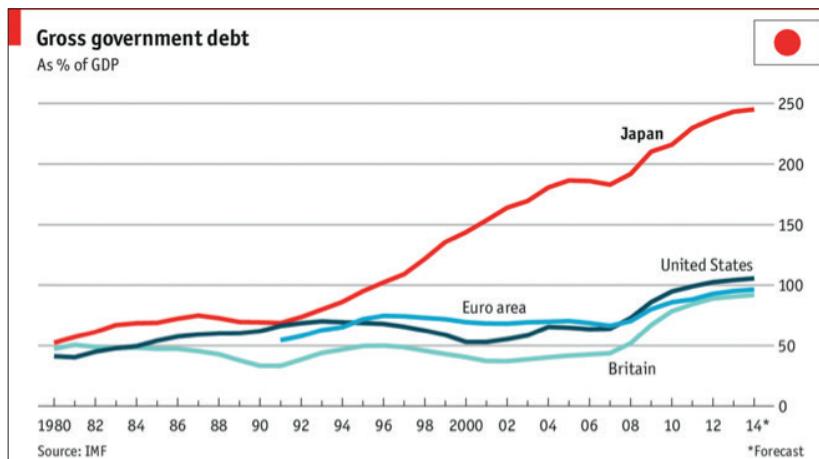


Source: own graph, data: World Bank, World Development Indicators.

As the liquidity trap paralysed monetary policy, the Japanese government did what Keynes would have done: if private spending does not go up, public spending should. Japan started spending huge amounts of money on public works and on bank bailouts, thereby probably avoiding an even worse economy. Nonetheless, the depreciating Yen caused a contamination of the whole region in 1997, further aggravating the situation. In July of that year, depreciation spun out of control in Thailand and within less than a year the financial crisis spread through Asia, Latin America and Russia. The downward spiral only stopped when the Federal Reserve and European Countries lowered their interest rates out of fear of a global crisis. Far from recovered itself, the falling exports made Japan take another hit and for two consecutive years its economy shrunk, making Japan's lost decade a fact. Even if in the beginning of the 21st century Japan did not suffer that much of the crisis in Latin America, growth rates remained below expectations. It was only through exports pulling up thanks to China and the US that its economy finally grew a bit again. Inflation, however, remained low so that monetary policy did not have any room to manoeuvre through a subsequent crisis (Krugman and Obstfeld, 2006; Krugman, 2009; Teekankee; 2009).

The economy plunged again when Lehman Brothers defaulted in 2008 and after a fourteen-metre tsunami following an earthquake struck Japan in March 2011, leading to the biggest nuclear accident since Chernobyl. In the 20 years following the burst of the bubble, only in 2010 did the Japanese economy grow at a speed that was normal in preceding decades.

FIGURE 3: GROSS GOVERNMENT DEBT (% OF GDP)



Source: The Economist Graphic Detail, 2014.

Meanwhile, public spending resulted in a massive increase in government debt. Reinforced by its lack of growth, gross government debt rose above 100% of GDP by the end of the 20th century only to continue its steep climb to a staggering 240% of GDP (Figure 3; OECD, 2015a, p. 290). In relation to GDP this is more than twice the debt of Belgium, and even Greece is still quite far from this number. However, it should be stressed that about 40% of its total debt (or 100% of GDP) is owed internally to other governmental actors like the Bank of Japan. This results in a net debt of around 140% of GDP (The Economist, 2014a). Other explanations as to why this overwhelming government debt has not yet led to government default are the high savings of the Japanese and the very low interest rates and deflation which make it very cheap to lend.

1.3. JAPAN'S HEALTHCARE SYSTEM

1.3.1. The historical configuration

Many of the characteristics of the Japanese healthcare – kaihoken – or health insurance system are quite familiar for Europeans. Indeed, the Japanese system was based on European examples. There remain, all the same, important differences which can often be traced back to the early history of Japanese healthcare.

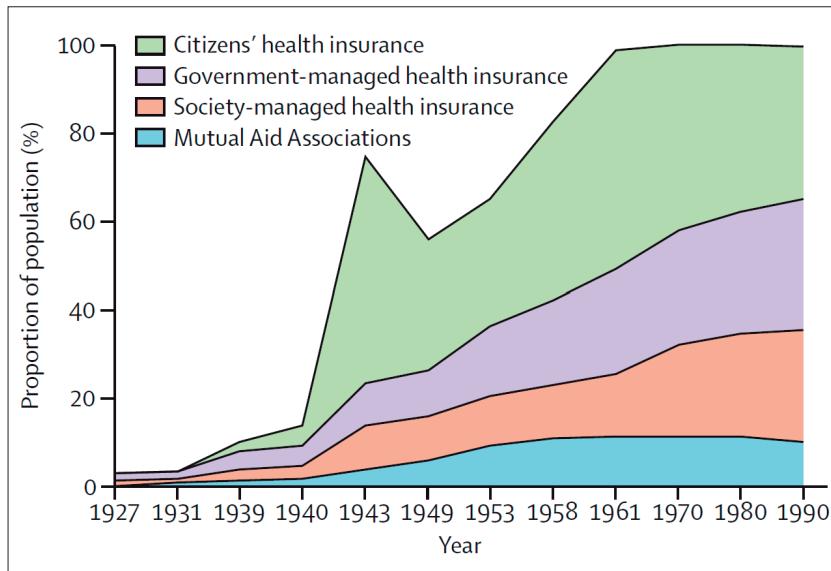
The origins of Japanese healthcare ought to be seen in the light of the influence of Chinese healthcare throughout the region. Traditional Chinese medicine – kampo – was the overall medical care practiced in Japan for over a thousand years. Western medical care was introduced in Japan from the 16th century onwards. First by the Spanish and Portuguese, but quickly overtaken by the Dutch which were the only European nation allowed into Japan during the sakoku policy. This policy of almost complete isolation from 1633 onwards would only be abandoned in 1853 under American pressure. Thus, it might seem strange that in 1868 Japan did not opt for the Dutch medical care model, but the German one. On the other hand, German doctors had come in under the Dutch flag and “Japan could not afford to follow the French elegance [...] the Dutch medical books were in any case translations of German and French books; the British despised the Japanese; the United States was such a young country [...] whereas Germany resembled Japan in polity or political regime and was new to Asia.” (Ministry of Health and Welfare, 1925²). In the following years the number of Western medical practitioners and hospitals would rise and the prominence of Chinese medicine came to an end (Powell and Anesaki, 1990, pp. 1-51).

At the beginning of the 20th century, healthcare and medical education were definitely modernised, but still for the happy few. This started to change under the pressure of the socialist movement in the early 20th century. Gradually a health insurance system was built up. Also the health insurance system was based on the German system. A Bismarck system – a social insurance system financed by employees and employers with the fees for drugs and services determined by a fee schedule – was set up for a very small amount of workers (Ikegami et al., 2011). Rather quickly the main driver to enforce further steps towards universal coverage became the military (Powell and Anesaki, 1990; Tatara and Okamoto, 2009, pp. 20-33). The policy of isolation was abruptly ended in the thirties with the Japanese invasion of China, eventually involving them in the Second World War. During the Sino-Japanese war the policy of “Healthy People, Healthy Soldiers” led to the opening of public health centres, the organisation of health insurance by municipal authorities and the creation of the Ministry of Health and Welfare (Powell and Anesaki, 1990; Tatara and Okamoto, 2009).

(2) As cited in Powell and Anesaki, 1990, p. 27.

The twenties and thirties gave birth to a health insurance system with an important organisational role for government as health insurer and provider. As small firms lacked the administrative capacity and scale benefits to organise insurance, central government took up this role in the Government-Managed Health Insurance (GMHI). For the non-employees the municipal level organised the National Health Insurance (NHI – also called Citizens' Health Insurance). Next to the government-managed insurers, the Society-Managed Health Insurances (SMHI) took care of employees of large firms and some employees chose to self-manage health insurance under a mutuality. From the offset there were thus three possible insurers: self-managed health insurance societies, health insurance societies organised by large firms and the government (Tatara and Okamoto, 2009).

The expansion of Japanese healthcare came to a sudden end at the termination of the Second World War. Like the rest of Japan, the whole healthcare system was in ruins. Many hospitals and drug production facilities had been destroyed, the majority of the male doctors had been drafted by the military and half of the social health insurers were defunct. Whereas previously the central government decided on where hospitals were built and the number of hospital beds, the arrival of the occupying forces ended the centralised, rational planning of the healthcare provision (Powell and Anesaki, 1990). Because the Second World War changed Japan overnight into a democratic and demilitarised regime, the biggest advocate of health insurance – the military – was gone. The main impulse now came from the biggest political party: the Liberal Democratic Party (LDP) (Ikegami et al., 2011; Miller, 2006). The new Constitution that saw the light in 1946 proclaimed that: "all people shall have the right to maintain a certain standard of healthy and cultured life, and to achieve this purpose, the state shall try to promote and improve the conditions of social welfare, social security and public health" (Article 25, Constitution of Japan, 1946). Health insurance remained largely in the hands of government and the continued efforts to extend healthcare insurance culminated in 1958 with the approval of a new National Health Insurance Act. The voluntary insurance policy changed towards a compulsory one. All municipal governments had two years to establish their own insurance systems. This generated an almost universal coverage of the Japanese population by April 1961 (Figure 4; Tatara and Okamoto, 2009). Once universal coverage was achieved, focus went towards improving coverage, increasing benefits and reducing co-payments. Gradually health insurance also started to be partially financed by ever-growing amounts of tax money (Powell and Anesaki, 1990); hence mixing the Bismarck model with elements of the Beveridge model.

FIGURE 4: HEALTH INSURANCE COVERAGE IN JAPAN 1927-1990

Source: Ikegami et al., 2011.

This period of expansion would not take forever. In the 1970s different LDP officials became well aware that the financing of its health insurance was economically unsustainable in the long run. Growth rates of health expenditure of 18% per year and the start of the greying of its population caused a shift of attention towards cost containment. The LDP waited, however, until 1981 to address this issue openly as the then Western conservative governments gave the LDP the examples they could sell to the Japanese population. At first, there were no clear reductions in budgets but rather limited attempts to control spending (Powell and Anesaki, 1990). It would however not be long before the economic troubles would lead to the reversal of some of the introduced benefits and services.

For better and for worse, the history of Japan still dogs the Japanese healthcare system today. Its historic resilience, the role of government as a big insurer, the difficulties to address healthcare provision and influence of *kanpo*, all remain relevant today.

In less than 20 years after World War 2 ripped the country apart, it established universal health insurance. In most Western European countries it would take another 10 to 30 years. This remarkable resilience and ability to adapt after the Second

World War is still present in a country that has now spent more than 2 decades in economic crisis. Indeed, the total collapse of its healthcare system was anticipated many times, yet, today it is still up and running.

Today, the role of the government as one of the largest insurers remains intact and a rather specific character of the Japanese system. With it the Japanese government retains, though often only in technical discussions, an impressive power over the healthcare system. On the other hand, the lack of control of central government that was created under pressure from the American occupational force has led to a failure to address health provision issues. Under continued opposition of the free-market advocating physicians, the mere thought of rational, centralised planning of health provision remained shelved until the eighties. Only in 1985, central authority regained partial control by obliging the prefectures to set up a regional plan on hospital beds to address regional imbalances (Powell and Anesaki, 1990; Tatara and Okamoto, 2009).

Over the decades, traditional Chinese medicine lost more and more ground in Japan. It has, nonetheless, had a lasting influence on the organisation of Japanese healthcare. The most prominent example is the non-separation of prescribing and dispensing of drugs. Western medicine departs from the principle that both should be separated, primordially to avoid conflicting interests. In Chinese medicine it is long established that practitioners prescribe and dispense traditional drugs. When in 1874 the first Medical Act contained the separation principle, it quickly became problematic in practice. It was difficult for practitioners of Western medicine to compete with traditional ones as they could not dispense drugs which was difficult to understand for the Japanese population. Above this came the issue of the regulation of the medicaments³. The separation principle would have meant the recognition of at least some traditional drugs. This was exactly what the government wanted to avoid. Therefore, a new legal framework was set up in 1887 that allowed practitioners to dispense drugs whilst it kept most of the traditional medicine outside the Japanese Pharmacopoeia (Tatara and Okamoto, 2009). The kampo heritage has led to overpriced and overused medication and difficulties for succeeding governments to intervene therein.

1.4. THE ORGANISATION OF THE HEALTHCARE SYSTEM IN JAPAN

1.4.1. General governance: overall policy and budget

The governance of healthcare in Japan is of course a reflection of the overall political system. Even today the summary of Margaret Powell and Masahira Anesaki in 1990 still applies: "The Japanese political system is one in which power is shared by a

(3) This is regulated in the Japanese *Pharmacopoeia*.

limited number of institutions which are characterised by seemingly contradictory features of stability, consensus, and differences of goals" (Powell and Anesaki, 1990, p. 87). More recently, authors like Robert Kaplan have called the general political system a "mild bureaucratic autocracy" (Kaplan R. D., 2012). Criticism was often directed towards the dominance and organisation of the LDP with tentacles in the different Ministries. Through its continued hold of power, the LDP became a powerful political machine which enabled it to endure almost any pressure for reform by trade unions or the opposition. However, in reality the LDP consists of very diverse factions which at times appear to form different parties within. In a search for balance, this has led to constant changes of ministers consequently limiting their power. Indeed, this has led to a reinforcement of the bureaucrats at the different ministries and tight ties between the ministries, the business and many other sectors (Powell and Anesaki, 1990, pp. 81-107). Even when in 1993, for the first time in 35 years, the LDP lost its majority this only led to minor reforms. In general, informal relations between politics, bureaucrats and businesses remain omnipresent (Hagström, 2000). These general characteristics are also reflected in the healthcare governance. The current Minister of Health, Labour and Welfare under the third Abe cabinet is Mr. Yasuhisa Shiozaki. Minister Shiozaki is a member of the LDP and a notable right-wing reformist. His hunger for reform and specific views have led to conflicts with other LDP members and the "bureaucrats" of the Ministries (The Economist, 2002; Warnock, 2015) forming a good example of the previously described contradictions inherent in the Japanese political system.

The Japanese healthcare system is tightly regulated by the government. By both legislative and budgetary measures, the national government regulates most of the healthcare system and keeps tight control over it. Government formally decides on the fee schedule, determines the subsidies for lower levels of government and non-governmental actors and regulates the providers (Matsuda, 2015). The general healthcare framework is set out by the Diet on the basis whereof the Ministry of Health, Labour and Welfare (MHLW) decides the detailed health policies under the political authority of the Minister of Health, Labour and Welfare. The MHLW can prepare legislative bills for the cabinet to submit to the parliament. Nonetheless, as for other Ministries, most policy decisions are reviewed and enacted by parliament when the general budget bill of the cabinet is tabled. While the MHLW can submit its budget plan, it is upon the Ministry of Finance (MOF) to review and compile it into the budget cabinet bill that will be laid before parliament (Tatara and Okamoto, 2009, p. 8).

The MHLW is assisted by advisory organs: The Social Security Council, the Central Social Insurance Medical Council, Health Sciences Council, etc. (MHLW, 2014a). The role of these "advisory councils" should not be underestimated. The best example is the Central Social Insurance Medical Council (CSIMC) as it involves real political power over the healthcare system. The CSIMC – Chuikyo in Japanese – consists of

representatives of providers (for instance the Japan Medical Association and hospital associations) and health insurers (local governments, employers, labour unions and society-managed health insurance associations), assisted by experts. It is the most important advisory council as it is responsible for the revision of the fee schedule, thus having a major impact on the healthcare budget. In practice, the decisions are often negotiated informally between the Ministry's civil servant doctors and the healthcare providers (Campbell and Takagi, 2014, pp. 101-118). In a context where a lot of power resides in informal relations, it is of course no wonder that in 2004 a scandal broke out around the bribery of two members of the Chuikyo (Otake, 2006).

Even if this last example confirms some of the alleged weaknesses of the Japanese governance system, it should not cloud the role of evidence-based policy. Japan possesses an impressive arsenal of research, statistics and time-series observations. Not many countries can compare to the quality, profoundness and consistency in both time and space with which research is conducted on their healthcare system. This is a major factor in guiding reforms and also a motive of the power of the "bureaucrats" in the MHLW.

1.4.2. Healthcare insurance

Statutory health insurance in Japan is obligatory and provided by public or private non-profit organisations. Private insurances that complement the obligatory insurance only play a minor role. There are, however, some people with private income insurance in case of sickness (Matsuda, 2015). Statutory healthcare insurance in Japan is highly diffuse.

First of all, there is a separation between employees (which includes retired persons under 75), old-aged persons (75+) and all others (self-employed and unemployed). Most of the employed are covered by Society-Managed Health Insurance (SMHI) of large companies and the Government Managed Health Insurance (GMHI). The self-employed and unemployed are mainly covered by the National Health Insurance (NHI) and persons aged 75 or older by the Late-Stage Medical Care System for the Elderly (LSE). Other smaller systems concern public employees and seamen for instance (National Institute of Population and Social Security Research, 2014).

Second, Table 2 illustrates that there are more than 3,000 health insurers in Japan mainly due to the 1,717 municipalities (in 2011) managing the NHI and the large companies organising their own health insurance. The specific system for the "old-old" – persons aged 75 or older – is managed at the prefecture level even though in practice it consists of reassembled municipality insurers. The large number of insurers combined with the flexibility of the Health Insurance Act leads to differences between them, especially on premiums. Most insurers can decide on a premium le-

vel between 3% and 10% of the income of the employee, evenly distributed among employer and employee (Tatara and Okamoto, 2009, pp. 60-66).

TABLE 2: SIMPLIFIED OVERVIEW OF THE HEALTH INSURANCE SYSTEM

	Number of insurers (2013)	Numbers of insured (2011)	Number of insured, % of total (2011)
GMHI	1 (Japan Health Insurance Association)	35 million	28%
SMHI	1,431 (Companies)	29 million	23%
NHI	1,717 (Municipalities)	38 million	30%
LSE	47 (Prefectures)	15 million	12%
Other	85 (Mutual aid associations and other)	9 million	7%
TOTAL	3,281	126 million	100%

Source: Own table, data: MHLW, 2014b.

Japanese healthcare insurance covers almost the totality of medical services and drugs except advanced medical care. The prices of all included services, drugs and devices are determined in the fee schedule (National Institute of Population and Social Security Research, 2014). In addition to non-reimbursement of advanced medical care, there is also a ban on a combination of advanced medical care and normal health services or drugs. Patients that do combine both would have to pay both parts out of their own pockets (Sho, Narimatsu and Murakami, 2013).

1.4.3. Healthcare provision

The organisation of healthcare provision largely follows a privatised logic that was established by the US in the aftermath of the Second World War. The number of public hospitals, either owned by national, prefecture or local government, was at 40% of the total of all hospitals after the reconstruction of the war. The absolute number of public hospitals then started to drop whilst the number of private hospitals kept growing until 1990, after which the amount of private hospitals started dropping. In contrast, the number of clinics has seen consistent growth (Table 3; MHLW, 2014b). Although healthcare provision is largely in the hands of the private sector, they are not allowed to make profit (National Institute of Population and Social Security Research, 2014).

TABLE 3: NUMBER OF HOSPITALS, CLINICS AND BEDS AND AVERAGE LENGTH OF STAY

	1960	1990	2002	2012
Number of Hospitals	6,094 (31% public)	10,096 (17.5% public)	9,187 (18.6% public)	8,565 (17.8% public)
Number of General Clinics	59,008	80,852	94,819	100,152
Number of Dental Clinics	27,020	52,216	65,073	68,474
Number of Beds	313,545	1,949,493	1,642,593	1,578,254
Number of Beds per 1,000 persons	3.39	15.77	14.43	13.51 OECD average: 4.8
Average length of stay in days	57 ⁴	50.5	37.5	31.2 OECD average: 8.4
Average length of stay curative care	/	34.4 ⁵	22.2	17.5 OECD average: 7.4

Sources: Own table, data: Powell and Anesaki, 1990; MHLW, 2014b; MHLW, 2010; OECD, OECD.Stat.

Kaihoken is known for some specific particularities. First of all, the Japanese health-care provision gravitates around hospital (or clinic) beds. The Japanese are the world leaders in use of hospital beds on the basis of two indicators: the number of beds per 1,000 persons and the average length of stay (in general and for curative care). The average length of stay is almost 4 times the OECD average and leaves all other countries far behind. This difference has been decreasing but remains high. It is important to note the huge difference between the curative and general length of stay. Although it is still by far the highest of all OECD countries the average length of stay for curative care is lower and has dropped faster since the nineties. This can be explained by the fact that only 60% of hospital beds are for general use and around 15% for long-term care use and another 15% for psychiatric use⁶. A huge average stay of around 300 days in long-term care and psychiatric beds explains the large difference with the curative care average (MHLW, 2010).

(4) Based on the year 1965 and not 1960.

(5) The first available data on this of the OECD is of 1994.

(6) Japan is also world leader in the number of psychiatric beds per capita.

Second, Japanese law does not provide a definition of “general practitioner”, nor “nurses” or “specialists”. Indeed, there is no gatekeeping towards more specialist care nor a clear distinction between both and patients have complete freedom of choice. The fact that there is no gatekeeping in Japan is also reflected in the lack of differentiation between hospitals and clinics⁷. Most of the primary care is delivered in clinics, however, there are some hospitals that also provide primary care and specialist care is given at both hospitals and clinics. Even inpatient specialist care is delivered by certain clinics, though a minority (Matsuda, 2015).

Lastly, in Japan doctors cannot only prescribe but also dispense medication. This remains the case today, even though, since the seventies, the government started giving incentives through the fee schedule to increase the independence of the prescriber from the deliverer of the drugs. Hereby, the number of community pharmacies gradually increased and the amount of prescription drugs rose well above 60% by 2013 (Japanese Pharmaceutical Association, 2015).

2. HEALTHCARE POLICY IN JAPAN: MUDDLING THROUGH ECONOMIC AND DEMOGRAPHIC TURMOIL

In developed countries, reforms of the healthcare system fairly often take the form of a multitude of technical modifications in the system. The political reason being that, in an attempt to avoid an uproar of society and voters, policy makers prefer gradual changes than an all open revolution with clouded consequences. However, these technical changes are also a sign of inherent mechanisms that ensure short and medium-term sustainability of a healthcare system. Healthcare systems need almost constant minor changes to assure sustainability and a fit with the changing needs of a population. In Japan, the routine of using these technical measures for cost containment has received criticism and has been faced with a seemingly ever-growing call for radical reforms.

The origins of cost containment policy, and the healthcare reforms linked to it, lie in the seventies. During that period, it became obvious that the Japanese healthcare system faced a mid- and long-term crisis caused by three factors: demography, development of expensive technology in medical care and lower economic growth. Calls for reform, however, remained blocked until the eighties: the LDP was losing voters and proposals of cost-containing measures clashed with the powerful Japan Medical Association, representing the medical personnel (Powell and Anesaki, 1990, pp. 133-137). The stalemate ended in the early eighties following a big electoral victory of the LDP. Principally under the government led by Yasunari Nakasone, from 1982

(7) By law, hospitals are defined as medical institutions that have 20 beds or more while clinics are those with less than 20 beds, and which include primary healthcare focused clinics without beds.

to 1987, an austerity policy, comparable to the Thatcherism and Reaganomics in the UK and US, was introduced. In healthcare it led to technical cost containment measures (Campbell, Ikegami and Tsugawa, 2014).

More profound, radical reforms were proposed, but only few saw the light of day and were often merely symbolic changes. The main symbolic change was a small reversal on co-payment reductions, especially for the elderly. In the 70s local authorities started cutting into co-payment rates, especially for the elderly. Against the advice of both the Ministry of Finance and the Ministry of Health and Welfare, the central government followed, reducing co-payments for most people and eliminating them for persons over 70. This led to older people using physicians and staying in hospitals more for social than medical reasons. The reintroduction of a tiny co-payment for older people in 1983 was a symbolic measure to put this to a halt. At the same time, on a strategic level, the government changed the financing for medical care for people of 70 years of age or older. Large portions of health insurance premiums of the employers and employees were now being used to subsidise the high medical costs of the +70 category (Campbell, Ikegami and Tsugawa, 2014). The alpha and omega of cost containment policy, however, was – and still is – the biannual revision of the fee schedule which became a highly political happening and a true arena of conflicting interests between administration, healthcare providers and healthcare insurers.

The stage for the era of austerity and cost containment was already set when the economic crisis struck Japan in the early nineties and is now in its third decade.

2.1. HEALTHCARE REFORMS IN JAPAN: 1990-2012

To disentangle the different and often complex reforms, we discuss all major reform mechanisms and logics separately before drawing out patterns and looking at the more recent policy.

2.1.1. The Japanese fee schedule: the cornerstone of cost containment

The major angle to contain healthcare costs in Japan is the biannual revision of the fee schedule. The first reason that the fee schedule system is the most important tool for the Japanese government to cut costs is the sheer size of it. It sets the price of the more than 4,000 medical services and 130,000 drugs covered by health insurance. This way, the Japanese government sets the maximum price of virtually all medical services, drugs and devices of all providers (Ikegami, 2014a). Secondly and thirdly, the influence of the fee schedule is further reinforced by the prohibition on charging more than the fee schedule and the restriction of services and drugs not covered by health insurance. Indeed, items falling outside the scope of health insurance can

only be delivered if they have received an explicit exemption (i.e. single room) or if the total package of services – including those that are covered by health insurance – are paid by the patient (Ikegami and Anderson, 2012).

Although many other countries use fee schedules, not many systems define both reimbursement fees of statutory health insurance and out-of-pocket payment of patients, fixed by a co-payment rate, as strictly and extensively as the Japanese. Unlike, for instance, the Belgium system which sets maximum surcharges for patients in relation to the reimbursement fees when a single room is used, the Japanese system does not allow hospitals to apply surcharges on services or drugs other than the service of a single room itself. In practice, this leads to a situation where the services, drugs and devices included in the fee schedule determine about 95% of both the revenues of hospitals and doctors and the out-of-pocket payments made by patients (Ikegami, 2014a). They also account for 80% of the total health expenditure, with the other 20% derived from preventive healthcare measures, medication free from prescription and subsidies for public hospitals (Ikegami and Anderson, 2012). The power of most other countries over prices and costs pales in comparison.

a. The revision process

Every two years there is a complete revision of the fee schedule which is implemented the following fiscal year. The revision has three steps: the determination of the overall rates of increase or decrease in prices, the revision of prices of drugs and devices and the modification of prices of services (Ikegami and Anderson, 2012).

The determination of the overall rate by which the health insurance benefits may grow or must decrease is mainly a political decision. With the growing importance of tax money to finance health expenditure, the role of the Ministry of Finance (MoF) has been growing. Consequently, the prime minister has the task of conciliating the MoF – which consistently pleads for a decrease – with the interests of the Ministry of Health, Labour and Welfare (MHLW) and insurers and providers represented in the Central Social Insurance Medical Council (CSIMC). Once the general revision rate is determined it is divided between pharmaceuticals and services (Ikegami and Anderson, 2012; Tatara and Okamoto, 2009; Ikegami, 2014a).

In step two, the CSIMC, officially, and the MHLW and providers, unofficially, review the prices of the pharmaceuticals, item-by-item. The drug prices are adapted on the basis of market price survey (Ikegami and Anderson, 2012; Ikegami, 2014a). For most drugs this leads to a reduction in price. Indeed, there is often an extra margin when dispensing drugs as wholesalers give volume reductions and encourage the prescription and dispensing of their drugs by setting their end-user prices under the fee schedule price. The fee price is adapted every two years towards the weighted

market price to which a reasonable margin is added. A second reason to lower prices is an unforeseen growth of consumption of a recently added drug. The prices of newly added drugs are determined by comparison with similar drugs and in some cases a bonus is added for innovative drugs to encourage innovation (Tatara and Okamoto, 2009, pp. 67-70).

Lastly, the medical services are reviewed one-by-one. Most of the prices of services remain constant. If price cuts occur, they are often the consequence of a rapid increase in use of a service or other indications of a profit margin like dropping costs. Increases in a service price are either specifically requested by providers which have to submit evidence of necessity or used by the MHLW to provide incentives for certain behaviour and attain specific policy goals (Ikegami and Anderson, 2012; Ikegami, 2014a; Campbell and Takagi, 2014).

The apparently technical process is in fact a very tough negotiation between providers, pharmacists, insurers and government, where at the end there are winners and losers. It comes with a lot of eye for balance between the different stakeholders and it is highly politicised, yet very informal: “[...] it is a series of statements to reporters, punctuated by quiet talks among various participants, perhaps at a restaurant.” (Campbell and Takagi, 2014, p. 106).

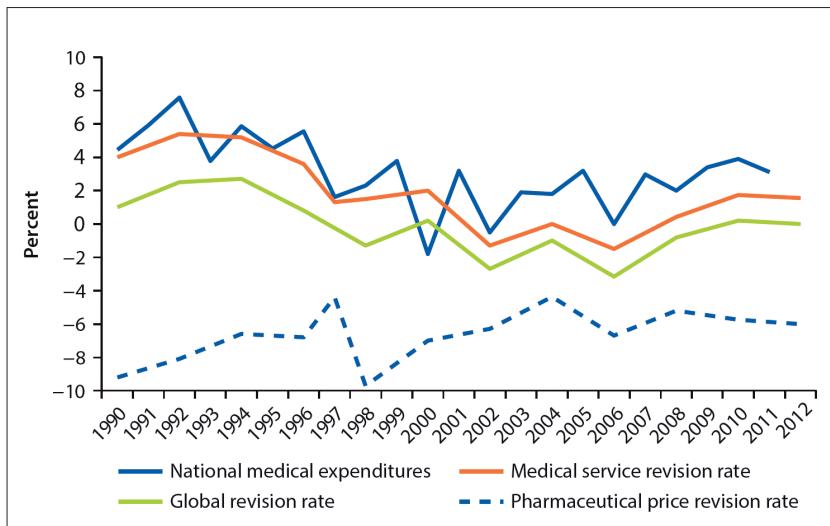
b. Cost cutting through revisions of the fee schedule

The fee schedule in itself is a perfect, and on paper simple, way for the Japanese government to contain the rising costs of the healthcare system by simply easing or even lowering the prices. And this is exactly what it has done.

As shown in Figure 5, since the crisis hit and especially from 1996 onwards, the overall revision rates have been almost constantly negative until 2008 when it was just barely positive again. It also demonstrates that, overall, increases or small decreases in services fees have been accommodated by strong reductions in prices of pharmaceuticals. The specific case of 1998 can be explained by the Asian financial crisis which prompted Prime Minister Ryutaro Hashimoto to take swift austerity measures. Due to lack of time, the cuts were especially made to pharmaceuticals, with prices cut by 10% overall. In the early 21st century, the continued economic crisis made calls for a radical reform even louder. Radical reforms did not follow, but Prime Minister Koizumi made it a personal endeavour to cut even deeper into the fee schedule. In 2002, for the first time in history there was a negative revision rate for services. Under electoral pressure the LDP government held off a bit in 2004, nonetheless, in 2006 Koizumi would succeed in making a record cut of 3.16% globally in the fee schedule. Even if this was eased in 2008, it played its part in the massive defeat the LDP led in the elections of 2009. The Democratic Party of Japan

(DPJ) used the slogan of the “collapse of medical care” to gain majority. After its Prime Minister, Yukio Hatoyama, came into office, a slightly positive global revision rate was set in 2010 and 2012 under the new DPJ government (Campbell and Takagi, 2014; Ikegami and Anderson, 2012).

FIGURE 5: FEE SCHEDULE REVISION RATES AND THE ANNUAL GROWTH OF NATIONAL MEDICAL EXPENDITURES



Source: Ikegami, 2014a, p. 72.

The different governments have also used the fee schedule to change the behaviour of healthcare providers and patients. One technique is the way the system inherently attends to rises in volume and higher prices of new procedures by linking increasing volume to lowering prices. One example is MRI scans. Invented some thirty years ago, they were gradually used more often, replacing other imaging technologies. This rise in volume of use, led to a gradually lower price of MRI scans, by 10% during the late 90s and by over 30% in the 2000s, actually decreasing the volume of use for two years. In 2012 Japan had the highest number of MRI machines per capita, yet, the price of MRI scans is about the lowest in the world (Ikegami and Anderson, 2012; Ikegami, 2014a).

Another technique is incentives that encourage behaviour which is considered to be cheaper in the short or long run. The most obvious case is the attempt to shift

the more expensive elderly inpatient care to outpatient care. Thus in 2006, bonus payments were added for hospitals, clinics and physicians who foresaw care of these patients at home. Another palpable illustration is the high amount of medication used in Japan and the low proportion of generics. On the one hand, Japan, being in the lead for some time, still has one of the highest levels of drug consumption of the OECD. On the other, generics, cheaper than their still patented brothers, are less attractive for Japanese physicians and pharmacies which can make more profit on more expensive drugs. Due to the bigger difference between the fee schedule price and the actual price they pay, they are of course keen to sell patented versions. The government has responded by consistently lowering prices of pharmaceuticals and providing bonuses to prescribe and dispense generics (Ikegami, 2014a; Jones, 2009).

2.1.2. Partial shift from Fee-For-Service to Diagnostic Procedures Combination

Due to the continuously rising costs of healthcare, officials and experts have started to question the fee-for-service (FFS) system, the basic notion being that FFS did not provide incentives for providers to control the volume of delivered services. In 2000, Kawabuchi concluded that the introduction of a progressive payment system (PPS) based on diagnosis related groups (DRG) would give strong incentives for cost reduction in the Japanese healthcare system. Such a system foresees a specific amount of reimbursement by diagnosis category and not per service. The amount of reimbursement is linked to the gravity of illness or general costs of care needed instead of the delivered services.

Although the example of the United States has proven that such a system was not necessarily cheaper, the Japanese government introduced it in 2003 for acute inpatient care (Ikegami and Campbell, 2004). The amount of hospitals that stepped into this system gradually grew from less than 1% at the start to 15% of all hospitals and the majority of acute care beds by 2010 (Hamada, Sekimoto and Imanaka, 2012). The Japanese DRG system is in fact a combination of FFS and DRG. Under this Diagnostic Procedures Combination system (DPC) fees for hospital stays, drugs and services with a price below 10,000 Yen (70 EUR) fall under the DRG part, whilst services and drugs above that threshold are reimbursed under the FFS. The DRG part is a per diem payment that reduces with time and is based on different diagnostic cases. This is supposed to give an incentive to reduce the length of stay in hospitals (Matsuda et al., 2014).

Another objective of this system is to increase transparency and available data on expenses in hospitals. In contrast with the fee schedule, the revision of the diagnostic case groups is based much more on medical evidence than the negotiations between interest groups on the fee schedule (Ikegami and Anderson, 2012).

2.1.3. Changes in premiums and co-payment rates

Cost containment has also been an issue on the income side of healthcare financing. Government can change premiums for health insurance, co-payment rates for healthcare provision and catastrophic coverage which puts a maximum level on the co-payment. Analysis, however, is challenging due to the complexity of the health insurance system. It is difficult to check all changes as they depend upon the 3,000+ insurers.

In general, it is a certainty that total social security premiums have increased. Gradually their proportion of GDP has increased from 8% in 1990 to 12.5% in 2011 (Oshio, Miake and Ikegami). Another indication of increases in premiums is the fact that the GMHI system, managed by government, saw an increase in premium rates: from 8.2% to 8.6% in 1998 and then to 10% after a final hike in 2012 (Ikegami and Campbell, 1999; Japan Health Insurance Association, 2012). Further, the introduction of a premium of 10% for the elderly in 2006 is proof of increasing premiums (see infra).

Similarly, co-payment levels have changed. The policy of zero co-payment rates for almost everyone in the 70s was turned back during the eighties. Workers, for instance, saw their co-payment rates increased to 10%. In 1997, there was a further rise to 20% and eventually the Koizumi administration put it at the current level of 30% in 2003. Likewise, for the elderly⁸ there was an increase from zero to 10% and then to the current 20%. To give a complete view of the co-payment rates, this has to be taken together with the catastrophic coverage. The co-payment rates are high, but once a certain threshold gets overridden, it is reduced to a very low 1%. Although these have of course changed, they traditionally remained low to guarantee the equality of the overall system. To further reinforce the egalitarianism of the system the maximum caps depend on income. For a person with an average income they are around 600 EUR (Oshio, Miake and Ikegami; Ikegami, 2014a; Campbell and Takagi, 2014; MHLW, 2014b).

2.1.4. Health insurance for the elderly

In 1983 the Japanese government had introduced health insurance for the elderly. It was not in itself a separate insurance scheme, but spread the financing costs of this group (70 and older) over the other insurance schemes. Seventy percent was financed by the other insurers, 20% by central government and 10% by local government. With costs soaring, in 1992, the proportion borne by public funds was increased to 50% (Fukawa, 2002).

(8) For those between 70 and 75 years old.

In 2006, the Structural Health Care Reform Act was adopted. One structural reform it contained was the creation of the Late-Stage Medical Care System for the Elderly (LSE). It created an independent health insurance system for people aged 75 or older. The government continued to subsidise half of the healthcare expenses of these “old-old”, but introduced a premium of 10% for the elderly, deducted from their pension, to reduce the burden for the other insurers. Also the specific organisation contained an important change. Central government decided to organise the LSE at prefecture level where it is governed by a consortium of all municipal governments per prefecture (Jones, 2009; Tatara and Okamoto, 2009, pp. 133-136).

The reform entered into force in 2008 and left all those between 65 and 75 under the other insurance systems – this mainly meant the municipally governed NHI (National Institute of Population and Social Security Research, 2014; Tatara and Okamoto, 2009).

2.1.5. Long-term care insurance

On account of the general health insurance a lot of long-term care provision takes place in those hospitals and clinics which provide long-term care beds. In the eighties, it was obvious for experts that Japan was struggling with a problem of social admissions in these hospitals which was very costly. A growing number of the elderly remained hospitalised even when they were doing medically better. To solve this and reduce costs, the first Gold Plan⁹ of the Ministry in 1989 promoted the use of out-patient care. A new Gold Plan in 1994 focused on delivering care at home and healthcare homes for the elderly that combined traditional homes for the elderly with aspects of hospitals. Eventually, in 1997, the Long-term Care Insurance Act was adopted which came into effect in 2000 and continued down the road of shifting towards out-patient care to reduce costs (National Institute of Population and Social Security Research, 2014; Tatara and Okamoto, 2009, pp. 117-123).

The general health insurance was thereby complemented by a Long-Term Care Insurance (LTCI) which covers the long-term care needs of old aged persons. It is a compulsory insurance for all those aged 40 and older. Those aged 40 to 65 pay an additional premium to their general health insurance, while for those aged 65 and older, the premium is taken directly from their pension. The LTCI is organised at municipal level which again gives differences in the premiums. The LTCI covers additional services: home help, home nursing, disability equipment, etc. To this end, applicants’ needs are assessed by a municipality physician and classified into one of seven categories ranging from limited need of support to a high need of care

(9) An overall strategy of the Japanese government to address the ageing of its population.

(National Institute of Population and Social Security Research, 2014). Most of the long-term care providers are private for-profit entities. So in contrast with services falling under the general health insurance or long-term care provided in health institutions, specific long-term care providers can make profit and the majority of them does (Matsuda, 2015).

The fact that the Japanese LTCI also supports people with minor support needs is a major difference from most of the European long-term care systems. In Japan, however, this is merely an extension of already generous services provided before, under a multitude of smaller systems and programmes and general health insurance. Overall the new system is more transparent and, of course, much appreciated by the young – who get support in taking care of their elders – and old (Campbell, 2014). At the foreseen revision in 2005, minor modifications to the LTCI were made. To control costs, services preventing disability were emphasised and the link with the pension system was reinforced to avoid inappropriate accumulation of both LTCI and welfare benefits (Tatara and Okamoto, 2009).

2.1.6. Reducing administrative costs

There have been three major axes to reduce administrative costs in Japan's healthcare system: digitalisation, consolidation of the number of health insurers and making health insurers more responsible.

In the slipstream of the national information technology strategy of 2001 the goal was set to have a majority of digital hospital bills by 2004. Despite the efforts, in 2005, only 10% of medical and 50% of pharmaceutical billing was digitalised (Tatara and Okamoto, 2009, pp. 80-135). In the reforms of 2006, the government introduced an on-line payment system which all hospitals and pharmacies were to adopt within seven years. As hospitals were failing to meet deadlines, the government started providing subsidies for the digitalisation (Jones, 2009).

A clear burden in the Japanese healthcare system is the complexity of the insurance system due to the huge number of different insurers. This has caused discrepancies in premiums and a brake on solidarity as rich insurers are not keen on sharing with poorer insurers. The consolidation of health insurers would logically broaden the basis of solidarity in the system, bring more equality in premium rates and create economies of scale. There is, nevertheless, a lot of reluctance towards mergers of insurers. SMHI insurers that operate in nicely profitable economic sectors often have lower premiums and mergers would lead to increased premiums for them. Moreover, the GMHI and NHI systems have different calculation methods per municipality. Due to the various methods and the reluctance towards it, mergers are a technical and political nightmare (Takaku et al., 2014). Nevertheless, since 1999,

there has been an effort to reduce the number of municipalities. Mainly out of economic and financial necessity the number of municipalities nearly halved from 3,232 in 1999 to 1,719 as of 2014 (Ministry of Internal Affairs and Communications, Local Administration Bureau). The central government is also making a shift from municipal towards prefectural level. This trend was set in 2000 with the introduction of the LTCI system and was confirmed in the 2006 Structural Reform Act. Prefectures received a mandate to consolidate SMHI insurers in financial trouble towards insurers at prefecture level. Central government itself also transferred some of its own competences towards the prefectures. In 2009, the government entrusted the determination of the GMHI premiums at the prefectures (Tatara and Okamoto, 2009; Jones, 2009).

Lastly, in the 2006 reform, cost containment measures also focused on prevention services. These were transferred from municipalities and prefectures to insurers themselves. After decades, health check-ups and other preventive measures befall these insurers. Officials hope that this reinforces prevention as this is in the interest of the insurers in the long run and it provides financial relief at the local level (Tatara and Okamoto, 2009; Ikeda et al., 2011).

2.1.7. Reinforced prevention

Next to organisational reforms of preventive healthcare, the Structural Health Care Reform Act also reinforced prevention measures. It required annual health check-ups for people between 40 and 74 years old with regard to obesity, high blood pressure and other lifestyle related diseases. Prefectures are to come up with five-year strategic plans to contain costs by providing health promotion measures, reducing the number of hospital beds for long-term care and improving the care for lifestyle related diseases (e.g. diabetes) (Tatara and Okamoto, 2009, pp. 133-135; Ikeda et al., 2011).

Around the same time the Japanese government strengthened the prevention of suicides and mental illness. Up until the late 90s there was a taboo around the subject, but since the mid-2000s measures have been taken to prevent suicides and increase mental health in Japan (WHO, 2014a).

2.2. REFORM TRENDS

On the basis of the foregoing we can distil different trends of the reforms instigated by cost containment policy in the two decades following the start of economic turmoil in the 1990s.

First of all, there is the chronology of reforms. On the cost side, austerity was particularly something of the early 2000s after which it returned to the cost easing policy of the 1990s. In the aftermath of the bubble-burst in the early nineties, a

relatively moderate policy of cost containment was followed. The fee schedule revision rates were moderated and other reforms remained incremental and technical. In the early 2000s this moved towards a more robust austerity policy. The average overall review rate of prices was negative during this whole decade and reforms came to be more structural. Though radical reforms remained taboo, the long-term care restructurings and the Structural Health Care Act of 2006 stressed an invigorated, yet modest, structural approach. This had not in the least to do with the Koizumi government. The policy of cost containment was eased a bit in the fee revisions of 2008, 2010 and 2012. The income side has shown a more continuous approach with modifications of premiums and co-payment rates in the direction of more contributions from patients and insured throughout both decades.

Second, since 2000, there is a clear trend of consolidation of governance levels and responsibilities towards the level of the prefectures and insurers. The number of municipalities are dropping, prefectures are taking over functions from both municipalities and central government and insurers have become responsible for prevention policy. The government hopes that combined with further digitalisation, it can decrease complexity, attain economies of scale and increase accountability of insurers with regard to the prevention of medical expenses.

Third, the structural issues related to ageing have led to an almost contradictory mix of cost containment measures, provision of extensive services towards the elderly and the creation of specific insurance schemes. Through incentives in the fee schedule and provision of supplementary services, cost containment is sought by shifting patients away from inpatient care and keeping them healthy and fit to contribute for as long as possible. The wide availability of these services does, however, give thought to effectiveness and efficiency. Nevertheless, the decoupling of the elderly in the health insurance system is a successful attempt to provide more transparency over the financial solidarity so that the structural issues of population ageing could be attended to more specifically. Then again, it is rather inconsistent with the trend of consolidation and diminishing complexity.

Last, but probably most importantly, the central place of the fee schedule in all reforms is astonishing. Even if a limited parallel system based on diagnosis related groups has been introduced, the fee schedule remains the primordial reform and cost containment mechanism. Most of the structural issues, e.g. rapid ageing, the lack of use of generics and the cost of new technology, have all received attention in different revisions of the fee schedule. Central to this cost containment culture around the fee schedule is the constant care about the price of provided healthcare, be it services or drugs. This does, nevertheless, highlight that during two decades of cost containment policy the demand side of healthcare, the quality of healthcare provision and the way in which healthcare provision is organised were neglected or addressed merely indirectly.

2.3. ABENOMICS

After his last term in 2007, Shinzo Abe returned to the highest stage in the December 2012 elections. During the elections he proposed a “three arrow” strategy to pull the economy out of the slump: massive fiscal incentives, aggressive monetary policy and structural reforms to strengthen the fundamentals of the Japanese economy. Abe was only just in office when he had already started launching the first two arrows of his so-called “Abenomics” (Financial Times, Lexicon).

In 2013, the third arrow started to take shape with the “Japan revitalisation strategy: Japan is back” (Prime Minister of Japan, 2013) to which more concrete proposals were added in the 2014 version. With regard to healthcare we note the following proposals¹⁰:

- the increased use of robot technology in the healthcare sector as a response to personnel shortages and an ageing population;
- integration of the delivery of social welfare and medical care through non-profit corporations;
- incentives for preventive healthcare in general, and prevention of lifestyle diseases specifically;
- allowing the combination of advanced – non reimbursed – healthcare and services covered by health insurance;
- promoting the development of advanced medical technology;
- introducing the “economic analysis” in the fee-schedule review system to increase performance of the system whilst reducing the costs;
- reinforcing the digitalisation efforts in healthcare.

Most of these proposals are incremental steps on already used policy paths. Integration of welfare and medical care in certain institutions, incentives for preventive healthcare and digitalisation are far from new approaches and far from structural. Counting on robots to replace medical care personnel does seem a bit futuristic, but in robot-crazy Japan it might just work. They are far ahead in the development of assistance robots and carebots might contribute in overcoming the huge challenges of Japan’s demography (see for instance Crisostomo, 2015). Outside of the Japan revitalising strategy, the current government also has plans to extend previous reforms on the income side of healthcare financing. In an attempt to lower the state subsidies to the LTCI system they are preparing heavy increases in the insurance premiums paid by workers (between 40 and 65) and their employers (The Japan News, 2015).

Three of the proposals in the above list embed, nevertheless, more profound reforms. First of all, the proposed inclusion of an economic analysis in the fee-schedule revision system is a game changer. Although, previously proposed by the Central

(10) Source: own interpretation of: Prime Minister of Japan, 2014.

Social Insurance Medical Care Committee itself (Tatara and Okamoto, 2009, pp. 133-135), it is a bold move in Japan to take it up on this level. Currently, all services and pharmaceuticals that are approved, automatically fall under the health insurance system. Indeed, unlike at some level in Belgium, Japan is not familiar with an analysis wherein new treatment methods or drugs are compared with existing ones with regard to their efficiency. As a consequence, both cheap and very expensive procedures and drugs for the same condition are reimbursed even if the more expensive provide little or no advantages (Okamoto, 2014).

Second, both proposals concerning deregulation of advanced medical technology provide a true departure from a principle which has been so central in the Japanese healthcare system. It is of course no surprise that they are the most contended ones. If implemented, they will end the prohibition to combine healthcare covered by health insurance and uncovered advanced medical technology. Thereby, the Abe government hopes to create a new economic growth pole around advanced medical technology.

These proposed more structural reforms are actually a reattempt. In fact, the Koizumi administration had the same basic idea: get for-profit companies in the mix, lift the ban on the combination of insured and non-insured services and get medical efficiency in the fee schedule reviews. Making a new growth industry of healthcare is the ultimate goal. Koizumi succeeded in a radical revision in the fee-schedule, but not these structural changes. Abe is already confronted with the same opposition that led Koizumi to drop these reforms: both allegedly create healthcare at different speeds. In Japan the argument of equality, used by the doctors' lobby, is a very powerful one. The Japanese are keen on the almost complete universality and equality of their healthcare system. Next to this, the advanced technology growth pole idea has raised concerns over its net financial result as the economic benefits of this new growth pole might be completely counterweighted by increased public medical costs due to supplementary reimbursements for those using unreimbursed advanced technologies (CNBC, 2013; The Economist, 2014b; Sekimoto and Li, 2010).

The proof of the pudding is of course in the eating. What has the Abe government realised in the meantime?

In 2016 the roll-out of the "my number" project started: a unique national identification number. This is a crucial step towards effective digitalisation, less administrative burden and is helpful in the fight against fraud and error (Aoki, 2013; Brasor and Tsubuku, 2016). Less concretely, the Abe government pledged to reinforce its efforts in both lowering the price of generics and increasing its market share. In 2012, the goal had been set at 60% of generics by 2018 and in 2015 the goal was reinforced to 80%, but delayed to 2020 (OECD, 2014a; Nikkei Asian Review, 2015). However, as in the decades before, the Abe government turned especially towards

the alpha and omega of cost containment: the fee schedule revisions. In the 2014 and 2016 revisions the Abe government returned towards the negative revision rates of the Koizumi period, though not as harsh. In 2014, the revision rate was actually slightly positive at 0.1%. In real terms it did concern a 1.26% cut as one has to take into account the consumption tax hike in the same year from 5% to 8%. The second revision of the Abe government was a 0.83% cut to overall fees, which is slightly less because of more successful pressure from the Japan Medical Association in the light of elections for the Diet. The logic of strong reductions in pharmaceutical prices to pay for small increases of services fees and the overall reduction remained (Central Social Insurance Medical Council; The Mainichi, 2015).

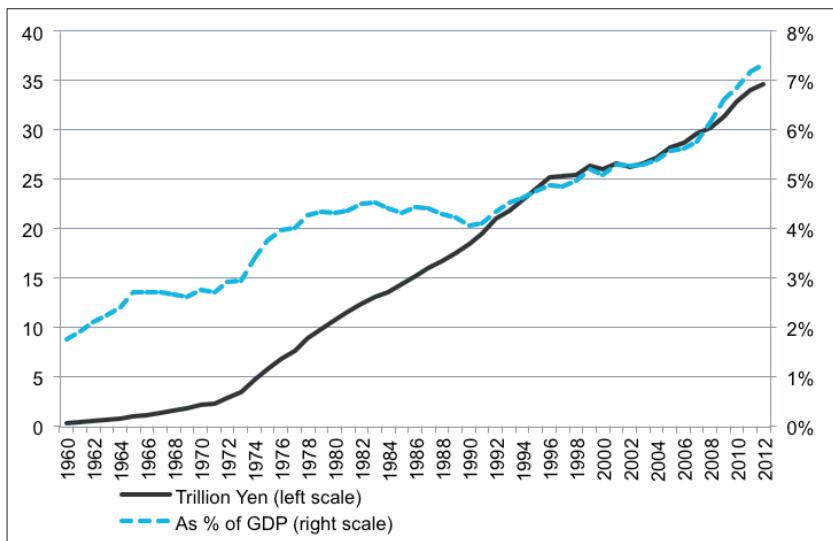
In continuation of past policy, the Abe government is also addressing structural issues, primarily through the fee schedule. First, there are continued efforts to steer patients away from hospitals. Bonus fees for doctors visiting patients outside hospitals were introduced and an earlier introduced surcharge for patients visiting large hospitals without referral was made mandatory. Next, the objective to increase the proportion of generics received support by a reduction of the price of new generics in relation to their patented versions. Third, prevention of smoking addiction was reinforced through greater coverage of nicotine addiction treatment. Lastly, robotics are also getting support from health insurance through greater reimbursement (The Japan Times, 2014; Otake, 2016).

Some important steps have been taken by the Abe government, though none of the more profound reforms that were proposed. They are still energetically debated.

3. EFFICACY OF COST CONTAINMENT POLICY AND ITS SUSTAINABILITY

3.1. SUCCESSFUL COST CONTAINMENT THROUGH THE FEE SCHEDULE

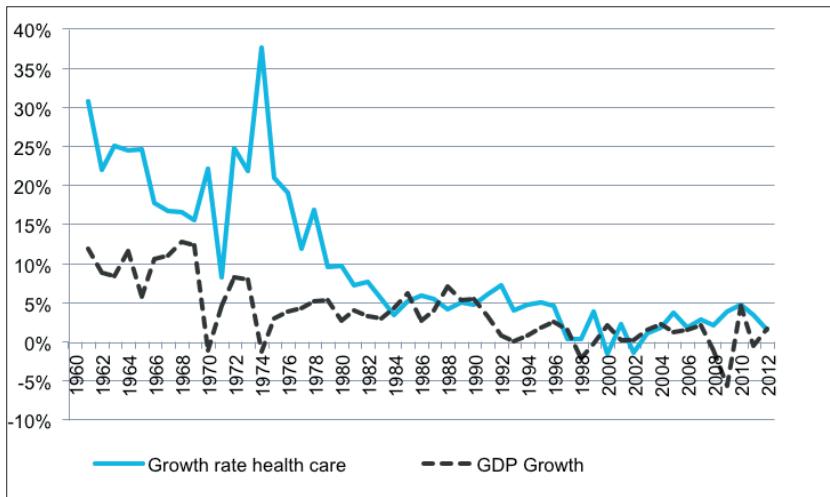
Healthcare spending in Japan has soared impressively from around 300 billion Yen (around 2 billion EUR) in 1960 to almost 35 trillion Yen (around 250 billion EUR) in 2012. In absolute numbers, healthcare spending since 1960 only saw two small descents: in 2000 and 2002. Similarly, healthcare spending as a proportion of GDP kept growing almost constantly with some hiccups caused by economic progress and the bubble in the late 1980s. Where in 1960 healthcare represented less than 2% of GDP, in 2012 it was well over 7%, a four-fold increase (Figure 6).

FIGURE 6: TOTAL PUBLIC HEALTH EXPENDITURE IN JAPAN 1960-2012

Sources: Own graph, data: National Institute of Population and Social Security Research, 2015.

Note: Patient out-of-pocket money is excluded in these numbers.

The raw numbers are astounding and would lead to the wrong conclusion that cost containment has failed. For multiple reasons, these raw numbers, however, do not prove anything. Most importantly, the massive ageing waves would expect us to see an accelerated increase in expenditure. Yet, the growth of health expenditure has been slowing down for some time. If we compare GDP growth rates and public health expenditure growth rates (see Figure 7), we notice that until 1983 health expenditure constantly grew faster than GDP. Up until the late 70s, healthcare expenditure grew almost continuously above 15%, a lot higher than the astonishing GDP growth rates of Japan at that time. The numbers prove that when in 1983 the government started to lightly hit the brake, measures were successful at converging healthcare expenditure growth towards the GDP growth. It still remained higher, though a lot less. Even from the crisis in the nineties onward, the Japanese government succeeded in controlling costs effectively. The latest important rise of health expenditure in proportion to GDP took place in the aftermath of the financial crisis of 2008 and is rather caused by the plunging GDP and the role of social security as a macro-economic stabiliser.

FIGURE 7: GDP AND PUBLIC HEALTH EXPENDITURE GROWTH RATES

Source: Own graph, data: National Institute of Population and Social Security Research, 2015.

Note: Patient out-of-pocket money is excluded in the healthcare expenditure growth.

International comparison shows that public healthcare expenditure as a part of GDP has been rising faster than in other developed countries. The same goes for total healthcare expenditure (public and private) which accounted for 10% of GDP in Japan in 2012, thus surpassing the OECD average of 9.3% (OECD, OECD Stat; OECD, 2015b). However, taking into account the fact that on some indicators Japan is the greyest of all developed countries and has a population mushroom in a later phase, it is impressive how Japan stayed under the OECD average for so long especially as the economic growth was also trailing behind.

At least on a macro level, Japan tamed the storms. Health expenditure grew, but not the way one would expect given the exceptional circumstances. First of all, the cornerstone of cost containment policy, the fee schedule revisions, has been effective. Again, let us first of all set out the logic. When you look at the factors driving health expenditure upwards, you would expect that the fee schedule also has a positive effect. Even if overall prices are cut, we should not forget that at each review new services and drugs are included and that an efficiency test is not used, thus indirectly including new technology as a cost driver. Even if price cuts are helpful in controlling volume and dealing with more expensive new technologies, this does not mean that overall costs are reduced. The exact reason that new technology is a cost driver is that, even after price cuts, it remains more expensive than the old one it gradually

replaces more as patients and doctors look for the best (Ikegami and Anderson, 2012; Ikegami, 2014a).

The efforts of different governments are reflected in the factors increasing medical expenditure¹¹ in Table 4 which provides annual averages of different periods. Obviously, the main upwards effect is given by the ageing of the population, but also other factors, like changed patient behaviour, play a role. During the last decade, the fee schedule, on average, still had a positive effect, although minor. It is especially in the period from 2000-2006 that there has been a clear offset of the increasing cost of ageing through the fee schedule. Between 2000 and 2006, the Koizumi government was almost able to compensate increased expenditure caused by ageing. After 2006, the fee schedule was still easing medical expenditure although less than in previous years. Ever since the economic turmoil hit, the main goal of the fee schedule revisions was cost containment and this indeed has been proven to be very successful.

TABLE 4: FACTORS INCREASING MEDICAL EXPENDITURE 1990-2012

Average annual rate	Population ageing	Fee schedule	Population growth	Other factors	National medical expenditure
1990-2000	+1.6%	+0.5%	+0.3%	+1.5%	+3.9%
2000-2006	+1.6%	-1.2%	+0.1%	+1%	+1.6%
2006-2012	+1.5%	-0.2%	-0.1%	+1.7%	+2.9%

Sources: Own table, data: Oshio, Miake and Ikegami, 2014; Jones, 2009.

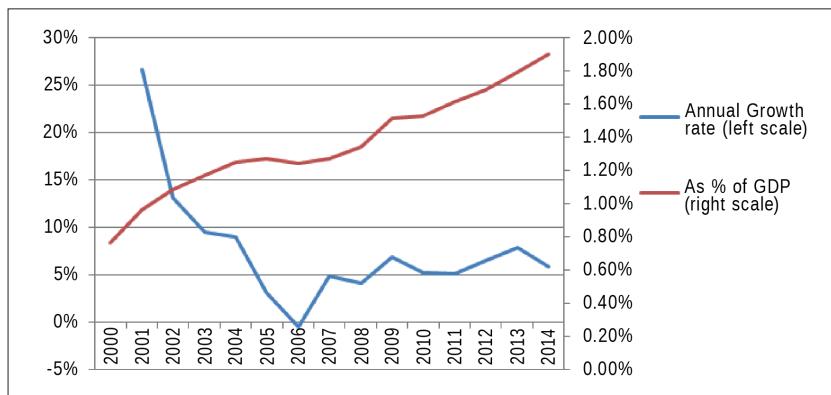
Unfortunately for the Japanese government, measures, outside or inside the fee schedule, used to overcome more structural issues were not as successful. The strongest example is the overall cost of pharmaceuticals. Analysing the areas where the Japanese healthcare budget is consumed, based on the numbers of 2011, it appears that almost 22% of the healthcare budget goes to pharmaceuticals. This last number is high in comparison with other countries and way above the OECD average of 15.9%. Whilst in the last decade, in other developed countries the proportion spent on drugs is going down, in Japan it has gone up from around 19% in 2000. Even if ageing plays a major role, this can at least partially be explained by a failure of the fee schedule to effectively address three other major factors: overpricing of medication,

(11) Note that medical expenditure is not completely the same as health expenditure, which also explains the slight differences in numbers with the aforementioned graphs. It does not include over-the-counter drugs, nor preventive health care measures. In short it includes everything covered by health insurance and the co-payments but excludes what is not covered by health insurance. It is, however, consistently about 80% of total health expenditure.

the low share of generics (11% of the whole drugs market value and 30% of the prescriptions) and overconsumption. Though the fee schedule revisions have foreseen constant overall price cuts for pharmaceuticals, the rise in health expenditure between 2000 and 2012 are for 44% caused by pharmaceuticals (MHLW, 2014b; OECD, 2013; OECD, 2015b; OECD, 2015c). The weakness of the fee schedule to deal with some of the structural issues is linked to the fact that it has to fall back on bonuses and surcharges. The fact is that the bonuses simply do not offset the mark-up that can be made on the brand drugs (Ikegami, 2014a; Jones, 2009). Another weakness is the fact that in lowering costs, if volume goes up it is actually making these pharmaceuticals more attractive.

Likewise, the minor modification of the fee schedule has not proven cost containment effective. The introduction of a DRG system has, until now, not fulfilled the desired effects. The effect on the length of stay is reduced by the fact that for the DRG part a per diem allocation is given and not one general allocation. Overall costs didn't reduce because hospitals simply started shifting to outpatient care for services falling under the DRG system to benefit from the higher FFS fees. Hospitals also responded by overstating the medical condition of patients, thus receiving higher reimbursement fees (Ikegami, 2014a; Hamada, Sekimoto and Imanaka, 2012; Jones, 2009).

The most worrying example of failure to contain costs by attending to structural issues is the long-term care insurance (LTCI). The creation of this system has yet to deliver on its objectives to shift healthcare of the elderly towards home care and homes. At the revision of the LTCI system in 2005, the government planned that there would be 100,000 less long-term care beds in hospitals – financed by general health insurance – by the year 2011. In reality this number barely dropped (Jones, 2009; MHLW, 2014b).

FIGURE 8: ANNUAL GROWTH RATE AND PROPORTION OF GDP OF THE LTCI EXPENDITURE

Source: Own graph, data: MHLW, 2014b; National Institute of Population and Social Security Research, 2015.

Figure 8 shows the LTCI expenditure as a % of GDP and its growth rates. When the LTCI programme had just started up, the annual growth in expenditure was of course high as people started using the system. The expenditure continued to grow over 5%, with an offset by the minor reforms that were brought in 2006. This is above the general healthcare expenditure growth. Similarly, as a proportion of GDP the expenditure has been rising, from less than 1% until 2002, towards 2% as we speak. The major problem is that the LTCI has not substantially shifted healthcare provision for the elderly from hospitals to community care. Rather, it is for the majority an additional system, providing additional services.

The success of cost containment policy can be accounted to the fee schedule reviews. Price cuts were successful in containing costs. However, Japan cannot be said to have successfully attended to cost drivers other than prices.

3.2. SUSTAINABILITY OF THE COST CONTAINMENT POLICY

3.2.1. Financial sustainability

The rising costs in healthcare expenses are putting more and more pressure on government spending. Whereas in 1980 11.7% of the government budget went to healthcare, this is now approaching two-fold (see Table 5). In general, Social Security expenses are increasingly at the expense of the government budget due to a sharp increase, since the early 1990s, in the gap between social insurance contributions and the cost of social security (Ministry of Finance, 2014).

TABLE 5: PERCENTAGE OF STATE SUBSIDY FOR MEDICAL CARE EXPENDITURE IN GOVERNMENT EXPENDITURE FROM 1980 TO 2012

1980	1985	1990	1995	2000	2005	2010	2011	2012
11.7%	12.2%	14.7%	14.7%	14.1%	17.1%	17.7%	18.4%	19.8%

Source: Own table, data: MHLW, 2013.

To a large extent this is of course the consequence of increasing social security costs or healthcare costs linked to ageing. Table 6, however, shows that for a lesser part this is due to the increased share of medical care expenses financed from public resources whilst those from the insurance premiums and co-payments by patients have dropped. The reforms on an organisational level have led to significantly different trends between the different levels of government, insurers and patients. Though the fraction of medical care expenditure depending on the national government has increased, it is surpassed by that of the local level. The increased proportion that is borne by government is in fact largely at the expense of the municipalities whilst employers, patients and insured persons have seen their share dropped. As the massive government debt and the overall prognoses indicate (see infra) this is a trend which needs to be stopped for the system to remain viable.

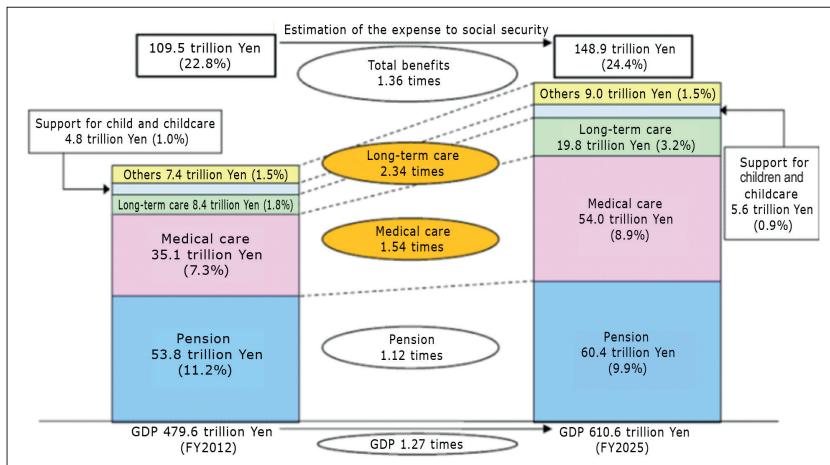
TABLE 6: SOURCES OF MEDICAL CARE EXPENDITURE FROM 2002 TO 2011

In % of total medical expenditure		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Public funding	Total	34.1	35.1	35.9	36.6	36.8	36.8	37.1	37.5	38.1	38.4
	National Government	25.2	25.7	26.2	25.2	24.9	24.8	25.1	25.3	25.9	26.0
	Local Government	8.8	9.4	9.7	11.4	11.9	12.0	12.0	12.1	12.2	12.4
Insurance premiums	Total	51.9	50.0	49.7	49.0	48.8	49.0	48.8	48.6	48.5	48.6
	Employers	21.9	20.9	20.6	20.3	20.1	20.2	20.4	20.3	20.1	20.2
	Insured person (employees + other)	30.1	29.1	29.1	28.7	28.8	28.8	28.3	28.3	28.3	28.4
Other	Total	14.0	14.9	14.5	14.4	14.4	14.1	14.2	13.9	13.4	13.0
	Patient funding	13.9	14.8	14.4	14.4	14.4	14.1	14.1	13.9	12.7	12.3

Source: Own table, data: MHLW, 2012.

Though the increase in health expenditure has been toned down, it will definitely not stop anytime soon. On the contrary, even if absolute increases are less dramatic than in the past and economic growth is a bit higher, healthcare is going to continue to take up a larger part of the Japanese economy. This is a big difference with the pension costs in Japan for instance. As the baby boomers are hitting pension age, especially now, the costs of pensions are close to their peak. Healthcare expenditure will continue to rise as these pensioners get older and need more care (see the population pyramid, Figure 1). The Ministry of Health, Labour and Welfare prognoses that in 2025 public healthcare expenditure will represent 8.9% of GDP and 54 trillion Yen (386 billion EUR) (Figure 9), about the size of the current Austrian, South African or United Arab Emirates economy.

FIGURE 9: SOCIAL SECURITY EXPENDITURE IN 2012 AND 2025



Source: MHLW, 2011b.

The prognoses used depart from an increase of 54% in healthcare costs or just above 3% yearly. The growth rates of healthcare expenditure were on average a bit under 3% yearly between 1992 (when the economic crisis hit) and 2012. There have of course been fluctuations, but if future cost containment policy is effective it is not unreasonable to expect a 3% growth rate annually. Looking towards the future we should, however, take into account both the general healthcare and long-term care costs as the latter are intended to lower the former. If we add the prognoses of the rising costs of the LTCI system to the prognoses of 3% average annual rise of healthcare expenditure, then we are actually looking at a rise of this total envelope by over

4% on average annually (Own calculations, data: National Institute of Population and Social Security Research, 2015; World Bank, Data, GDP). Costs of long-term care will more than double by 2025 (Figure 9). Current experiences prove that the rising costs of this system are a certainty while its goal to offset the rising costs of medical care remains to be proven. As it is a rather new system it will probably still undergo changes, but it seems that the generous services provided under the LTCI scheme might become the cause of some serious headaches at the Ministry of Finance and are undermining long-term sustainability.

The biggest challenge to avoid financial turmoil shall, nonetheless, be economic growth. The prognoses used depart from an economy increased by 27% in 2025. On a yearly basis this supposes an economic growth of almost 2% yearly. The GDP growth rates were, nevertheless, well under 2% on average between 1992 and 2012. On average GDP grew by 0.8% annually during this period. Only in 1996, 2000 and 2004 did the Japanese economy grow a bit more than 2%. Also in 2013 and 2014 these growth numbers were not achieved with respectively 1.6% growth and an actual slowdown of 0.1%. In 2015 recession loomed. If the average of 0.8% were to be maintained, the healthcare and long-term care would eat up over 14% of GDP in 2025, above 2% more than foreseen by the Japanese government. Almost one third of the economy would go to social security in this scenario (Own calculations, data: National Institute of Population and Social Security Research, 2015; World Bank, Data, GDP).

In our focus on economic growth we should, nevertheless, avoid an economic perspective. Some reporters and a rating agency have been talking about Japan entering its third lost decade (Aldrick, 2011; Gibbs and White, 2011). Contrariwise, we agree with the view of Paul Krugman. He points out that the Japanese economy is not doing very well, but that it is not doing as badly as some say and especially not compared to the Eurozone (Krugman, 2014). In a similar exercise as his, we compared the GDP growth rates per working age population. Leaving out the very specific years 2008-2009, but leaving in 2011, this indeed nuances a bit the start of the “third decade of economic crisis in Japan”. The nineties clearly were a lost decade from an economical perspective, but afterwards growth did pick up a bit and was even higher if you put it in comparison to its working age population and thus its potential employees. In fact, growth was 60% higher per working age population between 2010 and 2014 than in general.

TABLE 7: AVERAGE GDP PER WORKING AGE POPULATION GROWTH AND AVERAGE GDP GROWTH

	1981-1991	1992-1999	2000-2007	2010-2014
Average GDP per working age population growth	3.65%	0.70%	2.08%	2.42%
Average GDP growth	4.52%	0.72%	1.52%	1.49%

Sources: Own calculation, data: Ministry of Internal Affairs and Communications, 2014; World Bank, World Development Indicators.

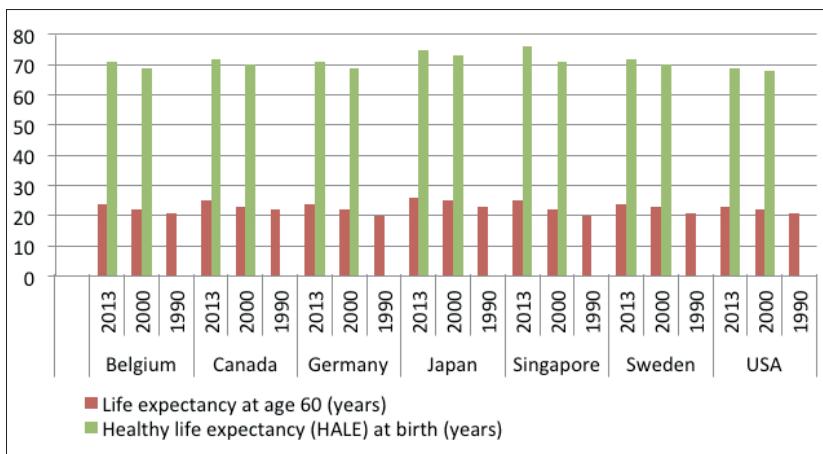
What does this mean? The financial sustainability does not look great especially due to the economic perspectives. One of the main reasons for the more recent and in the middle-term expected economic malaise has not got anything to do with the economy itself but with demography. Even more so in the future, Japan's core problem will probably be more demographic than economic. Working age population is shrinking and there simply are not enough hands and heads to live up to other factors of Japan's production potential. With Japan still refusing a more realistic immigration policy, the financial sustainability question is thus bringing us to the conclusion that it is a big leap in the unknown which depends especially on the Japanese being able to deal with economic issues and keeping people at work for longer. This would actually need good healthcare and makes us wonder if they are getting caught up in a catch 22 situation.

3.2.2. Sustainability from a public health and healthcare quality perspective

a. The healthiest population of the world (women) or nearly (men)

The health of the Japanese is well known and the reason for some western media to propagate the Japanese diet and lifestyle. Sushi and seaweed might indeed explain part of the impressive public health in Japan. But is Japan not also the land of cigarettes, sake and some of the best whiskies in the world? Explaining the health indicators is not that easy.

The perception of the healthy Japanese is confirmed by the most general health indicators. If we look at life expectancy at birth, we notice that Japan saw a steep improvement in life expectancy after the Second World War that lasted until the early 70s. From then on the Japanese continued to live longer increasingly faster than other nations, eventually overtaking them (Ministry of Health, Labour and Welfare, 2014c). Japan is the country with the highest average life expectancy for women in the world and one of the highest for men (WHO, 2014b). Japan is also topping the world ranking of life expectancy at the age of 60 and is contending with Singapore to be the leader in healthy life expectancy at birth (see Figure 10).

FIGURE 10: LIFE EXPECTANCY AT AGE 60 AND HEALTHY LIFE EXPECTANCY (HALE) AT BIRTH

Source: Own graph, data: WHO, Global Health Observatory Data Repository, Life expectancy.

The Japanese are getting healthier compared to the pre-crisis period and do better than the rest of the world. Indeed, cost containment policy, though active for over two decades, cannot be said to have caused a clear health deficit like for instance in Greece. Mental health has seen important negative evolutions since 1990, suicide rates in Japan went steeply upwards just after the crisis and since 2013 suicide is the leading cause of deaths in the working-age population. At least partially this is, however, due to the economic crisis itself and it cannot for sure be linked to cost containment policy. On the contrary, governments have actually reinforced efforts to tackle this and this is having a downward effect on suicide rates in more recent years (MHLW, 2014c).

But of course the healthcare system is only part of the explanation for the overall continuously healthier status of the Japanese. The health of the Japanese has been widely studied and multiple reasons have been identified as a factor.

The first explanation of the general good health of the Japanese lies in the general lifestyle and culture. In ancient history, the Chinese already recognised that the Japanese had a healthy population and that it was linked to their general knowledge that to prevent diseases from spreading, hygiene is important. The care for hygiene has also been assimilated into Japanese Shinto religion through purification rituals (Powell and Anesaki, 1990, p. 15). Furthermore, although alcohol consumption is moderate and smoking is a real problem in Japan, Japanese food is healthier than

the western diet. Likewise, the culture of strong social ties within the Japanese culture might have contributed to the improvement of health as people look after one another (Ikeda et al., 2001; Hooper, 2012).

Second, Japanese seem to spend a lot of time on health. General health screenings are provided at schools, work and municipalities. Since the fifties, the practice of undergoing complete health check-ups has become more and more popular. This popularity only increased as certain employers started to include it in health insurance. These health check-ups are becoming more sophisticated. They started off with basic blood and other tests, but soon included MRI and even PET scans. One can of course question the cost-effectiveness of this, but from a health perspective these tests have helped prevent lifestyle diseases and identify illnesses like cancer at an early stage (Ikeda et al., 2001).

Last but not least, the government worked on the prevention of diseases. In the seventies and eighties, it launched massive preventive campaigns to decrease the use of salt. As a result, its use halved (Ikeda et al., 2001; Hooper, 2012).

In recent years, the important cultural fundamentals of Japan's health surplus are starting to shake. With the upcoming consumption of western food, obesity is rising. Though still lower than in other countries obesity is of special concern as the ethnic Japanese might be genetically more vulnerable (Ikeda et al., 2001; Hooper, 2012).

On the basis of public health, there are no reasons to doubt that the cost containment policy can still be maintained for some time without decaying public health.

b. The trade-off between healthcare quality and cost containment policy

A trade-off between public health and cost containment cannot be established. There are, on the contrary, clear examples of a trade-off with healthcare quality. In practice it is obviously not always possible to prove causality as it is difficult to distinguish between the consequences of austerity policy, the economic crisis itself or completely external variables like the earthquake of 2011. Some issues can, nevertheless, be distinguished.

First off, there are worrying messages being sent from within the medical world about the health of medical personnel itself (Kyodo, 2012): abundance of workload, lack of pay (Nakamura, 2008) and doctors making production line work of patient consultations to gain at least some money (The Economist, 2011). As Table 8 shows, the number of doctors has gradually increased in Japan, just like the number of doctors per 1,000 persons. Despite the continued increase, the number of doctors per 1,000 persons is still under the OECD average by quite a lot. Between 1990

and 2002 it grew by about 2% annually, between 2002 and 2012 this dropped to 1.5%. Knowing that the rapid increase on the demand side is only starting to hit, this indeed points to a lack of doctors in Japan.

TABLE 8: NUMBER OF DOCTORS

	1960	1990	2002	2012
Number of Doctors	103,131	211,797	262,687	303,268
Number of doctors per 1,000 persons	1.03	1.71	2.06	2.38 OECD average: 3.2

Source: Own table, data: MHLW, 2014b; MHLW, 2010; OECD, OECD.Stat.

The general shortage of doctors is a direct effect of cost-containment by the government. To curb rising healthcare expenses, the government has cut medical student quotas by over 7% between 1986 and 2006, hence lowering the number of doctors entering the healthcare arena (Toyabe, 2009). It created a lack of emergency doctors, paediatricians, obstetricians and surgeons. The consequences on the doctors' working conditions is of course evident. On average they work more than 60 hours a week and the deaths of a couple of physicians has officially been recognised as having been caused by the massive workload (Yasunaga, 2008). A survey conducted by Nishimura et al. in 2013 showed that more than 40% of the doctors working on a stroke care department showed signs of burn out, half of which were severe.

The cost cuts were especially felt by doctors working in hospitals. Indeed, the fee schedule inherently provides a situation almost twice as good for their non-hospital private-based colleagues. This was already the case at its creation and has remained an issue. Even the most specialised doctors working at high end hospitals earn less on average than their colleagues in private practice or clinics. Hospital doctors earn about 2.5 times the average overall wage which is fairly low. Though their relative wage did increase a bit between 1990 and 2010, this is no comparison with the extra hours they have been working due to the increased demand (Ikegami, 2014b). This suggests that the reviews of the fee schedule are inducing doctors to work more due to the lower fees, whilst pressure on them is already increasing due to the booming demand.

These budget cuts, worsened by a disequilibrium in the fee schedule, threaten the health of doctors and patients (Ikegami, 2014b; Toyabe, 2009; Yasunaga, 2008). Indeed, it leads to "three minute consultations" and research shows that this lack of capacity leads to refusal of emergency patients in hospitals. In 2007 an estimated 16% of emergency patients with a severe trauma or illness coming in by ambulance at

a hospital were sent away (Ikegami, 2014b; Toyabe, 2009; Yasunaga, 2008; OECD, 2014b, p. 20).

In 2008, the government responded by increasing the quota for medical students and did so again in 2013. Instead of 7,710 possible future doctors annually they are allowing 9,041 each year to try their “luck” (Ikegami, 2014b; Toyabe, 2009; Yasunaga, 2008). This seems too little and is in any case too late. In the coming years, the shortages will only get worse as it takes time to train doctors. In comparison with the OECD average per 100,000 persons, Japan is about 30% short – an impressive 100,000 doctors. Even if healthcare needs did not rise due to ageing and no doctors retired, under current policy it would take at least 10 years to address the shortages somewhat. Indeed, if the Japanese government continues to blatantly refuse a selective immigration policy to solve this, it will get worse before it gets better.

Second, Japan is no exception to rising income inequalities that have been noticed all around the world. Japan is above the OECD average for income inequality (OECD, 2015d), does know poverty, though often hidden, and the myth that everyone in Japan is middle class is slowly but surely being busted (The Economist, 2010). In a study published in 2007, Fukuda et al. proved that health inequality on the basis of income has also gone up. In their study they compare life expectancy and mortality of different income groups on an age-corrected basis. Their study concluded that health inequality decreased for 40 years between 1955 and 1995, but increased between 1995 and 2000. They also noticed that this trend seemed to continue at the beginning of the 21st century.

The reasons for the rising inequality are definitely multifold and not only linked to cost containment policy. The economic crisis, ageing and other socio-economic aspects probably also interfere. But the rise in premiums and co-payments has contributed. In reality, there is evidence of a rising inability of people to pay their premiums (Fukuda et al., 2007). Experts expect that health inequality on the basis of a persons’ financial position will submerge, though probably less visibly than in Western countries (Kagamimori, Gaina and Nasermoadeli, 2009). Yet, further research is needed to bring more clarity.

Last but not least, there is a multitude of structural issues which for political reasons and an overly strong focus on cost containment have not been addressed. As explained earlier on, the most important axis of the cost containment policy of subsequent governments has been the fee schedule. The method to curb spending has been successful and some incentives to address some of the structural issues have been given through the fee system. We already mentioned several of these structural issues: negative consequences of the non-separation of dispensing and prescribing, the absence of clear definitions of general or specialist practitioners and the absence

of barriers between them, the complexity of the health insurance system and the average length of stay that remains high. Most of these structural issues are primarily caused by historical choices (e.g. the no gateway policy) and not the fee schedule or austerity measures. Yet, because of it they seem to have been ignored. Indeed, the fee schedule price cuts have a particular impact on the cost of the healthcare supply price whilst the structural issues are linked to how or by whom healthcare is provided (Hashimoto et al., 2011).

Hashimoto et al. contend that the sole focus on tight price control and reigning inaction towards how services are provided is unsustainable. Like many others, they believe that more profound reforms are needed and will have to follow. They give several reasons. The first one is a changed composition in the Central Social Insurance Medical Council which will discontinue previous policy. Next, the Diagnosis Procedure Combination is actually pulling services outside of the fee schedule system thereby undermining its effectiveness for cost containment. The major part of their paper, however, contends that there has been a major neglect of quality which is becoming increasingly problematic. Health education for instance, remained organised the same way for decades. With no specific definitions or exams for specialists this has led to a complete disequilibrium between supply and demand over the different specialties of physicians and raises doubts over the quality of some.

But how can the excellent health indicators be explained if there are such seemingly major quality issues? Those calling for more radical reforms contend that this can be explained by the fact that the fee schedule, until now, worked rather well for outpatient care and that the quality and motivation of the majority of physicians overthrew the effects of structural problems. In the future this will, nevertheless, not be sufficient in their opinion and we tend to agree.

Indeed, there does seem to be a very basic problem with the primordial method used to solve structural problems. Over and over again, they were addressed by financial incentives through the fee schedule. If incentives need to change physicians' or other actors' ways of doing things (e.g. by prescribing generics or attending hospitals less often for minor health issues) the bonuses need to be able to offset the financial loss or practical obstacles of this changed behaviour. However, unlike in the past, the budgetary room for such policy now seems to have been immobilised by the descent of global revision rates in the fee schedule. The financial bonuses simply are not sufficient and physicians, clinics and hospitals optimise constructions for a maximum benefit. Likewise, the traditional checks and balances have led to a very limited policy of surcharges. Often it concerns only a couple of Euros. This is for instance the case when a patient does not go to a hospital on the basis of a referral. Next to this, the constant price cuts in pharmaceuticals and prices of services being kept low have indeed succeeded in cost containment for the government.

Unfortunately, combined with insufficient obligation to use generics, the cheaper drug and traditionally low hospital service prices have created a drug and hospital overconsuming population which is now getting to an age where it will need even more care. A gentle approach has proven its efficacy in times where there was still at least some budgetary room, however; with a state debt of over 240% the need for the use of obligations and more enforceable measures is growing. In its absence, the whole system could come down.

4. GENERAL CONCLUSION

... and so the Japanese plough on in an attempt to console austerity measures with a highly equal and qualitative healthcare system. They are dealing with wars on many fronts: getting economic growth on track, keeping people at work for longer, lowering debt, containing costs of the healthcare system and maintaining quality of the healthcare system.

This situation is leading to an increasing pressure on the sustainability of the Japanese healthcare system. Financially, unchanged policy would make it hit the brick wall of simply too much government debt. From a health perspective a major crash seems unavoidable if the current policy of cost containment through the fee schedule without fundamental reforms is maintained. After the Koizumi administration the number of articles in Japanese newspapers speaking of the “collapse of medical care” exploded. It was also a major campaign topic in the 2009 elections (Campbell, Ikegami and Tsugawa, 2014) and healthcare reform is a central part of the “Abenomics” of the current government. Unfortunately, there have not been any concrete signs that a cost containment approach through the fee schedule will be complemented with fundamental reforms any time soon. Fundamental reforms, as in the past, are especially discussed and contested, yet, not implemented.

The collapse of the healthcare system in Japan is, nonetheless, not a foregone conclusion. In the absence of radical reforms this has been predicted many times, but the Japanese have proven to have an enormous talent for muddling through economic and demographic crises. Through the fee schedule they have kept a tight reign over their healthcare costs. Patiently and with small steps Japan did try to attend to the structural problems and when any of these small steps had undesired consequences they went at it again, step by step. Through this old approach, some improvements can still be achieved. The extended use of generics, further consolidation of the number of insurers, the reduction of the average length of stay in hospitals, rationalisation in the long-term care insurance scheme, the possibilities of digitalisation and the many potential improvements on the processes and procedures in healthcare provision still leave an awful lot of room for cost reductions without having to resort to radical reforms. Likewise, Japan is still left with some possibilities on the income

side. It could review the very low catastrophic coverage or benefit from the growth of a reinforced industry for advanced medical equipment.

The foremost reason that we believe that this approach is hitting its end game is the utter lack of budgetary room due to the demographic and economic situation. There is only so much the fee schedule can do. Key structural reforms are needed in the organisation of health provision itself. Standard setting laws are needed in order to define general and specialist physicians and the words obligation and prohibition should take a more prominent place on the demand side. Undeniably, the over-consumption of medication and hospital beds, the fact that drugs and services are not judged upon their effectiveness in comparison with alternatives and the lack of doctors cannot be solved without more structural reforms. It has been proven to be inefficient to deal with this through the fee schedule as patients, hospitals and physicians simply look for means to optimise their position.

The sustainability of the system will depend on the ability of political leaders to answer these challenges with appropriate responses. We do not believe that this will need a revolution of the Japanese healthcare system. But it will take courage of politicians to take on some of the strongest lobbies in the country and convince the population of the need for these more radical reforms going against practices, some of which have over 1,000 years of history.

Regrettably for Japan, the part of sustainability that the healthcare system itself can deal with is only limited. Even if all healthcare system concerns are dealt with, this still might not be enough to guarantee its survival. The general state of the economy will determine the fiscal space that is left to pay the bills of the increasing healthcare costs because of the ageing of its population. Cost containment cannot be expected to compensate for the ageing cost. Even apart from humanitarian and political reasons, the most drastic option of reducing quality or equality of its healthcare system is merely an illusion. On the contrary, the healthcare system of Japan has the additional challenge of keeping its population in such a good shape that they can work longer and contribute longer to its healthcare system.

The reform plans of Abe might prove the way forward for Japan. The difficulties for Prime Minister Abe are similar to the ones of Koizumi. Success will depend upon the approval of society and on being on the right side of the economic ambiguity of the proposed measures. If the right balance is found in cost cuts in the fee schedule, increased sales of advanced medical devices, monetary policy and measures on the income side, Abenomics could be a success story. Medical care could become a new growth pole and help the Japanese economy get back on its feet and its population stay healthy. But if Abe overshoots any of his three arrows, public healthcare spending might expand faster or the economy could fall into deep recession, both

deepening the debt and pushing the population to even more saving, thus leading to a downward spiral. If he undershoots any, it would merely be a drop onto a hot plate. All this still leaves open the pure demographic challenge. Japan needs to find a solution for its growing lack of workforce. The very low unemployment rates of Japan are not a blessing. Rather, they point to a lack of people to fill jobs. If an economic immigration policy is not set up, the discussion over cost containment in the healthcare system and economic measures becomes obsolete in the long run as Japan would simply lack enough people to work and contribute to the system.

The world should be watching the outcome of the real life lab test in Japan. Europe and Belgium in particular could learn from the Japanese experiences. Europe is facing ageing, economic crisis, the deflation ghost, an increase in healthcare demand and structural issues in its healthcare systems. Europe is starting to look a lot like the Japan of the 1990s. The most important lesson that we could distil from the Japanese experience up until now is this: do not fix something that is not broken and analyse before you change. One of the major reasons for the success of Japanese healthcare reforms up until recently is the massive amount of work that the Japanese government has put into analysing problems. This way, they have at least the necessary knowledge of the challenges they face. Through the fee schedule they tried to address them and at least on a cost containment perspective this was very successful. Today this does seem to reach its end as the fee schedule should be complemented with other measures to address structural issues. But even after more than 20 years the fee schedule is still an effective method for cost containment and should not be overthrown. Going into a diagnostic categories system has even proved pointless from a cost perspective. Likewise, it would be dangerous for European countries to start radical reforms of healthcare systems which are promising on paper. The outcomes would be unsure and today the major issues are economic ones, comparable to the ones Japan faced during the lost decade. Radical reforms have a tendency to push people to ease consumption and save more, which would worsen the situation for both the economy and the sustainability of the healthcare system. Rather, technical measures should be complemented with gradual structural reforms, the effectiveness of which is evaluated.

Japan deserves a lot of credit for dealing with its demons with incremental step reforms. It has kept its society together and a collapse of its healthcare system has not occurred and might not ever. Then again, if tomorrow the interest rates make a steep increase, its debt ratio could make the whole Japanese economy and Japanese healthcare system meet its Waterloo within a matter of months.

SOURCES

Aoki, M., New ID system for keeping tax tabs, finding cheats, *The Japan Times*, June 11, 2013, retrieved June 1, 2015, from <http://www.japantimes.co.jp/news/2013/06/11/reference/new-id-system-for-keeping-tax-tabs-finding-cheats/#.Vc99VfntlBd>.

Aldrick, P., Will earthquake mean a third lost decade for Japan?, *The Telegraph*, March 15, 2011, retrieved June 19, 2015, from <http://www.telegraph.co.uk/finance/economics/8381291/Will-earthquake-mean-a-third-lost-decade-for-Japan.html>.

Brasor, P. and Rsubuku, M., Uncertainty over negative interest and My Number may spur Japanese to stash more cash at home, *The Japan Times*, February 27, 2016, retrieved March 14, 2016, from <http://www.japantimes.co.jp/news/2016/02/27/business/economy-business/uncertainty-negative-interest-number-may-spur-japanese-stash-cash-home/#.VwjJ24aTtmkp>.

Campbell, J. C., Japan's long-term care insurance program as a model for middle-income nations, in Ikegami, N. (Ed.), *Universal Health Coverage for inclusive and sustainable development: Lessons from Japan*, Washington, DC, The World Bank Publishing and Knowledge Division, pp. 57-67, 2014.

Campbell, J. C. and Takagi, Y., The political economy of the fee schedule in Japan, in Ikegami, N. (Ed.), *Universal Health Coverage for inclusive and sustainable development: Lessons from Japan*, Washington, DC, The World Bank Publishing and Knowledge Division, pp. 101-118, 2014.

Campbell, J. C., Ikegami, N. and Tsugawa, Y., The political-historical context of Japanese health care, in Ikegami, N. (Ed.), *Universal Health Coverage for inclusive and sustainable development: Lessons from Japan*, Washington, DC, The World Bank Publishing and Knowledge Division, pp. 15-26, 2014.

Central Social Insurance Medical Council, website: <http://www.mhlw.go.jp/stf/shingi/shingi-chuo.html?tid=128154> (last consulted on April 14, 2016).

CIA, *World Factbook, Japan*, website: <https://www.cia.gov/library/publications/the-world-factbook/geos/ja.html> (last consulted on August 10, 2015).

CIA, *World Factbook, Median age*, website: <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2177rank.html> (last consulted on August 10, 2015).

CNBC, *Japan's Abe battles doctors' lobby over 'Third Arrow' reform*, Retrieved July 29, 2015, from <http://www.cnbc.com/id/100985726>.

Constitution of Japan, 1946, 2013.

Crisostomo, C., Robots: Japan's future elderly care workers, 2015, retrieved June 5, 2015, from <http://www.vrworld.com/2015/01/22/robots-japans-future-elderly-care-workers/>.

European Commission, Directorate-General for Economic and Financial Affairs, *The 2015 Ageing Report Underlying Assumptions and Projection Methodologies*, Brussels, European Commission, 2014.

Financial Times, *Lexicon. Abenomics*, retrieved July 20, 2015, from website: <http://lexicon.ft.com/Term?term=abenomics>.

Fukawa, T., *Public health insurance in Japan*, Washington, DC, World Bank, 2002, retrieved June 27, 2015, from <http://unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN020063.pdf>.

Fukuda, Y., Nakao, H., Yahata, Y. and Imai, H., Are health inequalities increasing in Japan? The trends of 1955 to 2000, *BioScience Trends*, 1 (1), pp. 38-42, 2007.

Gibbs, E. and White, S., Japan could face a third lost decade, Moody's, Reuters, June 27, 2011, retrieved August 1, 2015, from: <http://www.reuters.com/article/2011/06/27/japan-economy-moodys-idUSL3E7HR0EN20110627>.

Hagström, L., *Diverging accounts of Japanese policymaking*, Working paper for the European Institute of Japanese studies, 2000, retrieved June 23, 2015, from <http://www2.hhs.se/eijswp/102.pdf>.

Hamada, H., Sekimoto, M. and Imanaka, Y., Effects of the per diem prospective payment system with DRG-like grouping system (DPC/PDPS) on resource usage and healthcare quality in Japan, *Health policy*, 107, pp. 194-201, 2012

Hashimoto, H., Ikegami, N., Shibuya, K., Izumida, N., Noguchi, H., Yasunaga, H. et al., Cost containment and quality of care in Japan: is there a trade-off?, *Lancet*, 378, pp. 1174-1182, 2011.

Hooper, R., Obesity on the rise as Japanese eat more Western-style food, *The Japan Times*, March 12, 2012, retrieved July 7, 2015, from <http://www.japantimes.co.jp/news/2012/03/11/national/science-health/obesity-on-the-rise-as-japanese-eat-more-western-style-food/#.VdOCbvntlBd>.

Ikeda, N., Saito, E., Kondo, N., Inoue, M., Ikeda, S., Satoh, T. et al., What has made the population of Japan healthy?, *The Lancet*, 378 (9796), pp. 1094-1105, 2011.

Ikegami, N. and Campbell, J. C., Health care reform in Japan: the virtues of muddling through, *Health affairs*, 18 (3), pp. 56-75, 1999.

Ikegami, N. and Campbell, J. C., Japan's health care system: containing costs and attempting reform, *Health affairs*, 23 (3), pp. 26-36, 2004.

Ikegami, N., Yoo, B., Hashimoto, H., Matsumoto, M., Ogata, H., Babazono, A. et al., Japanese universal health coverage: evolution, achievements, and challenges, *Lancet*, 378, pp. 1106-1115, 2011.

Ikegami, N. and Anderson, G. F., In Japan, All-payer rate setting under tight government control has proved to be an effective approach to containing costs, *Health Affairs*, 31 (5), pp. 1049-1056, 2012.

Ikegami, N., Controlling health expenditures by revisions to the fee schedule in Japan, in Ikegami, N. (Ed.), *Universal Health Coverage for inclusive and sustainable development: Lessons from Japan*, Washington, DC, The World Bank Publishing and Knowledge Division, pp. 69-100, 2014a.

Ikegami, N., Factors demining the allocation of physicians in Japan, in Ikegami, N. (Ed.), *Universal Health Coverage for inclusive and sustainable development: Lessons from Japan*, Washington, DC, The World Bank Publishing and Knowledge Division, pp. 119-132, 2014b.

Japan Health Insurance Association, *Health insurance premiums for the fiscal year 2012 will change*, 2012, retrieved July 20, 2015, from <http://www.kyoukaikenpo.or.jp/g3/cat330/sb3130/h24/1993-91726> (Japanese only).

Japanese Pharmaceutical Association, *Annual report of JPA 2014-2015*, 2015, retrieved August 5, 2015, from http://www.nichiyaku.or.jp/e/data/annual_report2014e.pdf.

Jones, R. S., *Health-care reform in Japan: controlling costs, improving quality and ensuring equity*, Paris, OECD Publishing, 2009, retrieved July 22, 2015, from [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?doclanguage=en&cote=eco/wkp\(2009\)80](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?doclanguage=en&cote=eco/wkp(2009)80).

Kagamimori, S., Gaina, A. and Nasermoaddeli, A., Socioeconomic status and health in the Japanese population, *Social Science & Medicine*, 68, pp. 2152-2160, 2009.

Kaplan, R. D., Interview of December 14, 2012, Robert D. Kaplan on the Rise of Asia, retrieved June 25, 2015, from <https://www.stratfor.com/video/robert-d-kaplan-rise-asia-agenda>.

Kawabuchi, K., Payment systems and considerations of case mix--are diagnosis-related groups applicable in Japan?, *Pharmacoeconomics*, 18 (1), pp. 95-110, 2000.

Krugman, P. and Obstfeld, M., *International economics: theory & policy*, Seventh Pearson International edition, Boston, Pearson Education, 2006.

Krugman, P., *The return of depression economics and the crisis of 2008*, New York, W. W. Norton & Company, 2009.

Krugman, P., Notes on Japan, The New York Times Opinion Pages, October 28, 2014, retrieved June 18, 2015, from http://krugman.blogs.nytimes.com/2014/10/28/notes-on-japan/?_r=1.

Kyodo, Nearly half of Japan's doctors in poor health or worried about physical, mental state: survey, *The Japan Times*, November 19, 2012, retrieved July 2, 2015, from <http://www.japantimes.co.jp/news/2012/11/19/national/nearly-half-of-japans-doctors-in-poor-health-or-worried-about-physical-mental-state-survey/>.

The Mainichi (Japan), *Overall medical fees to be cut by 0.84 percent in fiscal 2016 revision*, December 19, 2015, retrieved April 2, 2016, from http://mainichi.jp/english/articles/20151219/p2a/00m/0na/015000c_12.

Matsuda, S., Ishikawa, K. B., Kuwabara, K., Fujimori, K., Fushimi, K. and Hashimoto, H., Development and use of the Japanese case-mix system, *Eurohealth*, 14(3), pp. 25-30, 2008.

Matsuda, R., The Japanese Health Care System, in Mossialos, E., Wenzl, M., Osborn, R. and Anderson, C. (Eds.), *International Profiles Of Health Care Systems 2014*, New York, The Commonwealth Fund, 2014.

MHLW, *Survey of medical institutions*, 2010, retrieved July 15, 2015, from <http://www.mhlw.go.jp/english/database/db-hss/smi.html>.

MHLW, *National medical expenditures, FY 2011*, 2011a, retrieved June 2, 2015, from <http://www.e-stat.go.jp/SG1/estat>List.do?lid=000001115498> (Japanese only).

MHLW, *Future projection of costs required for social security*, 2011b, retrieved June 5, 2015, from http://www.mhlw.go.jp/english/social_security/dl/social_security02.pdf.

MHLW, *Estimates of National Medical Care Expenditure, FY 2012*, Statistic Table, 2012, retrieved June 12, 2015, from http://www.mhlw.go.jp/english/database/db-hss/enmce_2012.html.

MHLW, *Annual health, labour and welfare report 2012-2013*, 2013, retrieved July 5, 2015, from <http://www.mhlw.go.jp/english/wp/wp-hw7/index.html>.

MHLW, *Service Guide 2014*, 2014a, retrieved July 5, 2015, from http://www.mhlw.go.jp/english/org/pamphlet/dl/pamphlet-about_mhlw.pdf.

MHLW, *Annual health, labour and welfare report 2013-2014*, 2014b, retrieved July 5, 2015, from <http://www.mhlw.go.jp/english/wp/wp-hw8/>.

MHLW, Vital statistics of Japan 2014, Database, 2014c, retrieved July 25, 2015, from <http://www.mhlw.go.jp/english/database/db-hw/vs01.html>.

Miller, J. H., Will the real Japan please stand up, *World Policy Journal*, 22 (4), pp. 36-46, 2006.

Ministry of Finance, *Japanese public finance fact sheet 2014*, 2014, retrieved July 7, 2015, from <http://www.mof.go.jp/english/budget/budget/fy2014/factsheet2014.pdf>.

Ministry of Health and Welfare, *Isei 50 Nenshi* (Fifty years of medical care in Japan), Tokyo, Ministry of Health and Welfare, 1925 (as cited in Powell and Anesaki, p. 27, 1990).

Ministry of Internal Affairs and Communications, *Current population estimates as of October 1, 2014*, 2014, website: <http://www.stat.go.jp/english/data/jinsui/2014np/index.htm> (last consulted on August 10, 2015).

Ministry of Internal Affairs and Communications, Local Administration Bureau, website: <http://www.soumu.go.jp/english/lab/> (last consulted on July 29, 2015).

Nakamura, A., Hospital doctors feeling the strain. Punishing workload, threat of litigation and little reward, *The Japan Times*, April 12, 2008, retrieved 5 July, 2015, from <http://www.japantimes.co.jp/news/2008/04/12/national/hospital-doctors-feeling-the-strain/#.VdBZJfntlBd>.

Nishimura, K., Nakamura, F., Takegami, M., Fukuhara, S., Nakagawara, J., Ogasawara, K. et al., Cross-Sectional Survey of Workload and Burnout Among Japanese Physicians Working in Stroke Care, *Circ Cardiovasc Qual Outcomes*, 7, pp. 414-422, 2014.

National Institute of Population and Social Security Research in Japan, *Population Projections for Japan (January 2012): 2011 to 2060*, 2012, retrieved June 24, 2015, from http://www.ipss.go.jp/site-ad/index_english/esuiken/ppf2012.pdf.

National Institute of Population and Social Security Research in Japan, *Social security in Japan*, 2014, retrieved June 5, 2015, from <http://www.ipss.go.jp/s-info/e/ssj2014/PDF/ssj2014.pdf>.

National Institute of Population and Social Security Research in Japan, *The financial statistics of social security in Japan*, 2015, retrieved June 20, 2015, from <http://www.ipss.go.jp/ss-cost/e/fsss-12/fsss-12.asp>.

Nikkei Asian Review, Japan becomes a new frontier, July 6, 2015, retrieved July 15, 2015, from <http://asia.nikkei.com/Business/Trends/Japan-becomes-a-new-frontier>.

OECD, *Health at a glance 2013*, Paris, OECD Publishing, 2013.

OECD, *Generic Pharmaceuticals*, note by the delegation of Japan, 2014a, retrieved August 5, 2015, from http://www.jftc.go.jp/en/int_relations/oecd.files/GENERICPHARMACEUTICALS.pdf.

OECD, *OECD Reviews of Health Care Quality: Japan, raising standards*, Paris, OECD Publishing, 2014b.

OECD, *OECD Economic Outlook 2015*, Paris, OECD Publishing, 2015a.

OECD, *OECD Economic Surveys: Japan*, Paris, OECD Publishing, 2015b.

OECD, *OECD Health Statistics 2015*, Country note Japan, 2015c, retrieved August 2, 2015, from <http://www.oecd.org/els/health-systems/Country-Note-JAPAN-OECD-Health-Statistics-2015.pdf>.

OECD, *In it together: why less inequality benefits all*, Paris, OECD Publishing, 2015d.

OECD, OECD.Stat., website: <http://stats.oecd.org/> (last consulted on August 2, 2015).

Okamoto, E., *Farewell to free access: Japan's universal health coverage*, 2014, retrieved August 5, 2015, <http://www.eastasiaforum.org/2014/02/22/farewell-to-free-access-japans-universal-health-coverage/>.

Oshio, R., Miake, N. and Ikegami, N., Macroeconomic context and challenges for maintaining Universal Health Coverage in Japan, in Ikegami, N. (Ed.), *Universal Health Coverage for inclusive and sustainable development: Lessons from Japan*, Washington, DC, The World Bank Publishing and Knowledge Division, pp. 27-40, 2014.

Otake, T., Who is paying the price of health care?, *The Japan Times*, March 14, 2006, retrieved July 30, 2015, from http://www.japantimes.co.jp/life/2006/03/14/lifestyle/who-is-paying-the-price-of-health-care/#article_history.

Otake, T., Competing interests converge on health care price-setting panel, *The Japan Times*, February 29, 2016, retrieved April 12, 2016, from <http://www.japantimes.co.jp/news/2016/02/29/reference/competing-interests-converge-on-health-care-price-setting-panel/>.

Pharmaceuticals and Medical Devices Agency, *Profile of Services 2014-2015*, 2015, retrieved August 5, 2015, from <http://www.pmda.go.jp/files/000151997.pdf>.

Powell, M. and Anesaki, M., *Health care in Japan*, New York, Routledge, 1990.

Prime Minister of Japan, *Japan revitalization strategy: Japan is back*, 2013, retrieved July 25, 2015, from http://www.kantei.go.jp/jp/singi/keizaisaisei/pdf/en_saikou_jpn_hon.pdf.

Prime Minister of Japan, *Japan revitalization strategy: Japan's challenge for the future*, 2014, retrieved July 25, 2015, from <http://www.kantei.go.jp/jp/singi/keizaisaisei/pdf/honbunEN.pdf>.

Sekimoto, M. and Li, M., The medical insurance system in Japan, in Japan National Committee for Pacific Economic Cooperation (JANCPEC), *Towards a more resilient society: lessons from economic crises, report of the social resilience project*, Tokyo, The Japan Institute of International Affairs, pp. 85-107, 2010.

Sho, R., Narimatsu, H. and Murakami, M., Japan's advanced medicine, *BioScience Trends*, 7 (5), pp. 245-249, 2013.

Statistics Japan, Portal Site of Official Statistics of Japan, Ministry of Internal Affairs and Communications, Population Estimates Monthly Report, website: <http://www.stat.go.jp/english/data/jinsui/tsuki/index.htm> (last consulted on 10/08/2015).

Takaku, R., Bessho, S., Nishimura, S. and Ikegami, N., Fiscal disparities among social health insurance programs in Japan, in Ikegami, N. (Ed.), *Universal Health Coverage for inclusive and sustainable development: Lessons from Japan*, Washington, DC, The World Bank Publishing and Knowledge Division, pp. 41-57, 2014.

Tatara, K. and Okamoto, E., Japan Health system review, *Health Systems in Transition*, 11 (5), pp. 1-164, 2009.

Teehankee, J., *Been There, Done That: Southeast Asian Response to the Global Financial Crisis*, paper presented at the Workshop on Global Financial Crisis and its impact on Asia, Hoi An, Vietnam, April 23-25, 2009, retrieved June 29, 2015, from [http://www.academia.edu/7265958/_Been_There_Done_That_Southeast_Asian_Response_to_the_Global_Financial_Crisis_](http://www.academia.edu/7265958/_Been_There_Done_That_Southeast_Asian_Response_to_the_Global_Financial_Crisis_.).

The Economist, *Japan: Reform in tangles*, March 21, 2002, retrieved June 30, 2015, from <http://www.economist.com/node/1048017>.

The Economist, *Social change in Japan: When the myths are blown away*, August 19, 2010, retrieved June 30, 2015, from <http://www.economist.com/node/16843681>.

The Economist, *Health care in Japan: Not all smiles*, September 10, 2011, retrieved June 30, 2015, from <http://www.economist.com/node/21528660>.

The Economist, *Japan's economy: About that debt*, November 18, 2014a, retrieved June 30, 2015, from <http://www.economist.com/blogs/freeexchange/2014/11/japans-economy-0>.

The Economist, *The battle for Japan*, June 28, 2014b, retrieved June 30, 2015, from <http://www.economist.com/news/asia/21605929-shinzo-abes-fight-reshape-japans-economy-and-society-entering-new-phase-battle-japan>.

The Economist Graphic Detail, *Falling Blossom, Japan in graphics*, December 15, 2014, retrieved June 30, 2015, from <http://www.economist.com/blogs/graphicdetail/2014/12/japan-graphics>.

The Huffington Post, *7 Things Japan Can Teach You About Living A Long, Healthy Life*, October 11, 2014, retrieved August 2, 2015, from http://www.huffingtonpost.com/2014/11/10/japan-long-healthy-life_n_5876866.html.

The Japan News, *Nursing care reform to hit major firms*, August 10, 2015, retrieved August 12, 2015, from <http://the-japan-news.com/news/article/0002346923>.

The Japan Times, *Medical reforms for an aging nation*, February 17, 2014, retrieved June 14, 2015, from <http://www.japantimes.co.jp/opinion/2014/02/17/editorials/medicalreformsforanagingnation/>.

Toyabe, S., Trend in geographic distribution of physicians in Japan, *International Journal of Equity in Health*, 8 (5), 2009.

United Nations, Department of Economic and Social Affairs, Population Division, *World Population Ageing 2013*, New York, United Nations, 2013.

Vogel, E. F., *Japan as Number 1: Lessons for America*, New York, Harper & Row Publishers, 1979.

Warnock, E., Japan welfare minister at odds with Abe administration over pension fund, *The Wall Street Journal*, January 22, 2015, retrieved June 30, 2015, from <http://www.wsj.com/articles/japan-minister-wants-safe-gpif-investments-1421890526>.

World Bank, Data, GDP, website: http://data.worldbank.org/indicator/NY.GDP.MKTP.CD?order=wbapi_data_value_2014+wbapi_data_value+wbapi_data_value-last&sort=desc (last consulted on August 10, 2015).

World Bank, World Development Indicators, DataBank, website: <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators> (last consulted on August 10, 2015).

WHO (World Health Organization), *Japan turning a corner in suicide prevention*, 2014a, retrieved July 21, 2015, from http://www.who.int/mental_health/suicide-prevention/japan_story/en/.

WHO (World Health Organization), *World health statistics 2014*, Geneva, WHO Press, 2014b.

WHO (World Health Organization), Global Health Observatory Data Repository, Life expectancy, website: <http://apps.who.int/gho/data/node.main.3?lang=en> (last consulted on August 10, 2015).

Yasunaga, H., The Catastrophic Collapse of Morale among Hospital Physicians in Japan, *Risk Management and Healthcare Policy*, 1, pp. 1-6, 2008.

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