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OECD Journal on Budgeting

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Foreword

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Economic and fiscal management under the Democratic Party of Japan (DPJ) administration

The success and failure of the budget institution reform in Japan

by
Hideaki Tanaka*

Japan experienced a major change of government in September 2009. It was a remarkable political event, because Japanese politics was dominated by the Liberal Democratic Party (LDP) in almost all the years following the end of World War II. The new coalition government led by the Democratic Party of Japan (DPJ) tried to overhaul and restructure public administration and policy making in order to strengthen political leadership. In particular, they wanted to reform budgetary institutions as they fully recognised the LDP governments' wasted public money that brought about huge fiscal deficits. They introduced new medium-term fiscal targets and planning, programme reviews, and tax expenditure report, and legislated laws to increase the rate of consumption tax from 5% to 10%. However their reforms were not successful as expected and ended in larger fiscal deficits. This paper analyses the economic and fiscal management of the DPJ Administration and why they couldn't succeed in reforming budgetary institutions.

JEL classification: D72, D73, H50, H61, H62, H83

Keywords: Japan, budgeting, fiscal discipline, medium-term fiscal planning, programme review, ageing

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1. Introduction

In the 45th House of Representatives election in August 2009, the Democratic Party of Japan (DPJ) achieved a historic landslide victory, increasing its seats from 115 seats they held before the official announcement of the election to 308 which is nearly two thirds of the total 480. Meanwhile, the Liberal Democratic Party (LDP) decreased its seats from 300 to 119, losing their position as the leading party in the House of Representatives for the first time since they came to power in 1955. It was the first non-LDP government since the administration of Morihiro Hosokawa who came to power after the July 1993 House of Representatives election, and the first time since the end of World War II that a party not directly affiliated with the LDP single-handedly won a majority and established an administration. It can be said that the birth of the DPJ administration proved that the rules of democracy were functioning properly in Japan. The public had high hopes and expectations for the DPJ administration. However, as symbolised by the fact that the Prime Minister switched every year from Yukio Hatoyama to Naoto Kan to Yoshihiko Noda, the administration had difficulty staying in control of the government. In the end, the DPJ suffered a catastrophic defeat in the House of Representatives election of December 2012, and the administration came to close after three years and three months.

The DPJ, in its manifesto for the 2009 Lower House election, promised to formulate a budget framework through a newly established institution called the National Strategy Unit, eradicate wasteful spending of tax money and secure revenues, allocate resources based on priorities, increase fiscal transparency, and promote growth through increased social welfare. In short, they envisaged a scenario in which they would cease wasteful spending through politician-led budget formulation rather than budget formulation based on bureaucratic control, use revenues to strengthen social security and promote economic growth. Therefore, we must review such points as whether or not the DPJ succeeded in realising politician-led budget compilation, changed the institution of budget compilation and allocation, and maintained fiscal discipline, as well as how the economy was affected. In this paper we will analyse the outcome of economic and fiscal management by the DPJ administration and review both its success and failures.

This paper is divided in the following sections: Section 2 is an overview of the economy and public finance management based on various data; Section 3 evaluates the results of the actual budget compilation and reform of budget institution; Section 4 analyses the growth strategy and consumption tax increase; Section 5 concludes this article.

2. Economy and public finance

2.1. *Political ambition for structural reform*

The DPJ manifesto for the 2009 Lower House elections stated, “True politics means setting priorities in policymaking and spending” and “Based on this new scale of priorities, we will restructure the budget and focus the use of taxpayers’ money on childrearing and education, on pensions and medical care, on regional sovereignty, and on employment and

the economy”. In order to achieve this, the DPJ said that it would establish a “National Strategy Unit” to formulate the budget framework and an “Administrative Reform Council” to scrutinise all budgets and programmes, and make use of Cabinet committees to co-ordinate difficult issues. In the section describing detailed policies, the manifesto outlines policies concerning budget accounting and institutions and lists such steps as: “abolish or review special accounts, independent administrative institutions and public service corporations”; “establish a ‘Government Procurement Oversight Commission’ and review government procurements”; “disclose the budget compilation process to the public as a basic rule”; “require by law that financial statements be submitted to the Diet”; and “review the effectiveness of tax expenditures and make the tax system more transparent”.

At the start of the administration, leading members of the DPJ indicated that it would be easy to finance a lot of commitments in the manifesto. In a press conference on the day he assumed power on 16 September 2009, Prime Minister Yukio Hatoyama said, “We will launch the Government Revitalisation Unit right away. I ask all ministries and agencies to forge ahead in an effort to radically cut wasteful spending. I am confident that we will be able to cut JPY 7 trillion in the first fiscal year.” Even in November, Finance Minister Hirohisa Fujii told the Diet, “With regard to budget compilation, we will co-ordinate with the Government Revitalisation Unit to fundamentally re-examine all budgets and programmes and create new revenues in order to realise the major commitments outlined in the manifesto roadmap. By doing so, we will maintain fiscal discipline and secure the confidence of the government bond market” (House of Representatives Financial Affairs Committee, 11 November 2009).

Let us look back on how different the result of fiscal management was from these lofty goals along with developments in the economy by reviewing related figures.

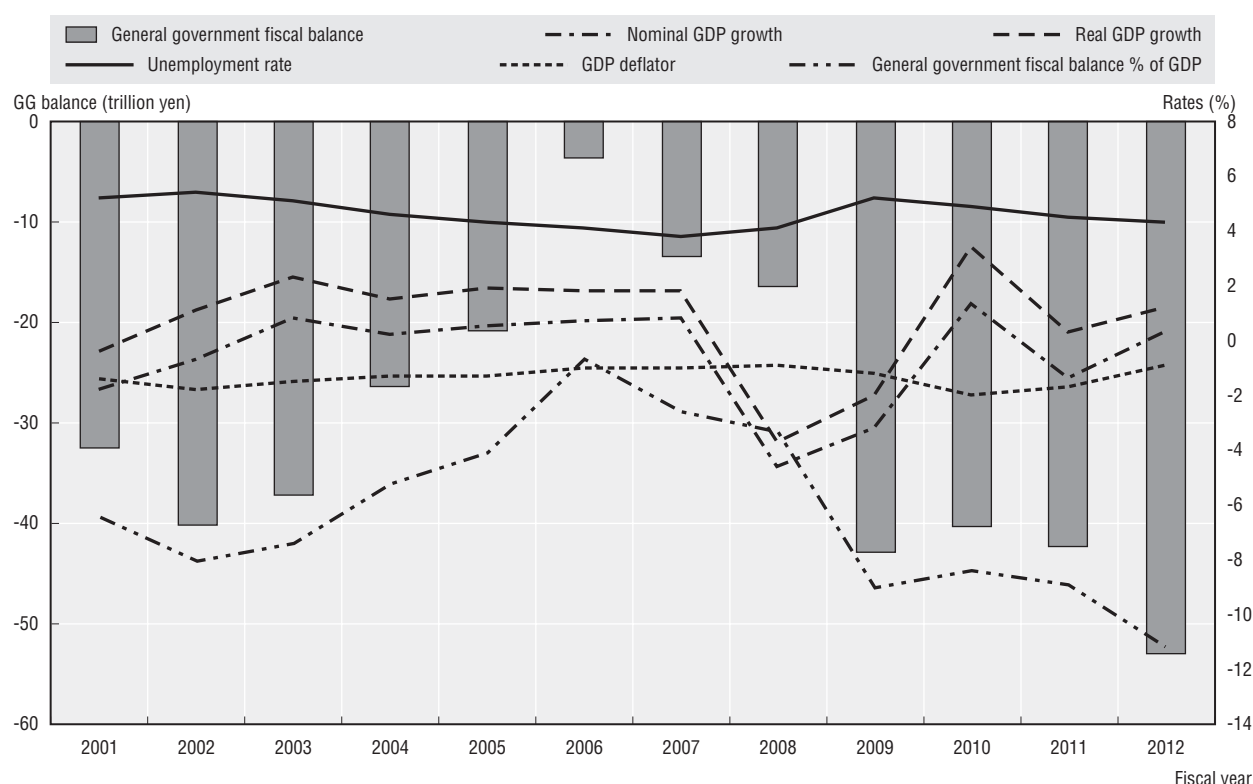
2.2. Dramatic swings in the economy

One of the misfortunes of the DPJ administration was the economic recession triggered by the collapse of Lehman Brothers in the fall of 2008 and the growing fiscal deficit it inherited from the previous administration. The Japanese economy made a sharp turn in 2008-09, and then fluctuated widely in response to the Great East Japan Earthquake and shifts in the world economy (Figure 1).

The economy bottomed out in March 2009 and then started to pick up. After the real GDP growth rate registered minus 4.1% (from the previous quarter) in the January-March 2009 period, it turned upward and mostly stayed in the mid 1% range until the July-September 2010 period. Although growth in fiscal year FY2009 was negative like the previous fiscal year, the real growth rate in FY 2010 substantially surpassed the government economic outlook of 1.4% (Cabinet decision on January 22, 2010) and reached 3.4%. The nominal growth rate, which was expected to be around 0.4%, was 1.3%.

If the economic recovery had continued smoothly, the DPJ administration may have been evaluated differently. However, due to the Great East Japan Earthquake, the real growth rate dropped to minus 2% in the January-March quarter of 2011. Later, government investment for restoration and reconstruction after the disaster as well as government consumption picked up, and the economy returned to positive growth for three consecutive periods from the July-September quarter of 2011. However, the results of FY2011 as a whole were downwardly revised from the government economic outlook of 1.5% to 0.3% (Cabinet decision on January 24, 2011). In FY2012, reconstruction demand from

Figure 1. Major economic and fiscal indicators



Source : Cabinet Office (2012) and Statistics Bureau of Japan, "Labour Force Survey".

the earthquake pushed the economy toward recovery, but the trend did not last long. Due to effects of the world economic slowdown and other factors, the economy returned to negative growth in the April-June and July-September periods in 2012.

During the administration, the range of drop of consumer prices narrowed (zero in FY2011), but the GDP deflator, which shows the difference between real growth and nominal growth, was minus 1-2%, and deflation continued.

After the Lehman crisis, the Nikkei Stock Average bottomed out in February 2009 (monthly average of daily figures at JPY 7 695). The highest point during the administration was recorded in April 2010 (JPY 11 140). After that, although there were some fluctuations, it continued on a downward trend until October 2012 (JPY 8 827) when the administration was coming to a close. In the exchange market, the appreciation of the yen continued from JPY 120.6 to USD 1 in January 2007 (monthly average of daily figures) through most of the duration of the administration, and recorded JPY 77.2 to USD 1 in August 2011. Reflecting the economic stagnation and continuing deflation, long-term interest rates (nominal interest rate of newly issued 10-year government bonds) dropped almost consistently from 1.9% in July 2007 to 0.7% in December 2012.

2.3. General government fiscal deficit over JPY 40 trillion

Next, we will review changes in the general government fiscal deficit in order to grasp the overall fiscal condition. In recent years, the fiscal deficit of the general government was the smallest in FY2006 at JPY 3.6 trillion¹ and has gradually expanded since then. Due to enormous public spending by the Aso administration in response to the Lehman crisis, the

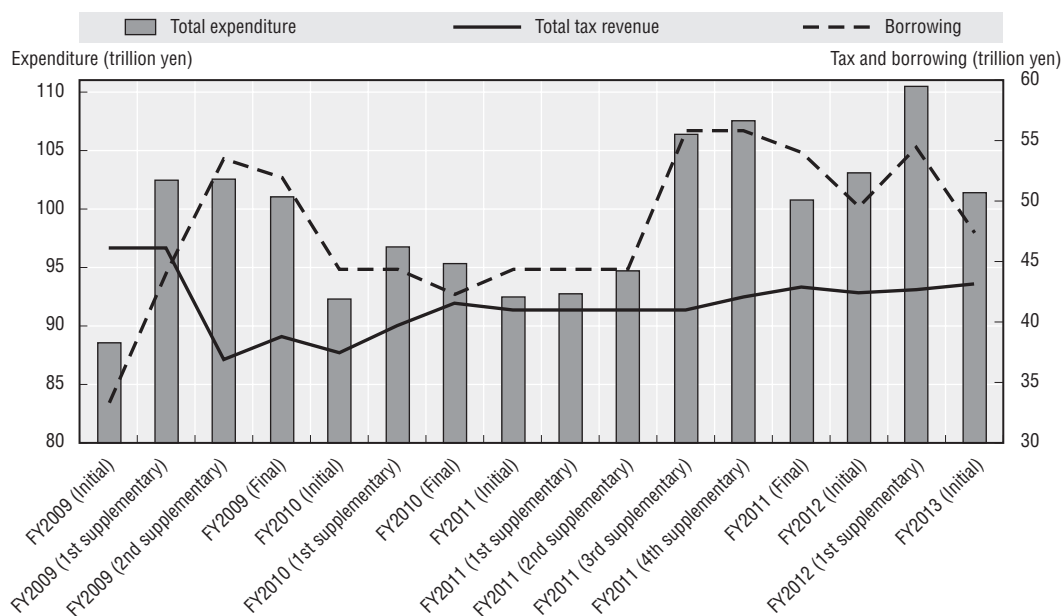
fiscal deficit worsened dramatically and hit JPY 42.9 trillion in FY2009 (Figure 1). In FY2010, the deficit decreased by almost JPY 2.5 trillion. However, the deficit continued to exceed JPY 40 trillion during the DPJ administration.

The deficit definitely decreased in FY2010, but when seen against the recovery of the nominal growth rate (from minus 3.2% in FY2009 to plus 1.3% in FY2010), the decrease is not that significant. There is one noteworthy reason for this. If we exclude the effects of economic fluctuations and look only at the fiscal deficit caused by the government's discretionary policies, which is called "cyclically adjusted deficit" or "structural deficit", the figure for 2010 is 7.6% (against potential GDP), which is worse than 7.3% in the previous year.² In other words, the deficit due to government discretionary policy was larger in 2010 when the DPJ administration compiled the budget for the first time than in 2009 when huge economy-boosting measures were taken by the Aso administration. This shows that the DPJ administration worsened the fiscal balance further.

2.4. Expansion of the General Account

Now let us look at how the General Account of the central government has changed (Figure 2).³ The FY2010 and 2011 total annual expenditures (initial) compiled by the DPJ increased by about JPY 4 trillion compared to FY2009, the last year of the LDP administration. On the other hand, revenue from taxation and stamps decreased by JPY 5-9 trillion. For this reason, issuance of government bonds increased by about JPY 10 trillion, and was around JPY 44 trillion for both years. The total General Account annual expenditure (final settlement), expanded to about JPY 101 trillion in FY2009 due to economy-boosting measures by the Aso administration and then dropped to JPY 95.3 trillion in FY2010, but in the two following years, due to reconstruction expenditures and other factors, the figure rose again to levels exceeding JPY 100 trillion.

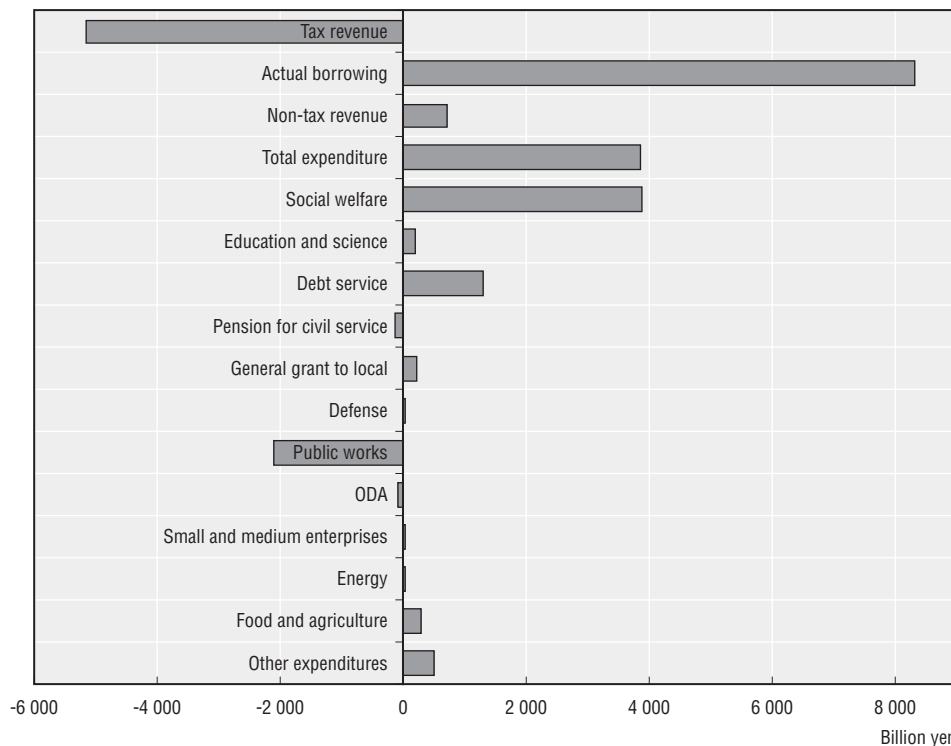
Figure 2. Aggregate figures in the General Account



Source : Ministry of Finance Japan, "Budget Paper" and "Final Account".

Next we will look at how the content of revenues and expenditures changed. Since reconstruction-related budgets were appropriated from the FY2011 supplementary budget, to see the changes excluding the reconstruction-related spending, we will compare the initial budgets for FY2009 and FY2011 (Figure 3). The real deficit increased by JPY 8.3 trillion in two years,⁴ but if we look at the breakdown, there was a JPY 5.2 trillion drop in tax revenue and a JPY 3.9 trillion increase in annual expenditure. Broadly speaking, public works spending were cut to finance the increases in national debt service payments and other expenditures, but the social security-related JPY 4 trillion increase led to the overall annual expenditure increase. Although it includes natural increases in social security expenditures such as one due to population ageing, the rest of the increase is clearly due to new policies set forth by the DPJ administrations.

Figure 3. **Changes in expenditures and revenues of the General Account from FY 2009-FY2011**

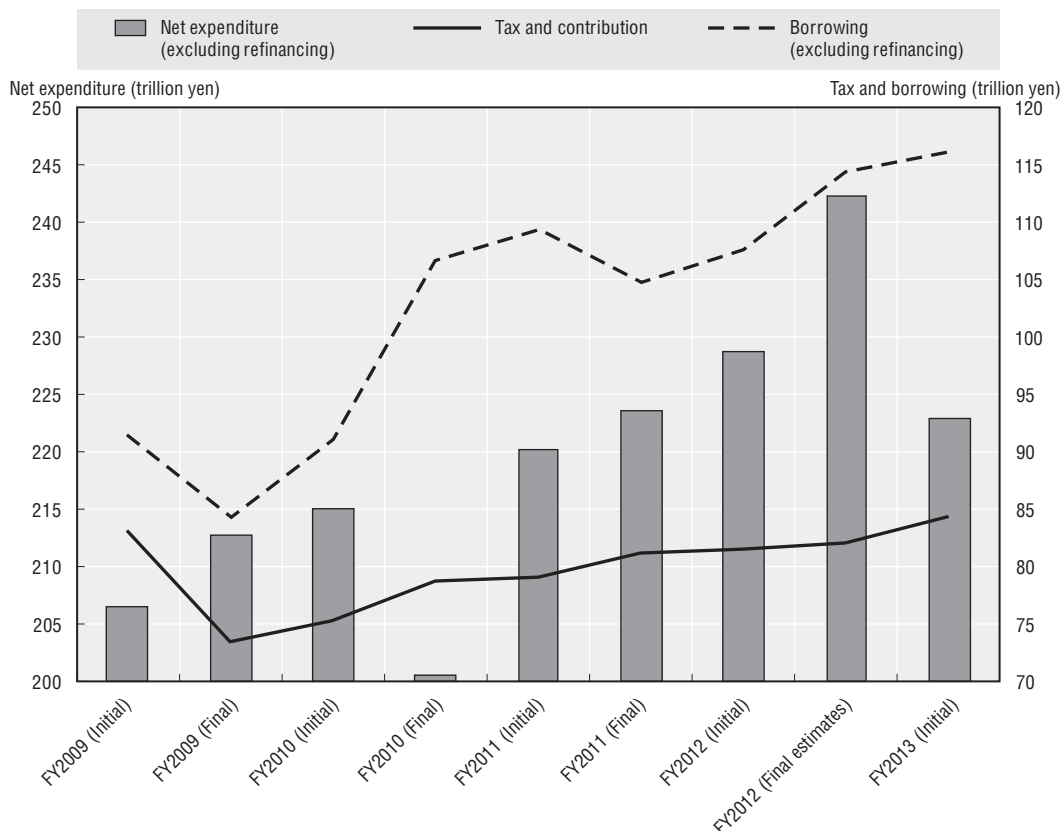


Source : Author's estimates based on Ministry of Finance Japan, "Budget Papers".

Similarly, if we compare the initial budgets for FY2009 and FY2010, real deficit increased by JPY 12 trillion in FY2010. If we look at the breakdown, tax revenues decreased by JPY 8.7 trillion and annual expenditure increased by JPY 3.8 trillion. If we compare the initial budgets, the tax revenue in FY2010 dropped as much as JPY 9 trillion, and so the increase in the issuance of government bonds may have been unavoidable. However, if we look at the settlement of the same fiscal year, tax revenues increased by approximately JPY 3 trillion from the results of the previous fiscal year, and rose by approximately JPY 4 trillion compared to the initial budget, but the issuance of government bonds decreased by only JPY 2 trillion from the initial budget. This shows that instead of using the entire amount of windfall tax revenue to reduce the amount of bonds, the administration compiled a supplementary budget and used up a part of the windfall tax revenue.⁵

In what areas was the amount spent? Let us look at the changes in the ratio of major expenditures to the total annual expenditure in the General Account excluding contingency reserves (Figure 4). Staying true to the slogan “from concrete to people”, the ratio of social security-related expenditure is actually higher in the initial budget (from 28.5% in FY2009 to 32.5% in FY2011), but it is not that much higher on the final settlement basis (from 28.4% in FY2009 to 29.6% in FY2011 and 29.7% after amendment in FY2012). This shows that although the slogan “from concrete to people” was followed through in the initial budget, much of the spending was routed to purposes other than social security in the supplementary budget that was compiled in the middle of the fiscal year.

Figure 4. **The ratio of major expenditures to the total expenditure in the General Account**

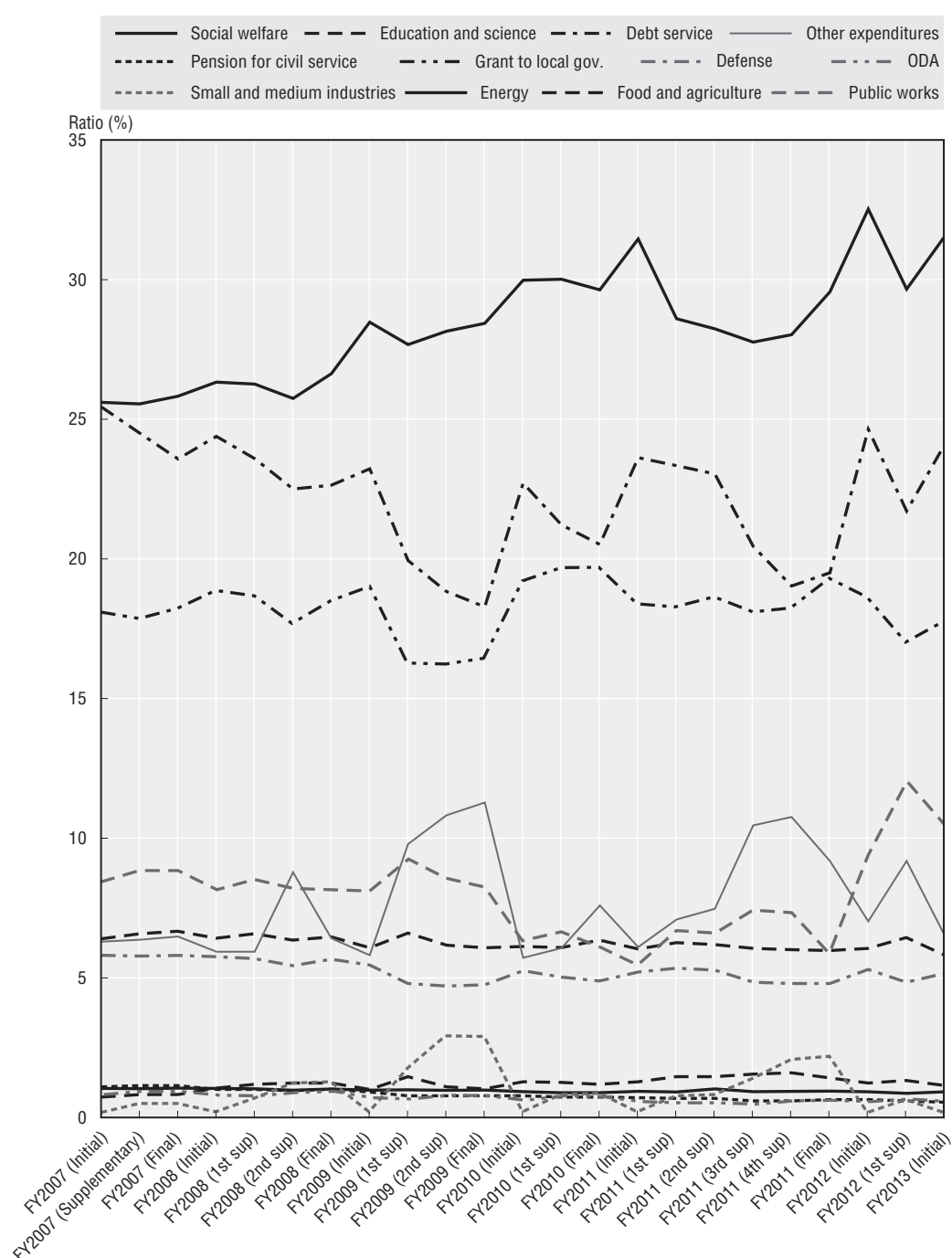


Source : Author's estimates based on Ministry of Finance Japan, “Budget Papers”.

2.5. Net total of general and special accounts

The decrease of tax revenues in FY2009 was caused by the recession, thus the DPJ administration was not responsible for it. However, as we have seen up to this point, there is no mistake that the annual expenditure as a whole has expanded. In order to examine the annual expenditure of the entire country, we will look at the changes in the total (net total) excluding overlapping transactions between general and special accounts (Figure 5).

The net total of annual expenditures in FY2010 (initial budget-basis) was approximately JPY 9 trillion higher than the previous fiscal year. Similarly, the initial budget for FY2011 was approximately JPY 5 trillion more than the previous fiscal year.

Figure 5. **Consolidated aggregates of the General Account and Special Accounts**

Source : Ministry of Finance Japan, "Budget Papers" and "Final Accounts".

Moreover, the initial budget for FY2012 was JPY 8.5 trillion higher than the previous fiscal year. The DPJ administration had announced that they would look at both the general and special accounts to refigure the entire budget, but the annual expenditure net total increased from the first fiscal year.

Next, on a consolidated basis including both general and special accounts, we compared the breakdown of the annual expenditures in the FY2009 settlement and the

FY2011 settlement. In two years, public works projects-related expenditures decreased by JPY 2.8 trillion. However, there were increases in the social security-related expenditure (JPY 1.7 trillion), national debt service payments (JPY 7.1 trillion), Local Allocation Tax which is a general block grant to local governments (JPY 3.7 trillion), and fiscal investment and loans (JPY 3.5 trillion). There was a noticeable rise in fiscal investment and loans despite the fact that the DPJ set the goal of cutting down on special accounts.

3. Budget compilation and budget institution reform

3.1. Accounting gimmicks on the revenue side

The biggest weakness of the DPJ administration was securing resources to implement the manifesto. Koji Matsui who was a member of the upper house and a Deputy Cabinet Secretary of the Hatoyama administration looked back on the process of designing the manifesto. “In the final stage, when it was deliberated by the Next Cabinet as a formality, I pointed out the weakness in the plan to secure resources, but my opinion was not considered. Mr Hirohisa Fujii, who is very experienced, asserted that we will be able to find the resources once we take over the reigns of government, and he was very persuasive.” (Yakushiji 2011)

The DPJ conducted a mid-term review of its manifesto in August 2011, and admitted that there were problems in the manifesto itself. Meanwhile, they listed several reasons for not being able to secure enough financial resources, such as the drop in tax revenues due to the recession, but the explanations did not carry much conviction. As we saw in the previous section, this is because the annual expenditure increased under the DPJ administration even though they had said that they would look at both the general and special accounts to refigure the entire budget. It had become known by September that in FY2009, the cumulative General Account tax revenue from April to July decreased 23.4% from the same period of the previous fiscal year.⁶ In other words, it was clear before the start of the administration that there was going to be a large drop in tax revenues, but leaders of the administration boasted that it would be easy to secure resources, thus the decrease of tax revenues is unrelated to the effort to secure resources. We have also pointed out that when tax revenues started to pick up, much of the spending was allocated to purposes other than social security that had little to do with the manifesto. Furthermore, the manifesto had not considered such issues as the approximately JPY 1 trillion annual natural increase of social security costs and the additional JPY 2.5 trillion necessary to increase the share of government contribution to the basic pension funds to 50%. Even if the details could not be worked out in the manifesto, when they took control of the government, the DPJ should have looked at the total picture of revenues and expenditures and thought about the order of priority of the tasks outlined in the manifesto, while taking into account the conditions surrounding the securing of resources.

When Noda reshuffled his Cabinet, a document entitled “The situation of securing financial resources after the change of government” was posted on the Prime Minister’s office website. It is explained in this document that JPY 14 trillion in FY2010, JPY 10.9 trillion in FY2011, and JPY 7.7 trillion in FY2012 was secured as financial resources. Noda himself gave a similar explanation at a Lower House plenary session (May 11, 2012). However, these figures represent the total of non-tax revenues including not only resources developed by the DPJ but also pre-existing resources such as surplus of the Bank of Japan.

Moreover, these figures include the so-called hidden funds (*maizoukin* in Japanese), but digging into these reserves will aggravate the fiscal condition and is the same as issuing deficit-financing government bonds. Explanations such as “financial resources have been secured through hidden funds” have been used from the times of the LDP administration, but this is a way of deceiving the public. The DPJ said in its manifesto that they will secure JPY 16.8 trillion of financial resources, but the amount of permanent financial resources (annual expenditure cuts and tax reform) they secured is only about JPY 4 trillion, according to the aforementioned document released by the Prime Minister’s office.

Next, we will overview how budgets were compiled by the DPJ administration.

3.2. The Hatoyama administration – The challenge of the manifesto budget

The starting point of the first budget compilation for FY2010 was the basic policy of budget compilation determined at the government-ruling coalition summit meeting on 28 September 2009. Here, it was decided that the budgetary request guideline including expenditure ceilings established by the Aso administration will be abolished and the requests for budgetary appropriations submitted by the ministries will be discarded in order to start with a clean slate. At the same time, it was decided that the budget would be compiled within the year, and so the administration faced the difficult task of incorporating manifesto-related items in the budget in a short amount of time. Above all, after the ceiling was removed, the ministries demanded large increases in their budgets using the manifesto as an excuse. In such a situation, a full-scale “programme review process” was introduced on a national level for the first time on 11 November. Although it was expected to be effective, it was insufficient in terms of securing resources.

As discussions went on about whether the manifesto-related budget or fiscal discipline should take precedence, the new issuance of government bonds became the focal point. The Prime Minister and other key Cabinet members had different opinions about whether or not it should be kept below JPY 44 trillion as the deficit of the General Account, and it proved difficult to iron out the differences. In the end, the total annual expenditure of the General Account swelled up from JPY 88.5 trillion in the previous fiscal year to JPY 92.3 trillion. The JPY 44 trillion framework for government new borrowing was maintained, but it was managed by using hidden reserves and other methods to manipulate the books in the same way as the days of the LDP administration. To begin with, the JPY 44 trillion target itself was based on the figure that had bloated up as a result of the supplementary budget of the Aso administration, and should have been questioned. The expenditure for public works in the General Account was cut by 18.3% compared to the initial budget for the previous fiscal year, and the promise of “from concrete to people” was fulfilled to a certain extent.

Budgets requests from relevant interest groups that were traditionally made at the end of the year during the LDP administration was managed thoroughly by Ichiro Ozawa, secretary-general of the DPJ. Seiji Maehara, who was then the Minister of Land, Infrastructure, Transport and Tourism, looked back on this time. “Although it was said that the policy would be determined by the government rather than the ruling party, budget requests came from the party in the name of policy demands. I thought this was inappropriate. Chief Cabinet Secretary Hirano told us that the demands from the party should be signed by each responsible minister, but I didn’t sign.”

3.3. The Kan administration – A budget based on Fiscal Management Strategy

In concurrence with the compilation of the FY2010 budget, the Hatoyama administration moved on with discussions about the budget institution reform. Two advisory councils (to be discussed later) were set up under the leadership of Naoto Kan, Deputy Prime Minister and State Minister for National Strategy, and plans for setting fiscal consolidation targets and a mid-term fiscal framework were proposed.

Based on these proposals, the Kan administration, which started in June 2010, took a Cabinet decision regarding the Fiscal Management Strategy on 22 June. The strategy was to halve the primary deficit of the general government excluding social security fund from FY2010 levels by FY2015 and bring the deficit down to zero by FY2020,⁷ to limit the total expenditure of General Account in FY2011 (excluding national debt service payments) to under JPY 71 trillion (this is the framework for the annual expenditure in the initial budget for FY2010), and to design a mid-term fiscal framework for the three years starting from FY2011.⁸ This became the starting point for the compilation of the FY2011 budget.

The budgetary request guidelines for the FY2011 budget that was decided in July included a decision to cut expenditures related to policy measures (excluding national debt service payments, social security costs, etc.) by 10% as a basic rule and to allocate the resources to the growth strategy and manifesto-related budgets by introducing “Special Allocation to Bring Vigour Back to Japan” (surpassing JPY 1 trillion). With regard to the special allocation, a “policy contest” was held in which ministries presented their policies to compete for funds. Minister for National Strategy Koichiro Genba served as chairman of the evaluation meeting composed of relevant Cabinet ministers.

The FY2011 budget was the first budget that the DPJ administration was involved in from the beginning, but the DPJ continued to struggle with securing resources for manifesto-related policies such as the new child allowance system. Although the administration kept to the mid-term fiscal framework that was set up in June, it was a budget that was managed by the use of hidden reserves and other accounting gimmicks.

3.4. Noda administration – Party-led budget compilation

The involvement of party members became stronger in the compilation of the FY2012 budget that was prepared by the Noda administration, and the manner of budget making became closer to that of LDP. For example, the budget requests made by ministries would be discussed and approved at party sectoral meetings that corresponded to each ministry. In addition, a budget compilation consultation meeting of the government and the ruling parties was established, consisting of relevant Cabinet members and the chairmen of the policy research councils of the DPJ and the People’s New Party.

The party was not the only institution involved in budget compilation. The National Strategy Conference that was established in November also participated and put together a proposed framework for the basic policy of budget compilation on 12 December 2011. The involvement of the National Strategy Unit and the Cabinet committee became less significant as many players took part in the process, including the Ministry of Finance, the Summit Meeting of the government and DPJ, the Budget Meeting of the government and the ruling parties, and the National Strategy Conference.

The basic policy for budget compilation was mostly the same as the previous fiscal year. It included securing financial resources by cutting expenditures related to policy measures excluding personnel expenses and others by 10% as a basic rule, creating a

special allocation, setting a JPY 71 trillion limit for the General Account annual expenditures, and keeping the new issuance of government bonds to under JPY 44 trillion.

The total amount of the FY2012 General Account was JPY 90.3 trillion (minus 2.2% compared to the initial budget of the previous fiscal year). However, this is because a part of the government contribution to the basic pension funds was financed by a special measure, rather than general revenue and the budget for reconstructing disaster areas hit by the earthquake was transferred to the special account. If these annual expenditures are included in to the General Account, the total amount will reach JPY 96.7 trillion. In other words, the FY2012 budget hit the initial numerical targets by using accounting techniques to dress up the balance sheet. Moreover, large-scale public works projects such as the new Shinkansen lines and an outer ring road for the Tokyo metropolitan area were revived, shaking up the DPJ slogan of “from concrete to people”.

3.5. Attempts for fiscal discipline and transparency of the budget

As described above, the DPJ administration could not succeed in restructuring the budget and ended up increasing the annual expenditure. However, the DPJ originally placed emphasis on fiscal discipline and criticised the fiscal management of the LDP administration, which issued excessive economy-boosting measures through public works projects and created a huge fiscal deficit.

The DPJ first made this apparent when they put a freeze on the execution of the 1st supplementary budget for FY 2009, which was compiled by the Aso administration. By taking steps such as putting a freeze on public works projects, the administration secured JPY 2.7 trillion, and decided to use these funds for the 2nd supplementary budget under the Hatoyama administration. But Shizuka Kamei, leader of the DPJ's minor coalition partner, the People's New Party, requested a 2nd supplementary budget of JPY 11 trillion yen. It was Deputy Prime Minister Kan who protested, saying that these were “conventional economy-boosting measures”. Kan and Kamei continued to clash with regard to the scale and the Cabinet decision on the economic measures was postponed. In the end, however, the increase from the government's initial plan was kept at JPY 100 billion, and on 8 December 2009, a Cabinet decision was taken on a JPY 7.2 trillion economic policy package.

The next initiative was the budget screening process, called “programme review”. The Government Revitalisation Unit was in charge of the programme review and explained the programme review, saying, “It is a process to review programmes and projects in a public forum and include outside points of view to review each programme and project and to discuss whether it is necessary, increasing the transparency of the process of reviewing the budget”.

The first programme review was conducted over nine days at the gymnasium of a government organisation in Shinjuku, Tokyo. A large audience gathered each day to listen in on discussions, which were transmitted live over the Internet. According to a survey conducted by the Yomiuri Shimbun in December 2009, 71% of the public had positive views about the programme review.

Later, the programme review was expanded to the special accounts as well as independent administrative agencies and public policies, and was conducted four times by November 2011. Moreover, from 2010, “programme review by each ministry” was conducted as well. This was a process in which each government department conducted programme review by themselves. The government departments produced a “review sheet”

for each of the programme they were responsible for to explain the purpose of the programme and how the budget would be used. In total, more than 5 000 review sheets were prepared across the government. Later, there were criticisms that the budget for reconstruction following the Great East Japan Earthquake was used inappropriately, but that was discovered because of the review sheet.

Although there are arguments for and against the programme review, its greatest contribution is that problems in the budget compilation process were identified. The programme review showed that although there are many institutions that investigate the budget such as the Ministry of Finance that assesses the budget, the Ministry of Internal Affairs and Communications that evaluates the programmes, and the Board of Audit and the Diet Audit Committee that audit the budget post hoc, they are not able to eliminate wasteful budget spending and inefficient use of taxes. Issues that were not apparent during the long-term administration of the LDP had been uncovered.

With regard to tax reform as well, the DPJ conducted a sweeping review of the methods from the LDP era. In order to execute government-led tax reform, the DPJ abolished the former tax commission that consisted of a panel of experts, and set up a new tax commission composed of vice ministers of government departments and chaired by the finance minister. This Government Tax Commission deliberated and put together the Act on Increasing the Transparency in the Application of Tax Expenditures (enacted March 2010). This made it possible to assess the effect of tax expenditures that are applied to certain industries for a specified duration, such as tax cuts for research and development. Under this law, applicable corporations were obliged to attach a “detailed statement of application” when filing income tax returns, and include such information as the type of special measure that was utilised and the applicable amount. This was a big step forward.

The National Strategy Unit and the Cabinet committee were also proposed as methods of politician-led fiscal management. Despite these initiatives, however, sufficient resources could not be secured. The reason for this, to put it briefly, was that the design of the system was too superficial and there was no leadership to operate the system. Let us attempt to evaluate each factor.

3.6. Limitations of the programme reviews

The DPJ administration tried to secure the manifesto budget through the programme reviews but did not always get the results they had hoped for. In the first round of programme review, 447 programmes were reviewed, and it was determined that it was possible to cut approximately JPY 740 billion from the requested budgets by abolishing and reviewing certain programmes. It was reported that the result of the programme review, including the return of funds from public service corporations and independent administrative institutions, was approximately JPY 1.6 trillion (*Asahi Shimbun*, 12 December 2009). Meanwhile, according to a report issued by the Ministry of Finance entitled “Review of Annual Expenditures and Revenues through the Government Revitalisation Unit’s Programme Review and Other Initiatives” (January 2010), when the results of efforts other than the programme review are included, expenditure cuts of approximately JPY 1.3 trillion at the time of budget requests, expenditure cuts of approximately JPY 1 trillion after the budget requests were realised, while approximately JPY 1 trillion of revenues was secured, and the total of approximately JPY 3.3 trillion was reflected in the FY2010 budget.

Although it is undeniable that efforts were made to secure resources through the programme review, the results were not as significant as the leading members of the DPJ were initially expecting. The programme review was originally developed at the municipality level and was aimed at not only securing resources but also including citizens in the process of budget compilation and improving transparency. Hideki Kato, who was the father of the programme review and a member of the executive office of the Government Revitalisation Unit at the time, was sceptical about the programme review as a means of securing resources. “The fundamental purpose of the programme review is to enhance the transparency of national programmes and the use of budgets. By discussing the budgets in a public forum, we can restrain politicians and bureaucrats who want to protect their established interests. Many of the budgets such as social security budgets are determined by the laws, and so we need institutional reforms based on a philosophy and strategy in order to cut these budgets. Politician-led budget compilation means that instead of the budget being managed by bureaucrats, politicians take an initiative to change laws and regulations”, Kato said.

Then what approach should have been taken instead? A useful reference is Canada, which succeeded in fiscal consolidation in the 1990s through a method called “Programme Review”.⁹ Canada first took a top-down approach to set reduction targets in spending for each ministry and agency. Some reduction rates were two digits and differed greatly depending on the ministry, ranging from 5% to 60%. After the Cabinet approved the expenditure cut target, the specific methods of expenditure cut were left up to each ministry and agency. The ministries themselves abolished policies and cut expenditures according to the criteria of programme review. In other words, the ministers of each ministry became “finance ministers”.

In the Japanese programme review, target figures for reduction were not set for each ministry and agency. Therefore, the ministries and agencies co-operated with related legislators and organisations and focused their attention on protecting their budgets. In the beginning, Prime Minister Hatoyama told the ministers to become “finance ministers” but this instruction was not followed.

In one case, the DPJ administration actually took an approach similar to Canada. It was the public works expenditure in the Ministry of Land, Infrastructure, Transport and Tourism budget for FY2010. Sumio Mabuchi was the Senior Vice Minister of Land, Infrastructure, Transport and Tourism at the time. “Instructed by Minister Maehara to cut the budget by 15%, the pale-faced secretary-general rushed to my office. But I told him to cut the budget by 20%. Lost for words, he left the room. Only the Road Bureau was able to achieve the 20% cut, and the other bureaus didn’t reach the target. In this way, I used the psychology of bureaucrats to achieve the 15% reduction.” This is an example of politician-led setting of reduction targets.

The programme review later evolved into the programme review by ministry, which is conducted by government departments themselves. Although this was an important step forward, it was not enough to change the traditional budget compilation process in a significant way. Micro-level initiatives such as programme reviews should have been incorporated into budget compilation to reform the entire process, but such a reform was not implemented, as we will discuss below.

3.7. National Strategy Unit-led budget compilation

The National Strategy Unit, which was one of the symbols of the DPJ, was aimed at thoroughly reviewing the budget compilation process. The introduction of the legislation to establish the Strategy Unit and the related Diet proceedings was much delayed, and the DPJ administration was finally forced to give up on the bill. One of the reasons for this is that the concept of compiling budgets through the National Strategy Unit was not fully developed. The bill to set up the National Strategy Unit (Cabinet decision, February 2010) prescribes that the administration of the National Strategy Unit will be excluded from the responsibilities of the Assistant Chief Cabinet Secretary, and the two are in a kind of competitive relationship. It was difficult to divide responsibilities between the state minister for national strategy and the chief cabinet secretary. The two have actually fought for control of the social security system reform.

The realisation of such differences in opinion about the roles and functions of the national strategy “unit” that was set up by the Hatoyama administration was a step backward in efforts to enhance politicians’ power in the handling of government affairs. Yoshito Sengoku, who was then the Minister of State for Civil Service Reform, said, “The image for the National Strategy Unit was unclear. We were not sure if it would be something similar to the Council on Economic and Fiscal Policy or if it would function as a policy unit.” If that was the case, perhaps they should not have forced the establishment of a new organisation that they had different opinions about. It could have been more sensible to utilise existing organisations to surely and steadily make progress on a budget system reform like the one that will be described later.

These disagreements and conflicts within the DPJ were favourable to the Ministry of Finance, which did not want the National Strategy Unit to take control of budget compilation. In the budget for FY2011, which was the first budget fully compiled by the DPJ administration, the National Strategy Unit was not included in the process of deciding important strategies such as budgetary request guidelines, and the Cabinet Secretariat and the Ministry of Finance carried out the compilation of the budget in the conventional manner. Hideki Takada, who was a member of the National Strategy Unit, stresses the role the National Strategy Unit played in establishing medium and long-term fiscal frameworks such as the fiscal management strategy and the mid-term fiscal framework. However, with regard to the compilation of annual budget, he says the National Strategy Unit was falling short of playing the role of “the control tower” in the budget compilation process (Takada, 2012:36).

3.8. Cabinet Budget Committee

Holding the key to politician-led budget compilation was the Cabinet Budget Committee. “Politician-led” means the Prime Minister and the ministers are co-ordinating the compilation of budgets instead of bureaucrats. Table 1 shows details of the Cabinet committees. In terms of the number of meetings that are held, certainly the largest number of Cabinet committee meetings is related to budget compilation, accounting for about half of the total. The largest number of meetings was held during the Kan administration, but this was because budgetary request guidelines were drawn up in the summer, and the meetings were not significantly more frequent than during the Hatoyama administration. The meetings were noticeably less frequent during the Noda administration. During the Noda administration, the Budget Compilation Consultation Meeting of the Government and the Ruling Parties was also established, and the Cabinet Budget Committee lost its substance.

Table 1. **The number of holdings of Cabinet committees**

Name of committee	Hatoyama	Kan	Noda	Total
Budget	9 (29 m)	12 (23 m)	6 (17 m)	27 (24 m)
Global warming	8 (50 m)	2 (46 m)	2 (21 m)	12 (44 m)
Basic policies	7 (40 m)	0	0	7 (40 m)
Economic partnership	1 (39 m)	2 (71 m)	1 (42 m)	4 (56 m)
Economic affairs	0	4 (27 m)	0	4 (27 m)
Defense and others	4 (25 m)	0	0	4 (25 m)
Total	29 (37 m)	20 (31 m)	9 (21 m)	58 (32 m)

Note: Parentheses suggest the average duration per one meeting (minutes).

Source: Author's estimates based on Prime Minister's schedule in Japanese news papers.

The Cabinet Budget Committee often followed certain formalities, and it did not necessarily play the role of co-ordinating differences in opinion and solving conflicts regarding the budget with a top-down approach. To be exact, the administration did not utilise the Cabinet committee so that it will function properly. In UK and Australia, for example, budget-related Cabinet committees function as a platform for a small number of Cabinet members such as the Prime Minister and the finance minister to solve disputes and make decisions concerning the budget, but it was not such a platform in Japan. A Cabinet committee should have co-ordinated manifesto-related budgets such as allocations for a child allowance system. In order for the Cabinet committee to gain authority as a system, the administration should have communicated to people inside and outside the government its policy of handling disputes and problems concerning the budget through the Cabinet committee, and actually carry out its words.

3.9. *Expectations and results of budget institution reform*

At the outset, the DPJ administration had high ideals about the budget and fiscal issues. The Review Council on Budgeting was held under the leadership of Naoto Kan, Deputy Prime Minister and State Minister for National Strategy. In addition to Kan, National Strategy Unit head Motohisa Furukawa, Senior Vice Minister of Finance Yoshihiko Noda, Parliamentary Secretary of Cabinet Office Keisuke Tsumura, and Keio University Professor Yoshihiro Katayama participated. I was also invited by Kan to participate. At the time, I was taking a study leave of absence from the Ministry of Finance and lecturing at Hitotsubashi University. The review council met four times by mid-October 2009 and drafted a "Summary of Issues" that would serve as a basic blueprint for budget institution reform (that was later adopted as a Cabinet decision). The pillars of the summary are as follows:

1. A top-down approach to budget compilation with a view to medium-term perspective.
2. Dramatically improving the transparency and visibility of the budget compilation and implementation processes.
3. Elimination of the wasteful spending, such as using up budgets by the end of the fiscal year.
4. Place strong focus on results by introducing a system to set clear policy targets.

In order to realise these proposals, The Review Council on Mid-Term Fiscal Management was established at the end of January 2010. It consisted of seven politicians including Minister of State for National Strategy Yoshito Sengoku; Deputy Chief Cabinet Secretary Koji Matsui; National Strategy Unit head Motohisa Furukawa; Senior Vice

Minister of Finance Yoshihiko Noda; and six experts (Keio University Associate Professor Eisaku Ide, Keio University Professor Yoshihiro Katayama, BNP Paribas Securities Chief Economist Ryutaro Kono, Keio University Professor Takero Doi, Chuo University Professor Toshiki Tomita, and myself). The results of the review were compiled in a “Summary of Issues” in April. The main points of the summary are as follows:

1. The fiscal consolidation plan should be based on a cautious economic outlook.
2. Fiscal consolidation targets should be set for both fiscal revenue and expenditure and the outstanding balance of government bonds.
3. Introduce rules of fiscal management such as a top-down approach to budget compilation and a “pay-as-you-go” principle (to secure revenues for new policies).
4. Produce a mid-term fiscal framework to fix expenditure ceilings for the next three years.

These reform proposals were following the trend of budget institution reforms in other countries (Tanaka, 2011). A part of the proposals from the two review councils were realised, such as medium-term fiscal plans on cautious economic growth forecasts. As a whole, however, the proposals did not lead to a fundamental reform of the budget system. An idea of setting clear strategic policy targets was adopted by the Cabinet but was not actually introduced. With regard to a mid-term fiscal framework, a “baseline” was not introduced despite strong recommendations from review council members.

An estimate of mid-term expenditures and revenues should have been made based on existing policies and the latest economic data. This would serve as the baseline. Next, annual expenditures and revenues would be planned so that fiscal consolidation targets can be met. In response to economic fluctuations, the baseline would be revised every six months, and the results of fiscal policy and the progress toward targets would be reviewed. Such methods of forecasts and reviews were proposed in the aim of reforming the fundamental mechanism of budget compilation in this country, but the Ministry of Finance opposed such reforms because they would not be able to use conventional methods of compiling budgets through bargaining with politicians and manipulation of supplementary budgets and accounts.

Tanaka (2013) underlines the importance of budget institution reform because weak budget institution is the main reason why Japan fails to consolidate public finance.¹⁰ Even though the DPJ administration started to reform budget institution, they lacked the strong political will to enforce it despite the reluctance of the Ministry of Finance.

4. Growth strategies and reform of tax and social security economic growth through social welfare

From the start, the DPJ administration was criticised for lacking a macroeconomic policy. The manifesto spends very few words on economic and fiscal policies, although it expresses its intent to pursue economic growth through social welfare in the words “Hope will be born in the hearts of people who no longer feel anxiety about their lives, and their positive spirits will give impetus to the nation as a whole”.

In December 2009, three months after the DPJ gained power, efforts to work out a growth strategy began. Deputy Prime Minister Kan announced in a press conference on 11 December that under instructions of Prime Minister Hatoyama, an economic growth strategy would be compiled by the end of the year. A council on the formulation of a strategy for economic growth (with Prime Minister Hatoyama as chairman, the entire Cabinet as members, and the

National Strategy Unit as the executive office) was established on 15 December, and the Cabinet issued an outline for the growth strategy on 30 December.

Then, immediately after the start of the Kan administration, the Cabinet published the New Growth Strategy on 18 June 2010. The strategy was based on the principles of “strong economy”, “strong fiscal administration” and “strong social security”. Instead of “the first approach” of relying on public works projects as the basis of economic policy, or the second approach based on excessive market fundamentalism, the new strategy outlined a “third approach” of building sustainable public finance and social security systems and establishing a safety net for livelihood security in order to create jobs and dispel the public’s uncertainty over their future prospects. This approach was advocated by Mr. Kan, who as Finance Minister spoke to the House of Representatives’ Committee on Financial Affairs (24 February 2010). “The social security area goes beyond simply helping people in need, and in a certain sense, it is one of the greatest growth areas”, he said.

The New Growth Strategy set out policies in 7 strategic areas (green innovation, life innovation, Asian economy, tourism and local revitalisation, science/technology/information and communications, employment/human resources, finance) and 21 national strategic projects as particularly important measures.

On 30 August the government announced additional economic policies to go along with additional monetary easing by the Bank of Japan. One was the establishment of the Council on the Realisation of the New Growth Strategy, which would serve as a platform for wide-ranging discussions on economic policy. This could be seen as the virtual revival of the Council on Fiscal and Economic Policy from the times of the LDP administration. The new council was chaired by Prime Minister Kan and consisted of relevant ministers and experts from the private sector.

The new economic growth strategy was based on analyses of past strategies but it is basically an across-the-board strategy and it includes whatever line ministries wanted. The fundamental question is the validity of the concept “growth through welfare”. Although it is important to establish a safety net for livelihood security, long-term growth cannot be expected from income redistribution and demand expansion policies of the government. Social Welfare is generally a field where productivity is low and innovations are few. Essential for growth is productivity and the utilisation of market mechanisms to increase capital and improve the quality of labour. The government should work to create an environment that promotes innovation and competition among corporations.

From the beginning, there was a view in the DPJ that not much economic growth can be expected in a mature society, and attitudes toward growth varied greatly. For example, in fall 2011, Yukio Edano, who was offered the position of the Minister of Economy, Trade and Industry by Prime Minister Noda, initially declined, saying, “I believe it is difficult for a depopulating society to achieve economic growth” (*Asahi Shimbun*, 1 December 2012). Banri Kaieda, who had stressed the importance of growth, explained, “There was a thinking that if we worked to improve social security, support for DPJ will increase, which was actually the case. Discussions about economic growth to support the social security system tended to be put on the back burner.”

Furthermore, during the administration there were a total of six state ministers for economic and fiscal policy, and in some cases, the minister of state for national strategy and the minister of state for economic and fiscal policy were different people. Therefore, it was difficult to maintain a consistent policy.

4.1. Efforts to stop the deflation

During the three years and three months of the DPJ administration, the Japanese economy could not escape from the malaise of deflation. The rate of increase in consumer price index (core CPI) once reached 1.2% in FY2008, but was mostly negative for the following three years. The GDP deflator, which shows the difference between real growth and nominal growth, was consistently negative since FY2001.

The DPJ administration was not unaware of the importance of anti-deflation policies, and it co-operated with the Bank of Japan to deal with matters. On 9 April 2010, Prime Minister Hatoyama and Bank of Japan Governor Masaaki Shirakawa had talks at the Prime Minister's office and agreed that the government and the Bank of Japan would work in co-ordination to overcome deflation. During the same month, the Parliamentary Association for Overcoming Deflation and Aiming at Economic Recovery (chaired by Jin Matsubara) in which 130 members of the DPJ participated made such proposals as taking aggressive monetary easing measures and setting the appropriate level of commodity prices.

In October, the Bank of Japan set out a “comprehensive monetary easing policy” (continuing the zero-interest-rate policy, establishing a fund to purchase various financial products, etc.) and executed five additional monetary easing measures by the beginning of September 2012. Moreover, in February 2012, the central bank introduced a target for price stability, saying that the increase of consumer prices from the previous year should be “1% for the time being”. On 13 April, the first session of the Ministerial Council on Exiting Deflation was held. On 30 October, Governor Shirakawa, Finance Minister Koriki Jojima, and Minister for National Strategy and Economic Policy Seiji Maehara announced a joint statement that confirmed that the Bank of Japan would push forward powerful monetary easing measures to achieve a price increase rate of 1%.

However, these measures were much more moderate than the “new phase of monetary easing” that was later put forth by the LDP Abe administration, but Kaieda, who is an economist, explained: “Overcoming deflation takes time. We believed that we must steadily move forward step by step and so we set the target for price increase at 1% for the time being.” Kaieda also pointed out that their approach was different from the extremely aggressive Abenomics which is an economic policy taken since the end of 2013 by Abe. Kan also criticised the “new phase of monetary easing”, saying, “In the current situation, monetary easing does not lead directly to people's spending, and at least half of the economists hold that view”.

If we look back at the circumstances in which the Bank of Japan governor was appointed in March 2008, we can see that it would have been difficult for the DPJ administration to overrule the policies of Governor Shirakawa to force monetary easing. At the time, the DPJ opposed the candidates proposed by the Yasuo Fukuda administration saying that they were former bureaucrats of the Ministry of Finance and went against the principle of separating fiscal and monetary affairs. As a result, the seat of the Bank of Japan governor was empty for a period of time, and in the end, the DPJ agreed to appoint Deputy Governor Shirakawa as the new governor. In other words, it was the DPJ that appointed Shirakawa as the governor.

The DPJ had always maintained that fiscal and monetary affairs should be separated, and respected the independence of the Bank of Japan. In 1997, the DPJ played a major role in amending the Bank of Japan Act and increasing the independence of the Bank of Japan.

“That’s why Kan and Okada and I all believed that the government should refrain from placing demands on the Bank of Japan or trying to force them to take certain monetary measures”, explained Yoshito Sengoku.

4.2. The excessiveness of the budget for reconstruction

Next, we will review the issues regarding the budget for reconstruction following the Great East Japan Earthquake.

The Great East Japan Earthquake Basic Act on Reconstruction, which outlined the basic principles for reconstruction, was enacted in June 2011. It was estimated that approximately JPY 19 trillion would be necessary in the first five years of reconstruction, and it was decided that approximately JPY 10 trillion of this amount would be finance by temporary tax increases.¹¹

Then, the Bill on Special Measures for Securing Financial Resources Necessary for Reconstruction from the Great East Japan Earthquake was passed on November 2011 after negotiations between the ruling and opposition parties. The legislation stipulated that for income tax, the tax rate will be increased by 2.1% for 25 years from January 2013, for individual inhabitants tax, JPY 1 000 per annum will be added for 10 years from June 2014, and for corporation tax, an additional 10% will be imposed for 3 years from 2012.

It was later revealed that this budget for reconstruction had been spent on projects that had little to do with the reconstruction of disaster-stricken areas. A programme broadcast as part of the NHK Special series of documentaries entitled “Tracking the 19 Trillion Yen Budget for Reconstruction” (broadcast on 9 September 2012) reported that based on more than 50 000 pages of materials, it was revealed that JPY 2 trillion of the JPY 19 trillion budget for reconstruction was used in regions that were unrelated to the disaster-stricken areas. For example, a part of the budget was used for a manufacturing line of a contact lens manufacturer in Gifu Prefecture as part of the Ministry of Economy, Trade and Industry’s “Subsidy for Domestic Location Promotion Projects”. The budget was also used for the Ministry of Agriculture, Forestry and Fisheries’ measures for anti-whaling groups, the Ministry of Land, Infrastructure, Transport and Tourism’s expenses for road improvement in Okinawa Prefecture, and the Ministry of Foreign Affairs’ youth exchange programme. Details of such projects that were unrelated to disaster-stricken areas were exposed one after another.

Although this provoked a firestorm of criticism, the Basic Act on Reconstruction in response to the Great East Japan Earthquake stipulates that the budget for reconstruction could be used for areas other than the affected areas. Article 1 of the Basic Act on Reconstruction states: “This Act has the purpose of promoting smooth and prompt reconstruction from the Great East Japan Earthquake and revitalisation of vibrant Japan.” In other words, the purpose of the law is twofold – reconstruction and the revitalisation of Japan. Such a situation was brought about by inertial forces that exist in bureaucracy and politics. After many years of demands for budget cuts, the large-scale budget for reconstruction was like a long-awaited rain after a long spell of dry weather, and the budget was allocated to projects with low cost-effectiveness and to areas other than those affected by the disaster. This is the result of officials of the Ministry of Finance and other ministries, the ministers, senior vice ministers and parliamentary secretaries, members of opposing parties and private corporations with vested interests all pursuing their own interests.

The root of the problem is the estimate of the total budget for reconstruction. In other words, the JPY 19 trillion budget was excessive. This amount was based on calculations by the Cabinet Office. The Cabinet Office on 23 March 2011 announced that the tentative estimate for the damage of physical assets caused by the Great East Japan Earthquake was between JPY 16 trillion and JPY 25 trillion. These figures were very rough estimates based on the damage caused by the Great Hanshin-Awaji Earthquake, and details on the basis of the estimate were not revealed.

4.3. The Comprehensive Reform of Social Security and Tax

The final important task by the DPJ administration was the consumption tax rate hike. Various reasons have been pointed out to explain why both Prime Minister Kan and Prime Minister Noda were pushed toward a tax increase, but for a long time there was an underlying belief in the DPJ that there was a limit to the amount of resources that can be secured through spending cuts, and sooner or later a consumption tax increase would be necessary to cover growing social security expenditures. This is only natural, since the DPJ gives great weight to social security. There were also many citizens that were not absolutely opposed to a consumption tax increase. They believed that the procedure and content of the tax hike was more important.

Regarding the increase of the consumption tax rate, just before the Upper House election, Prime Minister Kan, at a news conference following the announcement of the DPJ election manifesto (17 June 2010) said, “I want to consider as one of the options, the LDP’s proposal to increase the consumption tax rate from 5 to 10%”. This comment suddenly came out without any consideration and discussion inside the government, therefore it was completely unexpected and Kan’s personal idea.

The public’s impression was that the DPJ had started out by saying they would radically cut wasteful spending, but now they were already looking to raise taxes. In hindsight, a statement about the tax rate should not have been made at this time. It would have been more appropriate to say, “We will continue to make all-out efforts to increase the efficiency of expenditures until the next Lower House elections, and if we still cannot secure enough resources, we will discuss tax rates and possibly ask the people to bear a greater tax burden. However, since preparation is needed for the Comprehensive Reform of Social Security and Tax including a consumption tax increase, we will start to deliberate on this matter.”

The debate on the consumption tax increase, which had been put on hold after the defeat in the House of Councillors election, recommenced in October 2010 when the Headquarters of the Government and Ruling Parties for Social Security Reform was established. It was decided that the overall vision for social security reform and the method of securing resources would be discussed in an integrated manner. In order to move forward with the Comprehensive Reform of Social Security and Tax, in the Cabinet reshuffle in January 2011, Kan picked Kaoru Yosano, who was the joint leader of the Sunrise Party of Japan, for the post of Minister of State for Economic and Fiscal Policies, and effectively entrusted all discussions to him.

Discussions on the consumption tax increase, which was not included in the manifesto for the 2009 Lower House elections, caused confusion and conflict in the DPJ, and the materialisation of the comprehensive reform was passed on to the following Noda administration. After many twists and turns, the preliminary draft of the comprehensive

reform plan was adopted by the Headquarters of the Government and Ruling Parties for Social Security Reform on 6 January 2012, and comprehensive reform-related bills were decided by the Cabinet and introduced into the Diet on 30 March.

Although Diet deliberations were expected to proceed with difficulty, it was possible to conduct negotiations since it was the LDP that first proposed the consumption tax increase. The DPJ accepted requests for amendments from the LDP with regard to issues such as measures for people with low incomes and *kodomoen* (day care/kindergarten facilities), and related bills were amended and passed by the House of Representatives on 26 June. They were later passed in the House of Councillors as well, and enacted on 10 August. The bills related to the comprehensive reform of social security and tax systems, which were passed after revisions by the ruling and opposition parties, covers a broad range of issues such as pension and medical care, children and childrearing support, employment and employment contracts of senior citizens, and consumption tax increase. However, the main point was increasing the consumption tax rate from the current 5% to 8% on 1 April, 2014, and to 10% on 1 October 2015.

It is commendable that the Noda administration succeeded in the enactment of the comprehensive reform related-bills in a harsh political climate with conflicts within the DPJ and the hung parliament.¹² The consumption tax increase had been postponed by previous administrations, and it would be the first consumption tax increase which has since the end of World War II, which produces net increase in the government revenue taking account other tax's reduction.

However, the reform was one that aims to secure financial resources to make up the deficit caused by rising social security expenditures. It was not a reform that would overhaul the entire system by reviewing various related systems, such as the division of roles between social insurance and tax and the co-ordination between employment and pension. The DPJ had to summon their energies to obtain consensus within the party regarding tax increases, and they did not have enough energy left to move forward with the painful process of cutting into individual annual expenditures.

For example, in the process of deliberating a comprehensive reform, the problems in the current systems were not analysed based on data. The necessity of clearly separating insurance premiums and taxes was not discussed. The basic principle of social security reform is to ask more advantaged people to receive less or contribute more. The division of roles between the public and private sectors should be clarified, and the government should take responsibility for life security while encouraging higher income individuals to help themselves. Unless such a reform is pursued, consumption tax increases will not solve the problems at all.¹³ The recent "comprehensive reform" was only the first step in the reform of the social security system.

5. Conclusion

Because opposition parties do not have enough information to formulate public policy, it is only natural that they would face a gap between the manifesto and the reality after they take the reins of government. Moreover, the government must plan and execute policy under various constraints, and at times cannot execute policy as originally planned.

The failure of the DPJ administration was caused by a complex web of factors, including problems related to the Prime Minister and other personnel, problems in the system, and the economic environment. One should not try to oversimplify the matter.

However, the so-called “politician-led” approach that the administration took may have been based on an arrogance and overconfidence that led them to believe that they could do anything they wanted. They were confident that if they moved forward with the politician-led approach, they could cut any amount of wasteful budgets and move trillions of yen in budgets from left to right. It seems they didn’t realise that at the end of each budget are people who are benefiting from the spending, and they must go to some length to persuade the people and execute such cuts.

Because of such arrogance, they failed to create a detailed design of the foundation and institution necessary to proceed with politician-led budget compilation. Although they had prepared a blueprint for budget reform, they gave up on it before they could put any of it into practice.

From the start, the manifesto had major problems concerning the feasibility of the methods to secure resources. But they may have been able to get some results if they could change the rules of game in the budget process like Canada did when they succeeded in fiscal consolidation. Although the DPJ administration abolished the guidelines for the budget requests saying that it was a legacy of the LDP administration, they did not seriously think about what new rules of budget compilation should be introduced to take the place of the former guidelines.

Although the selling point of the DPJ was “non-LDP”, in the end they abandoned this principle and followed systems that were the same as the LDP, such as prior assessment of the budget by the ruling party. There were many commendable measures such as the mid-term fiscal framework based on cautious growth rate forecasts, switching from tax exemptions to direct benefits, the Act on Increasing the Transparency in the Application of Tax Expenditures, and the Programme Reviews, but criticisms about financing additional programmes dissipated such successes. In particular, it should be pointed out that leading members of the administration continued to deceive the public by denying the facts and citing reasons such as lower tax revenues to explain why they could not fulfil their manifesto.¹⁴

Although an LDP-New Komeito coalition administration was resurrected after the Lower House elections at the end of 2012, the supplementary budget for FY2012 drawn up by the Abe administration is typical of the conventional system.¹⁵ The mid-term fiscal outlook, which was usually announced after the compilation of the government budget in previous years, was not announced for the 2013 fiscal budget. Although the consumption tax hike was a step toward fiscal consolidation, fiscal discipline is starting to slacken under the Abe administration, and the clock is turning back. Although it is hard to imagine that Japan would collapse like Greece in the near future, the fiscal risk is steadily increasing.¹⁶ If we stop at only criticising the failure of DPJ, the public will pay the price.

Notes

1. This is because the general government deficit was reduced by the transfer of JPY 12 trillion from the Special Account for Fiscal Investment and Loan Programme. The System of National Accounts classifies this account as transactions related to public corporation, rather than the general account. If this transfer is excluded, the deficit amount is JPY 15.6 trillion.
2. Data from *OECD Economic Outlook*, No. 92, December 2012.
3. Here, we add the annual expenditures for the Special Account for Reconstruction following the great earthquake to the General Account to make the comparisons because the budget relating to

- reconstruction was separated from the General Account and budgeted in the relevant special account since FY2012.
4. Here, transferring reserve funds (often called “*maizoukin*”) from the special accounts to the General Account will be considered as an actual fiscal deficit. To spend these reserves will aggravate the fiscal condition, and is the same as the additional issuance of deficit-financing government bonds when we look at the government’s balance sheet.
 5. Two fiscal stimulus packages in September and October 2010 were financed by unexpectedly high tax revenues stemming from a better economic outcome than assumed in the initial budget for FY 2010, as well as surpluses carried over from the previous year, lower-than-expected interest payments due to the fall in long-term interest rates and the reserve fund in the FY 2010 budget, in order to avoid additional bond issuance (OECD 2011: 46-47).
 6. Ministry of Finance “Monthly Report on Taxes and Stamp Revenues in July 2009.”
 7. It should be noted the deficit target of the Strategy is limited to central and local governments, excluding the social security fund. This may be reasonable, because the social security fund produced the surplus in the pasts. However it deteriorated from a surplus of 0.5% of GDP in FY 2000 to a deficit of 1.5% in FY2009 (OECD 2011: 57).
 8. In addition, the Strategy sets several basic principles of fiscal management: i) secure permanent revenue sources to implement new spending programmes and tax reductions (a pay-as-you-go rule); ii) reduce the budget deficit each year to achieve the targets; iii) secure stable revenue sources to finance structural outlays, such as ageing-related spending; iv) cut wasteful spending in all areas, including the special accounts, to give scope for changing budget allocation; and v) ensure co-operation between central and local governments to achieve fiscal consolidation and avoid shifting financial burdens to local government (OECD 2011: 51).
 9. Details of programme review in Canada are shown in Blöndal (2001) and Kelly (2000).
 10. Tanaka (2013) proposes three important reforms including credible medium-term fiscal plan with multi-year expenditure ceilings, independent fiscal institution and legal framework of fiscal management such as Fiscal Responsibility Act of 1994 in New Zealand. OECD (2011 and 2013) also make similar recommendation on budget reforms.
 11. Non-tax revenue such as stock sales was also expected to raise JPY 5 trillion.
 12. DPJ got the majority in the lower house, but not in the upper house.
 13. In other words, a dramatic increase in the consumption tax rate is inevitable to stabilise public debt without spending cuts. Hoshi and Ito (2013) argue that a quick hike of the consumption tax, namely a hike by 1% a year, up to 20%, combined with high or moderate economic growth rates, seems to keep the economy out of a fiscal crisis.
 14. Explanation by Prime Minister Kan at the plenary session of House of Councillors (29 July 2011), explanation by Prime Minister Noda at the Lower House Budget Committee (8 November), explanation by Finance Minister Jun Azumi at the Lower House Special Committee on the Comprehensive Reform of Social Security and Taxation (22 May 2012), etc.
 15. Brückner and Tuladhar (2010) suggest Japan introduced 15 fiscal stimulus packages containing public works spending, amounting cumulatively to 15% of 2011 GDP, between 1990 and 2008 without much positive impact on its growth potential.
 16. Kang (2010) analyses idiosyncratic features of the public debt and financial systems – including home bias, household surpluses, and the existence of a stable pool of public financial institutions – have enabled the Japanese government to finance mounting public debt at low costs. Then, he argues the favourable conditions that enabled the government to finance public debt at relatively low costs are coming to an end and domestic financial sectors’ absorptive capacity for increasing public debt is reaching the limit.

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How to deal with contingent liabilities – Lessons from the Dutch experience

by

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A commission has reviewed all the guarantees, loans and financial interventions provided by the Dutch government. This review shows that policy makers often perceive these measures as a “free lunch”, do-not-ask (sufficiently high) premiums and do-not-build reserves to cover potential damages. The commission concluded that the Dutch government needs to reduce these measures where possible (e.g. by including sunset clauses), implement policies that reduce implicit risks, increase transparency, and consider asking for an external opinion regarding premiums in case of large and complex risks. Also internationally, an increased focus on budget systems that ensure transparency and provide the right incentives is necessary, as in recent years contingent liabilities increased while government finances deteriorated, making countries less resilient to these risks. Countries seem to use very different definitions and reporting methods with regard to contingent liabilities, making an international comparison and monitoring very difficult.

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Keywords: Budget systems, contingent liabilities, fiscal policy, risk management, sunset clauses, the Netherlands

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1. Introduction

Since 2008, many governments have taken measures in response to the financial crisis. Governments supported the financial sector, often in the form of loans and guarantees. And to support countries with financial difficulties, governments provided (additional) guarantees to international organisations, like the International Monetary Fund (IMF) and the newly established European Stability Mechanism (ESM).

These measures often did not lead directly to government expenditures, but did lead to an obligation for governments to incur losses when risks materialise and are therefore contingent liabilities. Not all contingent liabilities are crisis related. Also in normal times many countries have such measures in place to support certain sectors of the economy (e.g. export insurance) or certain households (e.g. student loans). And not all contingent liabilities are explicit. Often countries had no legal obligation to support the financial sector, but were more or less forced to take measures to avoid further escalation.

Contingent liabilities can significantly affect government deficits and debt levels. In 2007, Ireland and Spain were among the countries in the European Union (EU) with the lowest debt levels. However, due to the materialisation of risks their debt levels increased rapidly and both countries needed support from the IMF and the EU. Contingent liabilities are therefore a cause for concern, especially now that in most countries government finances have deteriorated substantially in the past few years. Countries are thus in a worse position to cope with these risks. An increased focus on budget systems that ensure transparency and provide the right incentives for policy makers with regard to contingent liabilities is therefore necessary.

Recognising these developments, the Dutch government decided to set up a Risk Commission to review all its existing loans, guarantees and financial sector support with a (semi)permanent character¹ and to come up with proposals that help limit a further increase in contingent liabilities. This Risk Commission consisted of Treasury officials and an external adviser from the Dutch central bank. When individual loans, guarantees or support measures were reviewed, the commission also included the relevant policy officials and controllers from the respective departments. The commission presented its findings and recommendations on Budget Day in September 2013.

This paper discusses the main findings of the Risk Commission and the policy response of the Dutch government. Section 2 describes the development of contingent liabilities in the Netherlands, Section 3 gives an overview of the findings and recommendations of the Risk Commission and compares these with recent OECD policy proposals, Section 4 describes the response by the Dutch government, and Section 5 concludes.

2. Contingent liabilities of the Dutch central government

2.1. Recent developments

In recent years, the level of (indirect) guarantees, loans and financial interventions provided by the Dutch government has increased significantly, as can be seen from Table 1.² In response to the financial crisis, the Dutch government has provided substantial support to financial institutions, sovereigns and the housing market. These risks were not only largely unforeseen, but they were also implicit, as before the crisis there were no formal support mechanisms in place for most of these risks.

Most of the increase since 2008 is directly related to the nature of the crisis. Early on, the government had to take measures to support the financial sector. For example, the government set up a guarantee facility for interbank loans, provided capital support to ING, Aegon and SNS REAAL (in the form of core tier one securities), nationalised ABN AMRO, and provided a loan to Fortis.

In the second phase of the crisis, the increase shown in Table 1 was mainly caused by measures to support countries that ran into financing difficulties. For example, the government provided bilateral loans to Greece and Iceland and provided (additional) guarantees to international organisations, such as the IMF and the temporary and permanent EU crisis resolution mechanisms (the European Financial Stability Facility (EFSF) and the ESM).

The Dutch government also increased its indirect guarantees, mainly to support the Dutch housing market. In the case of indirect guarantees, a third party provides the actual guarantee. This party has its own funds out of which to pay if the guarantee is called upon. Only when these funds run out will the government have to step in. The National Mortgage Guarantee (NHG) showed the largest increase in indirect guarantees, both in absolute and relative terms. The NHG provides homeowners a guarantee on mortgages below a certain threshold. If a homeowner cannot repay this state-backed mortgage, the NHG will repay the bank under certain conditions. Because of the fall in house prices in the course of the crisis, the government decided to increase the threshold. Moreover, a larger percentage of those eligible under the scheme took part.

A part of the support to the financial sector has been redeemed in recent years as financial institutions have started to repay the state-aid that they received in 2008. However, there are large differences between financial institutions. Just recently, in 2013, the Dutch government had to nationalise SNS REAAL which was accompanied by additional capital support, a loan, and a guarantee for a bridge bank to separate the problematic real estate portfolio from the remaining assets of SNS REAAL. At the same time, the Dutch government took a loss of EUR 0.8 billion (consisting of EUR 565 million principal and 50% interest) on the capital support that it provided to SNS REAAL in 2008.

Also, the amount of outstanding guarantees has fallen recently, mainly because the temporary crisis resolution mechanism EFSF was closed for new obligations. As a result, the government was able to lower the level of guarantees provided to the EFSF as not all room under the ceiling was used. For indirect guarantees, it will take some time before a decrease can be expected. Although the government is scaling down its support to the NHG, the level of outstanding indirect guarantees will only start decreasing when mortgages issued under the increased threshold expire.

Table 1. **Development of direct guarantees, indirect guarantees, loans and financial interventions**

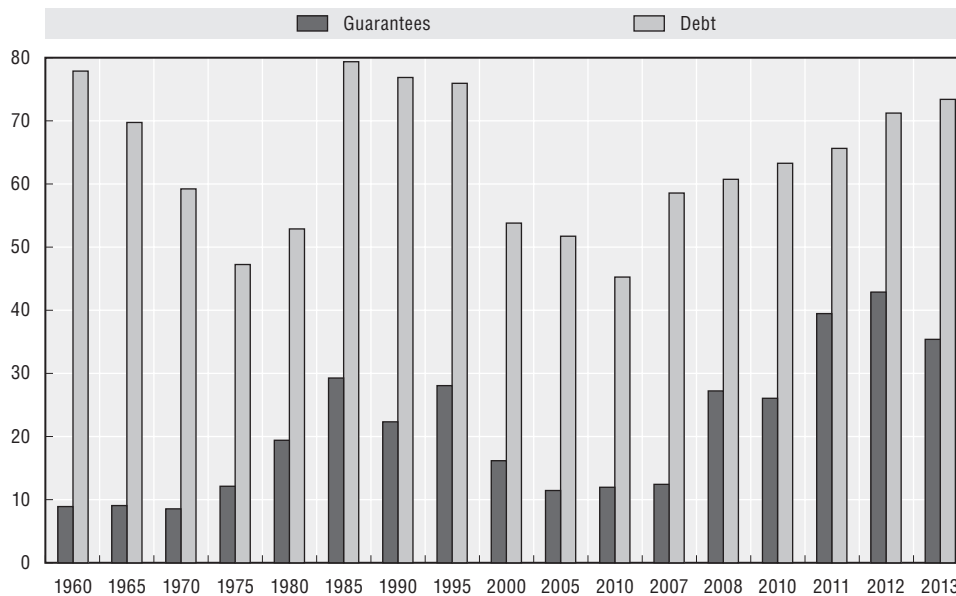
In EUR billion						
	2008	2009	2010	2011	2012	2013
Total guarantees	63.5	152.7	152.2	238.2	258.0	217.5
<i>Of which:</i>						
European Financial Stability Facility (EFSF)	-	-	25.9	97.8	97.8	49.6
Participation in capital IMF	9.9	23.4	28.8	47.3	46.5	46.5
European Stability Mechanism (ESM)	-	-	-	-	35.4	35.4
State guarantee facility interbank loans	2.7	47.1	39.0	33.2	17.2	14.1
Export insurance	17.6	12.3	13.4	14.5	17.4	17.4
Facility for nuclear disasters	14.0	14.0	14.0	14.0	14.0	14.0
European Investment Bank (EIB)	7.0	9.9	9.9	9.9	9.9	9.9
Guarantee De Nederlandsche Bank (DNB)	-	-	-	-	-	5.7
Guarantee SNS REAAL	-	-	-	-	-	5.0
Guarantee for loans to SMEs	1.9	2.0	2.2	2.6	2.4	2.2
Total indirect guarantees	177.7	192.7	220.2	231.2	250.3	259.1
<i>Of which:</i>						
Social Housing Guarantee Fund (WSW)	71.7	75.8	85.3	86.3	87.4	86.2
National Mortgage Guarantee (NHG)	98.3	108.9	126.4	136.2	154.0	164.0
Total participations	23.3	26.9	28.0	28.0	29.8	34.4
<i>Of which:</i>						
ABN Amro, ASR, RFS	23.3	26.9	28.0	28.0	28.0	28.0
ESM	-	-	-	-	1.8	3.7
SNS REAAL	-	-	-	-	-	2.2
Bridge bank for real estate portfolio	-	-	-	-	-	0.5
Total loans and claims	65.8	30.3	29.4	31.2	32.9	35.6
<i>Of which:</i>	13.6	15.4	16.9	18.3	19.8	21.2
Student loans						
Fortis	44.3	7.8	4.6	3.8	3.8	3.8
Iceland	1.3	1.3	1.3	1.0	0.8	0.8
Greece	-	-	1.2	3.2	3.2	3.2
SNS REAAL	-	-	-	-	-	1.1
Total core tier 1 securities	13.8	7.6	7.1	3.6	2.3	1.5
<i>Of which:</i>						
Aegon	3.0	2.0	1.5	-	-	-
SNS REAAL	0.8	0.6	0.6	0.6	-	-
ING	10.0	5.0	5.0	3.0	2.3	1.5
ING back up facility	-	18.4	16.4	13.9	11.1	8.8

2.2. Long-run developments in guarantees³

When looking at the Dutch experience regarding guarantees over the last 50 years, a few things stand out (Figure 1). Firstly, the level of guarantees tends to go up in bad times (current financial crisis, deep recession of the early 80s) and come down in good times (60s, 90s). Secondly, before the current financial crisis the Netherlands had the lowest level of guarantees as a percentage of GDP since the early 1970s. In recent years, however, the Netherlands has experienced the highest level in the last 50 years.

One could tell a similar story about the level of government debt: before 2008 government debt was approaching the lowest level in about 200 years and it has shot up since, though it is not yet as high as in the late 1980s when it reached its post WWII peak.

Figure 1. **Government guarantees and debt**
As percentage of GDP



Source : CPB Netherlands Bureau for Economic Policy Analysis, Statistics Netherlands and authors' own calculations.

The main lesson to be learned from the long-run experiences with guarantees seems to be that explicit and implicit risks should be analysed in tandem. In retrospect, it is clear that fiscal risks were very large before 2008, in particular the level of implicit guarantees.

2.3. International comparison

It is very difficult to make an international comparison of contingent liabilities, as there are hardly any data that are comparable across countries. Even when focusing only on guarantees in EU member states, data are scarce and still incomparable, as can be seen from Table 2. The table shows the level of guarantees that EU member states reported in their 2013 Stability and Convergence Programmes.

Table 2. **Reported guarantees**
As percentage of GDP

	2012
Austria	31.9
Belgium	17.1
Czech Republic	14.0
Denmark	19.2
Finland	17.1
France	6.2 ¹
Germany	23.5
Italy	6.4
Luxembourg	8.4
Netherlands	42.7
Poland	6.3
Slovenia	18.3
Sweden	45.3

1. Value for 2011.

Source: Stability and Convergence programmes 2013.

From the table it is clear that countries use different definitions and reporting methods for guarantees in their budgets. For example, in the Dutch budget, the guarantee to the temporary crisis resolution mechanism EFSF was approximately equal to 15% of GDP, due to very cautious budgeting. Other euro area countries have provided, as a percentage of their GDP, a similar guarantee to the EFSF, but due to a different methodology many report a much lower guarantee than 15% of GDP. The difference with France, Italy and Luxembourg is particularly striking, as the total amount of guarantees reported by these countries covers only a fraction of the guarantee reported by the Netherlands for just the EFSF.

The lack of internationally comparable data is a cause for concern. The financial crisis has shown that risks stemming from contingent liabilities can have fiscal consequences for other countries as well, for example via IMF or EU support, but also via contagion. It is therefore important to improve transparency by harmonising reporting methods or by creating new statistics, so that these risks can be sufficiently monitored.

3. Findings of the Risk Commission

The Dutch policy regarding measures that increase risks for the government finances is traditionally reflected in the budgetary rules that are set at the start of each new government. The most important rule in place when the Risk Commission presented its review, was the policy of “no, unless”. This implies that the government does not take on new contingent liabilities unless there is an overriding reason to do so, for example, in cases where the market does not provide certain services or only highly inefficiently.

An important element of this policy was that every new measure, or change in existing measures, faced an *ex ante* review. This review was based on ten questions that assess the need for the measure, its effectiveness, the premiums and the governance structure. Box 1 gives an overview of the other main elements of the policy framework that existed before the evaluation by the Risk Commission.

Box 1. Existing policy regarding measures that increase risks for the government finances

- Any damages that need to be paid out will be covered by the department that is responsible for the measure.
- The department in question will have to ask a premium that will cover the full costs of the measure, including a payment for the risk that was taken on behalf of the (risk averse) taxpayer.
- New premiums will be paid into a budgetary reserve.
- All new measures or changes in existing measures will need to be approved by the council of ministers.
- All measures will be regularly evaluated.

On the basis of the existing *ex ante* review framework, the Risk Commission reviewed all the existing loans, guarantees and financial sector support with a (semi) permanent character (i.e. expiration is not foreseen). This review process led to the following main findings:

- There are large differences between facilities, both in terms of potential risk for the government and in terms of governance of these risks. For some facilities, the probability

of payout is very small, but if there is one it is likely to be very large. A good example is the law that mandates government payouts in case of a nuclear disaster. In other cases the probability of payout is relatively large, but the budgetary consequences are generally limited. A case in point is the guarantee facility for loans to small and medium-sized enterprises. Another aspect in which facilities differ is whether there is collateral or not. Collateral can greatly reduce the maximum loss for the government, for instance in the case of the indirect guarantees in the housing market. Finally, facilities differ in the extent to which money can be recouped in the course of time. For instance, in the case of export insurance, the initial loss is often greatly reduced.

- In certain cases it is possible to use other policy instruments. For example, subsidies can sometimes be an alternative to guarantees. Many guarantee facilities want to ensure that certain target groups (e.g. entrepreneurs, exporters, museums, etc.) pay a lower interest rate for their loans at a bank or lower rates for their insurance. Some of these facilities could also take the form of a subsidy. This would limit the risk for the government and provide the best incentive to financial parties for monitoring the risks of the parties involved. Departments are often hesitant to do this as this means that they need to free up money in their budget.
- Guarantees and other measures that do not directly lead to an increase in expenditures are often considered a “free lunch”. In response to the question why a guarantee was chosen over a subsidy, departments responded over half of the times that a guarantee was chosen because a guarantee does not lead to an immediate budgetary outlay or because it can provide leverage for a larger facility. However, these kinds of measures do lead to larger liabilities for the government and therefore to potential budgetary payments in the future. Even when there are no direct payments (yet), measures can cost money if financial markets will consider the credit risk of a country to have increased.
- Very few measures are underpinned by strong empirical evidence. Instead, departments often provided more or less anecdotal evidence to support the case for certain measures. This problem is of course not exclusive to this particular field of government policy.
- Some facilities have a higher budgetary ceiling than necessary based on usage, others have no take-up at all. High ceilings make it is easier to make changes in the facility or increase the take-up without prior parliamentary approval.
- In very few cases parties pay a premium that covers all relevant costs and in certain cases the government receives no premium at all. There appears to be no unified definition of full cost recovery. In some cases it is considered to be enough if all damages are recouped in the long run. However, this does not take into account risk aversion that should lead to an additional premium. For more than 10% of the measures, departments responded that asking a (cost recovery) premium would be inconsistent with their policy targets to support certain groups.
- In many cases damages do not materialise frequently; this makes them difficult to quantify. This in turn makes it difficult to determine the appropriate premium.
- For less than a third of the measures, departments build up a reserve as is required for any new loan or guarantee. This implies that many departments *ex ante* do not have any coverage for damages that might occur.

Box 2. **How do the findings and recommendations of the Risk Commission compare to OECD proposals?**

In June 2013, the OECD published a working paper on “Budgeting for Contingent Liabilities”, that broadly suggested the following three policies:

1. Promote neutrality (i.e. remove the bias to use guarantees instead of direct payments where possible) by charging a market-based fee for guarantees, by creating a notional or actual fund to provide an offset should risks materialise, and by including guarantees in fiscal targets (e.g. as used in the Stability and Growth Pact).
2. Full and transparent disclosure of potential costs, both *ex ante* and *ex post*. Full disclosure is necessary to take a well-informed decision on the need for the measure and decide on the most appropriate form (for example, a guarantee or a direct grant).
3. Convert implicit liabilities to explicit liabilities (where practicable), unless the government can reliably pre-commit that it will not take measures in response to the risks stemming from the implicit liability.

These proposals are largely in line with the findings and recommendations of the Risk Commission. The commission did find evidence that decision-making is sometimes distorted because of a lack of neutrality, for example, when departments responded that they preferred a guarantee over a subsidy, because a guarantee does not (directly) lead to expenditures and/or a larger facility is possible when using a guarantee (i.e. leverage).

Also only a few departments set up a reserve to cover potential damages and often premiums do not cover all costs. However, it is often difficult to quantify risks and to decide *ex ante* on an appropriate premium. The Risk Commission suggests seeking external advice, but the OECD’s proposal to involve the debt management office could be a solution as well, although debt management offices will sometimes also not have the right expertise (for example in calculating nuclear risks).

As in the OECD proposals, increasing transparency is also an important element in the recommendations of the Risk Commission. In line with the suggestions by the OECD, the Risk Commission recommends to disclose the *ex ante* review framework, before new measures are discussed in Parliament. Decreasing unused budgetary ceilings will improve transparency as well, as it will be more difficult to make changes in facilities without asking for parliamentary approval. Also internationally there is a lack of transparency, making it impossible to monitor contingent liabilities, for example in the Stability and Growth Pact, so improving reporting and statistics in this field is key.

With regard to converting implicit into explicit liabilities, the Risk Commission has a somewhat diverging recommendation. For some implicit risks, it is very difficult to foresee what exactly the consequences will be, although it is clear that the consequences would be very large and very negative. In those cases, it can be better for the government to keep flexibility and to deal with the issue when it presents itself. This does not mean that these risks should not be adequately priced, but there are also more indirect ways to price risks, for example via taxation instead of a premium that creates obligations.

The above findings led to the following recommendations:

1. Reduce crisis-related measures when possible and keep focusing on policies that limit implicit liabilities to a minimum.
2. Increase transparency so as to enhance knowledge about risks and to allow for an appropriate assessment of risks. This can be done by:

- Increasing comparability of international statistics.
 - Providing more information in the annual budget memorandum.
 - Including a separate section on (indirect) guarantees, loans and financial interventions in departmental budgets.
 - Sending the *ex ante* review framework to Parliament for any new measure or changes in existing measures.
3. Include a sunset clause, so that measures do not automatically get a permanent character.
 4. End unused facilities and lower unused budgetary ceilings.
 5. Consider asking for a second opinion regarding the premiums to be paid in case of large and complex risks.

These findings and recommendations are largely in line with recent OECD proposals. Box 2 gives an overview of these OECD proposals.

4. The government framework to contain contingent liabilities

The Dutch government embraced the Risk Commission's recommendations and announced that it wants to apply them not only to new loans, (indirect) guarantees and financial interventions, but also to existing facilities. This has led to a new framework that incorporates the commission's recommendations in the existing budgetary rules for contingent liabilities and extends it by introducing a "guarantee ceiling", which sets a maximum for the overall level of contingent liabilities. The new framework should lead to a reduction in the risk exposure of the government in the next few years.

The new framework consists of the following elements:

1. For new measures that increase risks for the government finances the existing policy of "no, unless," remains in place. This implies that government does not want to take on contingent liabilities unless there is an overriding reason to do so, for example, in cases where the market does not provide certain services or only highly inefficiently.
2. As a rule, all new facilities and modifications of existing facilities will have a sunset clause. The standard end date will be five years after the start of the new facility.⁴
3. From now on, the council of ministers will automatically send the outcome of the *ex ante* review – in case of new facilities or modifications of existing facilities – to Parliament.
4. When new facilities are introduced, or when modifications to existing facilities lead to an increase of guarantee ceilings, a worsening of the risk profile, or an increased take-up, it needs to be accompanied by a reduction of (other) facilities.
5. A new rule regarding unused budgetary ceilings will be introduced. There can be good reasons for a high ceiling, for example when take-up is very volatile. This can be particularly relevant in times of crisis.

The rule will be as follows: departmental budgets will show each year how usage (over the last five years) is relative to the budgetary ceiling. If more than 10% of the ceiling is unused, it will be lowered – unless analysis shows a higher ceiling is justified due to volatile usage or expected future increases in take-up.

6. Moderation of facilities will be assessed. For some facilities concrete measures have already been taken. For example, the mortgage threshold for which the NHG provides a guarantee is being lowered to return to the pre-crisis level. Moderation only applies to

facilities that are still open to take on new obligations. For international obligations it is not possible to unilaterally undertake measures to moderate them, but departments will use regular evaluations as opportunities to critically assess the usefulness and necessity of these arrangements. The outcome of this process will be presented in the 2015 budget.

7. In case of large and complex risks, independent experts will be requested to provide a second opinion regarding the level of the premium.
8. In order to increase transparency and knowledge about individual facilities departmental budgets will contain a separate section describing (indirect) guarantees, loans and financial interventions. The government will also improve the overall overviews provided in the budget (prospectively) and annual report (retrospectively).
9. Finally, the government will use European fora to urge for a more transparent presentation of contingent liabilities, and will continue its policy of reducing implicit liabilities.

In principle, these new rules will also apply to existing facilities and will be implemented in the budget for 2015. Deviations from this framework are only possible in case of a well-founded decision by the council of ministers. It is therefore not yet clear what the effect of the framework will be on the overall level and risk profile of outstanding (indirect) guarantees, loans and financial interventions. However, as a substantial part of the loans and guarantees have been granted as part of (mandatory) international obligations, it is already clear that this new policy will not lead to a reduction across the board.

5. Conclusion

The review by the Risk Commission in the Netherlands shows that policy makers often perceive measures that do not directly lead to expenditures as a “free lunch”, do not ask (sufficiently high) premiums and do not build reserves to cover potential damages. Therefore, the Risk Commission recommends reducing these measures where possible (e.g. by including sunset clauses), implementing policies that reduce implicit risks, increasing transparency, and asking an external opinion regarding premiums in case of large and complex risks. These findings and recommendations are largely in line with recent OECD proposals.

Also internationally an increased focus on budget systems that ensure transparency and provide the right incentives is necessary, as in recent years contingent liabilities increased while government finances deteriorated, making countries less resilient to these risks. Countries use very different definitions and reporting methods with regard to contingent liabilities, making an international comparison very difficult.

The lack of internationally comparable data is a cause for concern. The financial crisis has shown that risks stemming from contingent liabilities can have fiscal consequences for other countries as well, for example via IMF or EU support and via contagion, but without comparable data these risks cannot be sufficiently monitored. Therefore further work needs to be done to improve transparency, for example by harmonising reporting methods or by creating new statistics. Moreover, it would be useful to have an international debate on how budgetary neutrality can be increased and what methods can be used to calculate appropriate premiums.

Notes

1. These are a subset of contingent liabilities and fiscal risks more broadly, which are also an important topic in Dutch policy debates. For instance, there is a tradition of doing so called “ageing calculations,” which show how the budget is likely to evolve in the long run due to the effects of population ageing. Moreover, since 2012 the budget includes a comprehensive fiscal risk analysis. Finally, in the run-up to the 2015 budget a stress test of government finances will be carried out. This will be the second such test, the first test being carried out in 2011 (see for example Schilperoort and Wiertz (2012)).
2. This article deals with contingent liabilities of the central government, unless otherwise stated. At the moment of writing, there is no satisfactory overview of the contingent liabilities of local governments.
3. This section focuses on guarantees, as we do not have similar data on other contingent liabilities.
4. Exceptions can be made if it is demonstrated that a longer period than five years is necessary or that introducing a sunset clause is damaging for the operation of the facility.

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Coping with fiscal risk: Analysis and practice

by
George Kopits*

Against the background of the recent financial crisis that in many countries metastasised into significant fiscal stress, this article reviews the analysis, management and mitigation of fiscal risks. On the basis of the classification of specific, general and systemic types, fiscal risks have been estimated directly, and more recently, through sensitivity tests on baseline macro-fiscal projections. Although still at an experimental stage, valuable insights have been gained for implementation of various stochastic methods. The article draws a number of lessons for improved management and mitigation of fiscal risks from a recent OECD survey of country practices. This suggests scope for improvement on a number of fronts: disclosure and estimation of risks; assignment of such tasks within the public sector; adoption of various insurance schemes; building special-purpose reserves; and enacting well-designed fiscal rules, along with effective no-bailout provisions. At the policy level, it is necessary to adopt a countercyclical policy stance especially during economic booms; to enforce transparent accounting and forecasting practices; and where necessary, to undertake structural reform in key areas. An additional overarching lesson from the financial crisis is the need to assess and prevent systemic fiscal risk through close co-ordination with an independent macroprudential supervisory authority.

JEL classification: H5, H12, H41

Keywords: Fiscal risk, fiscal rules, countercyclical policy, systemic risk, stochastic methods

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1. Introduction

Over the past couple of decades, policymakers have been operating in an increasingly uncertain environment, in part as a result of widespread financial liberalisation and integration.¹ These trends, along with policy complacency during the so-called Great Moderation, helped pave the way to the recent financial crisis. An upshot of the crisis has been the complexity of formulating fiscal policy in the face of a marked rise in public indebtedness, financial fragmentation, and prolonged economic stagnation or outright recession. In these circumstances, compounded by erosion of policy credibility in some countries, pressures have been mounting for heightened transparency, including explicit assessment and strengthened management of risks – under the gaze of highly inquisitive media and sensitised financial markets. Partly in response to these developments, in recent years, there have been multiple attempts at pursuing new approaches to cope with fiscal risks in an orderly and effective manner. The purpose of this article is to examine these attempts and distil useful lessons for the policymaking process and for public institutions.

Broadly speaking, fiscal risk denotes the uncertainty associated with the outlook in public finances. Fiscal risk can be defined as the probability of significant differences between actual and expected fiscal performance, over a short- to long-term time horizon. More critically, a sharp build-up of public indebtedness, coupled with financing difficulties, renders an economy vulnerable to shocks. In the event, the government may face a credit rollover risk. In an extreme case, fiscal risk encompasses the probability of sovereign default.

The article is organised as follows. The second section explores the rationale for assessing, managing and mitigating fiscal risks in the shadow of the recent financial crisis. The third section identifies and classifies fiscal risks in an analytically meaningful way, and the fourth examines evolving approaches for evaluating and estimating fiscal risks at various levels. The fifth section reviews selected country practices in managing fiscal risks, including in the assignment of responsibility to various public entities. The sixth section highlights major steps taken by governments intended to prevent and alleviate fiscal risk. The concluding section summarises key lessons and implications.

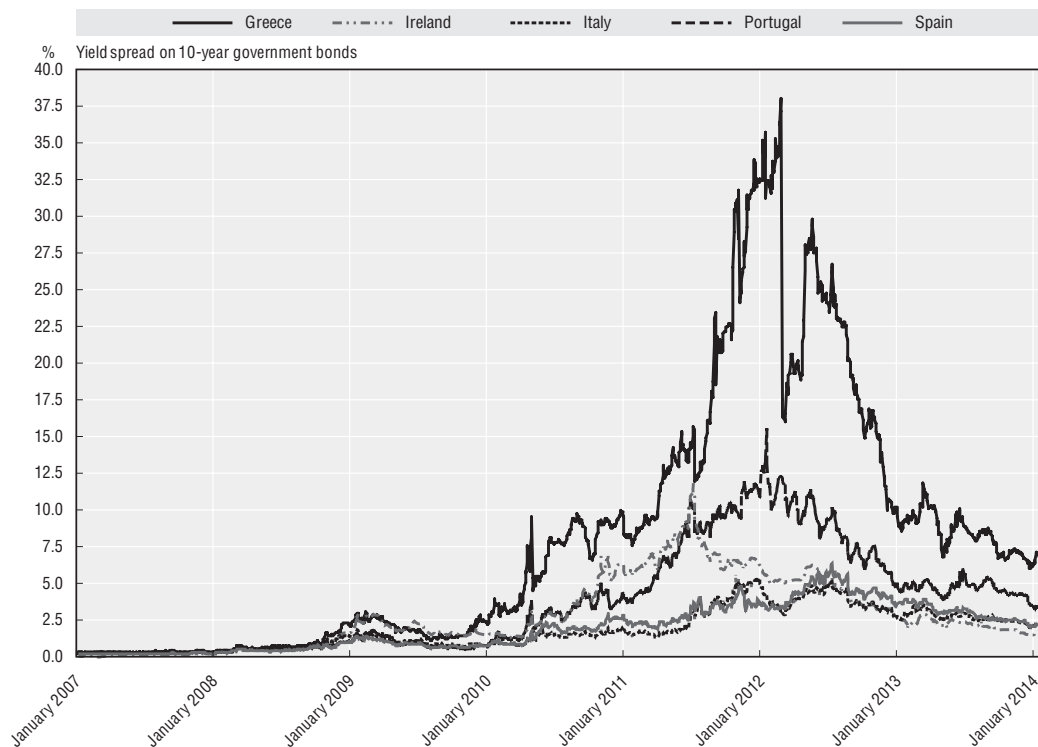
2. Rationale

In recent decades, an increasing number of governments, including those in emerging-market economies, have gained access to financial markets. With the deepening of the markets for sovereign paper, governments have been subject not only to periodic evaluation by major credit rating agencies, but more immediately, to continuous evaluation by investors as reflected in the interest yield on bonds traded in secondary markets. The heightened sensitivity of financial markets in the wake of the recent crisis provides a major rationale for assessing fiscal risk.

From the perspective of bondholders, the spread on a given government's interest yield relative to a high-grade sovereign bond of the same maturity (issued by another government) is interpreted as the sovereign risk premium paid by the government on its

debt. A further manifestation of sovereign risk premium is provided by the spread on credit default swaps (CDS), derivative instruments that reflect the cost of insurance against sovereign default. Figures 1 and 2 illustrate respectively the fluctuations in interest spreads on ten-year government bonds since 2007 and CDS spreads on such maturities since 2009, in the hardest-hit member countries of the euro area (Greece, Ireland, Italy, Portugal and Spain) within the European Union (EU).

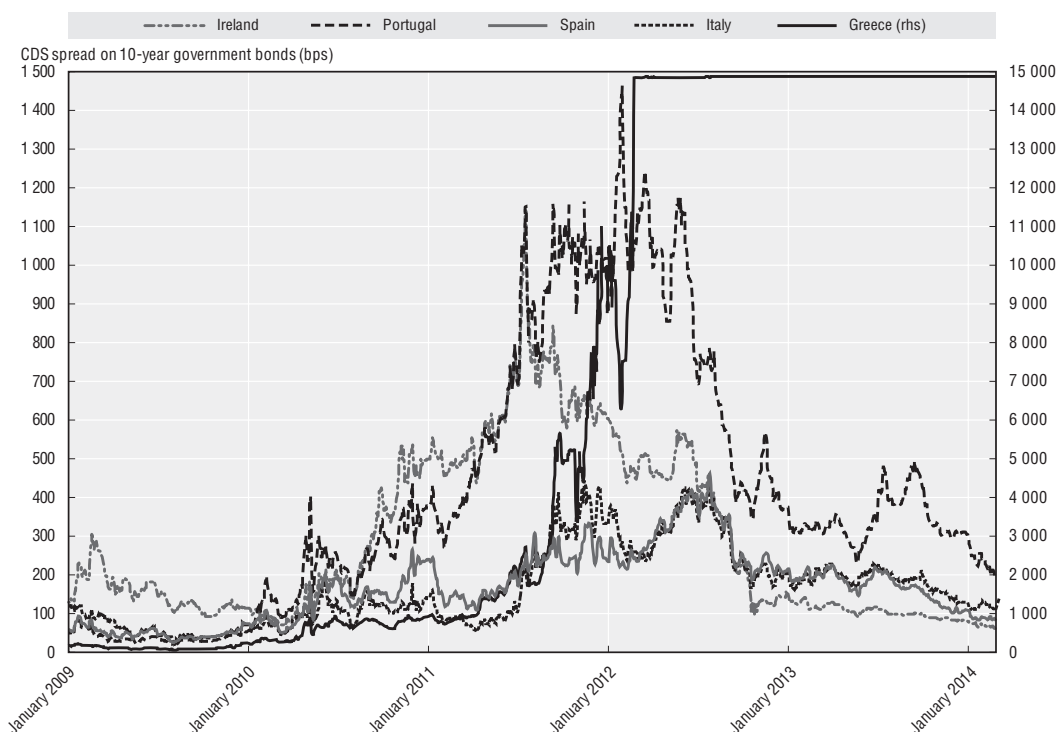
Figure 1. **Euro area: Sovereign risk premium**



While the relative position of spreads among countries broadly reflects differences in fundamental fiscal vulnerability to the crisis, their movement seems to be driven primarily by shifts in investor sentiment, rather than by significant changes in the underlying fiscal position. From 2008 onward, the sovereign risk of these countries jumped sharply as investors seem to have realised that the no-bailout clause, enshrined in the EU Treaty, is indeed (albeit fitfully) enforced.² Conversely, following the declaration in the middle of 2012 by the President of the European Central Bank that it will resort to “whatever it takes to save the euro” signalling an apparent relaxation of the no-bailout clause, spreads in most of these countries declined to nearly pre-crisis levels.

Although the sovereign risk premium, measured by yield spreads, serves as a broad indicator of a government’s vulnerability in financial markets, it conveys limited – and occasionally distorted – information on actual fiscal risk. First, spreads on sovereign bonds reflect not only fiscal risk, but may also embody country risk, currency risk and even systemic risk.³ Second, spreads are driven to a large extent by the vagaries of market perceptions, not necessarily by fundamentals. Third, as a corollary, spreads are rather volatile in thin secondary bond markets, and volatility of CDS spreads is usually further

Figure 2. Euro area: Sovereign default risk premium



magnified by highly speculative trading – where the parties to such instruments do not even hold the underlying bond that is meant to be insured. And fourth, movements in spreads cannot be decomposed into the sources underlying fiscal risk. These features underscore the need to approach fiscal risk from an analytical perspective that reaches beyond observed fluctuations in sovereign risk premium.

Besides the heightened sensitivity of financial markets, an even stronger argument for assessing fiscal risk can be made in a democratic society for transparency and accountability in public finances toward the electorate. In this regard, New Zealand's Public Finance Act of 1989 – precursor of the Fiscal Responsibility Act of 1994 – that instructs the government to publicly disclose fiscal risks on a regular basis, has become a template for many governments in their quest for transparency.

Apart from its value as a means of democratic inclusion, a factual and objective assessment of fiscal risks bestows multiple advantages on the quality of policymaking. A government that is aware of the likely risks ahead – including the risk of inaction – in both quantitative and qualitative terms is in far stronger position to make sound policy decisions than one that ignores or downplays such risks. Informed policymakers can choose among alternative options, conscious of the risks associated with each option. With an understanding of the sources and magnitude of fiscal risks, policymakers should be able to better avert, manage, and mitigate them in various ways. By the same token, the legislature and its constituencies can exercise oversight and conduct an effective debate over budgetary decisions on the basis of reliable estimates of risks. And ultimately, a government that is committed to disclose, manage and mitigate fiscal risks can gain credibility in financial markets and among credit rating agencies, and thus, overcome and dampen the effect of – and thus influence – sovereign spreads on investment decisions.

3. Identification

Fiscal risks can be observed from various perspectives. At a basic level, there are three major types of fiscal risk: economic, technical, and political.⁴ The risks under scrutiny herein are primarily of an economic and technical nature. Political risks are far more difficult to identify and assess as they do not lend themselves easily to objective analysis.

Economic risks for the most part involve macroeconomic variables (especially economic activity, interest rates, terms of trade, exchange rate) that underlie fiscal forecasts. In addition, they include the probable realisation of contingent liabilities that may result in claims on budgetary resources. Contingent liabilities cover a wide range of probable events for which the state may be called upon to honour explicit or implicit guarantees and insurance. Such events may be associated with financial default, health-care claims, various legal contracts, natural disasters, and other environmental damages.

Technical risks arise mainly from the data and method for estimating and forecasting government expenditure and revenue. The latter include erroneous elasticity estimates of tax revenue with respect to its corresponding effective base. For example, forecast errors for corporate income tax receipts typically rank among the largest in budgetary forecasts because of leads and lags as well as diversity across industries.

Political risks are the most difficult to capture because they usually involve unanticipated discretionary action (or inaction) by the government, deviating from previous commitments – including those expressed in budget documents – in the course of the fiscal year or over a medium-term programme. This is generally a symptom of dynamic inconsistency.

Each type of risk can be either temporary (e.g., risk of expenditure overruns in the run-up to an election) or permanent (e.g., risk of an earthquake or a volcano). More important, while most risks can be treated as exogenous, there are risks that are internally generated by the authorities. In a small open economy, considerable macroeconomic uncertainty is determined externally; specifically, GDP and interest rates may be affected by shocks in the terms of trade, foreign demand, and monetary conditions abroad. By contrast, endogenous risks, such as those associated with contingent liabilities, are largely a function of past and current government decisions, often in an attempt to postpone government expenditures into the future in order to maximise fiscal space at present. Likewise, over-optimism in budgetary forecasts is tantamount to a self-inflicted risk.

Economic and technical risks can be further classified under three distinct headings: *specific*, *general*, and *systemic*. They are differentiated by certain key characteristics that largely determine the methodological approach to estimating them, as discussed below. Such characteristics encompass in part the relative ease of identifying the source of the risk and the extent of its influence on budgetary outcome and economic performance.

Specific risks are identified directly with regard to government spending programmes, tax measures or other policy decisions that have an uncertain budgetary impact over time. For the most part, they consist of explicit and implicit contingent liabilities, mainly in the form of government guarantees for depositors, exporters, farmers, or investors in infrastructure under public-private partnership (PPP) contracts. Contingent liabilities may also arise with respect to state-owned enterprises or sub-national governments in case they operate under the protection of a bailout provision.⁵

The 2014 OECD Survey of Fiscal Risks highlights the relevance, or incidence, of specific and general types of risk as observed in member countries.⁶ Table 1 summarises the

Table 1. **OECD countries: Relevance of specific risks**

Category	Relevance			
	High	Medium	Low	None
	(In per cent of each category)			
Pension funds	6	37	31	25
PPPs and other risk sharing	6	16	44	34
Financial sector	31	22	25	22
Legal claims	3	9	53	34
Other liabilities and guarantees	9	19	63	9
Natural disasters, health-care risks	9	13	53	25

Source: 2014 OECD Survey of Fiscal Risks.

responses regarding specific risks grouped under major categories. Among the various risks, more than half of the respondents identified those associated with banks and the rest of the financial sector, which reflects the recent experience of the financial crisis and its negative feedback loop on the public sector. Meanwhile, a large majority of respondents assigned low or no relevance to risks from PPP contracts and other risk-sharing arrangements with the private sector, to potential legal claims, to other liabilities and guarantees, and to possible natural disasters and public-health risks.

Most specific risks – with the exception of natural disasters and public-health risks – are endogenous, typically incurred by a government to meet a headline deficit ceiling or target, under a fiscal rule, as in the European Union. Examples of risk-generating devices that have been introduced to comply with the EU Stability and Growth Pact include: extra-budgetary outlays, quasi-fiscal activities, PPPs, and more recently, unfunded public pensions (through nationalisation of private pension funds). Although conceptually well-designed, implementation of the deficit and debt criteria, under the original Pact, was ridden with loopholes⁷ and induced risky government behaviour. While providing increased headroom in the short run, such devices create a larger public debt burden and increased vulnerability over the medium to long run. Thus the immediate gain in fiscal space imposes a much larger loss in fiscal space in the future.⁸ In many countries, pressures to take advantage of loopholes have intensified, as fiscal space narrowed substantially due to the failure to undertake structural reforms in taxation, social entitlements, and other mandatory programmes.⁹

General risks cover risks that arise from estimates or projections of macroeconomic variables (GDP, interest rates, exchange rate, terms of trade, etc.) and demographic variables (old-age and youth dependency ratios) that provide the basis for government expenditure and revenue forecasts. Such risks can be traced as well to technical and behavioural linkages between fiscal and macroeconomic variables. According to Table 2 more than half of OECD governments report that economic forecast errors underlying budget forecast, pro-cyclical fiscal stance, financial asset bubbles, and demographic pressures are the most relevant general risks. Of lesser relevance is the vulnerability to outside shocks and to various external or internal imbalances. Opaque public accounting practices are regarded by governments as least relevant. This, however, may simply reflect the reluctance of some governments to admit publicly in the survey the prevalence of such practices.

General risks are endogenous in the case of a sustained optimistic bias in macro-fiscal forecasts. Similarly, a procyclical expansionary fiscal stance, possibly hidden behind a

Table 2. **OECD countries: Relevance of general risks**

Category	Relevance			
	High	Medium	Low	None
	(In per cent of each category)			
Fiscal forecast errors	16	38	41	6
Economic forecast errors	13	50	31	6
Vulnerability to shocks	19	28	41	12
Opaque accounting practices	3	16	16	66
Pro-cyclical fiscal policy stance	9	50	28	12
Financial asset bubbles	13	38	31	19
Other internal/external imbalances	13	18	50	19
Demographic pressure	22	31	47	0

Source: 2014 OECD Survey of Fiscal Risks.

miscalculated structural budget balance, usually has risky consequences.¹⁰ Over time, prolonged procyclical fiscal expansion that leads to unchecked accumulation of government liabilities can contribute to an eventual debt crisis.¹¹ In some countries, endogenous general risks (including opacity in public accounts) are attributable to an attempt to comply with fiscal rules or with an officially declared fiscal target – an illustration of the well-known Goodhart's law.¹²

Systemic risk refers to the probability that the state is insolvent and illiquid, that is, unable to meet its obligations toward bondholders and creditors. In a broader sense, it is the joint risk of unanticipated bankruptcy facing both the public and financial sectors – also known by the journalistic term of a Black Swan event. The likelihood of a financial crisis, such as the ones experienced recent years in Iceland, Ireland, Greece and Cyprus,¹³ or the earlier Argentine crisis, can be viewed as manifestation of systemic risk. This type of risk has been the least recognised and anticipated by governments prior to each crisis, including the most recent one. For the most part, fiscal and monetary authorities have only recently begun to identify such risk and to consider building institutions and mechanisms to prevent its occurrence.

4. Measurement

There are three different approaches to measuring fiscal risk: direct estimation, sensitivity analysis, and stochastic estimation. This review covers a range of methods, some of which are applied routinely by governments, while others have not advanced beyond an experimental stage.

4.1. Direct estimation

The best known way of assessing fiscal risk involves the identification and direct quantitative estimation of the potential budgetary cost of specific risks, including those related to contingent liabilities. Estimates can be extended to likely collateral effects on the economy (such as growth, or employment) of the policy measure under scrutiny. Direct estimation has become the most popular approach adopted by governments that follow good practices in transparency standards – especially in the wake of the financial crisis. The trend is reflected in the latest revision of the IMF Code of Fiscal Transparency, which calls for estimates of specific fiscal risks.¹⁴

Nevertheless, measurement of specific risks is less than straightforward. In particular, the stock of contingent liabilities (whether in nominal amounts or as a per cent of GDP)

cannot be simply added to the stock of liabilities in the government's accounting balance sheet – except shown in the form of a memorandum item. Instead, an estimate of the present value of contingent liabilities, qualified by the probability of realisation of the contingency, which cannot be observed, may be incorporated in a comprehensive inter-temporal balance sheet of the public sector. Furthermore, such estimates must be presented net of reserves set aside to cover the contingencies.

4.2. Sensitivity analysis

General risks that stem from macroeconomic developments are not amenable to direct estimation. However, they can be assessed by quantifying the sensitivity of a baseline projection of the budget deficit or public sector debt with respect to variations in the growth rate, financial asset bubbles, interest rate fluctuations, exchange rate volatility, terms of trade shocks, demographic pressures, or changes in other domestic or external macroeconomic variables – usually under the restrictive assumption that these changes are exogenous and separable.¹⁵ The resulting deviation from the baseline can be expressed in percentage or nominal terms, given a set percentage change in the selected macroeconomic variable.

A conventional manner of presenting a sensitivity analysis is by illustrating various outcomes with a fan chart – inspired by the fan chart for inflation forecasts published regularly by central banks. Such a technique is used as well to present the results of a stress test in which deviations from a baseline projection are shown in response to a macroeconomic shock of a given magnitude.

Initially, the IMF (2002) designed a sensitivity analysis or stress test as part of an exercise to assess public debt sustainability in member countries. The analysis simulates the impact of selected macroeconomic shocks (through GDP, GDP deflator, primary balance, external financial flow) on the projected path of the debt to GDP ratio over a five-year period. The shocks are set in terms of: historical average of the macroeconomic variables; one and two standard deviations of the variables; 30% exchange rate devaluation; and realisation of (undefined) contingent liabilities totalling 10% of GDP.

In an attempt to improve on the mechanistic nature of the analysis, the IMF (2003) explored various options to estimate the general risks faced by governments. But, cognisant of the difficulty of improving the stress tests for uniform application across countries, it decided to supplement the previous approach with alternative policy scenarios and qualitative assessments specific to each country.

The attractiveness of sensitivity analysis as a gauge of fiscal risk lies in methodological simplicity, minimal data requirements, and ease of communicating the results with the support of illustrative fan charts. On the other hand, the analysis is subject to a number of potentially serious shortcomings: arbitrariness, and exogeneity of the simulated shocks; absence of the probability estimates of their occurrence; lack of impact on contingent liabilities; lack of correlation among shocks; and no policy reaction to compensate the effect of the shocks. To a large extent, these shortcomings paved the way for the stochastic approach.

4.3. Stochastic approach

During the past decade there have been a number of attempts to identify and estimate fiscal risks beyond sensitivity analyses or stress tests. A common thread in these

experiments is to compute probability distributions of the impact of well-specified shocks on the budget balance and its components, and ultimately, on the public sector balance sheet. In several cases, the overriding objective is to assess public debt sustainability under uncertainty. The stochastic approach recognises and treats fiscal risks explicitly, and incorporates them into a comprehensive indicator of risk, or alternatively, allows calculating the probability of sovereign default.

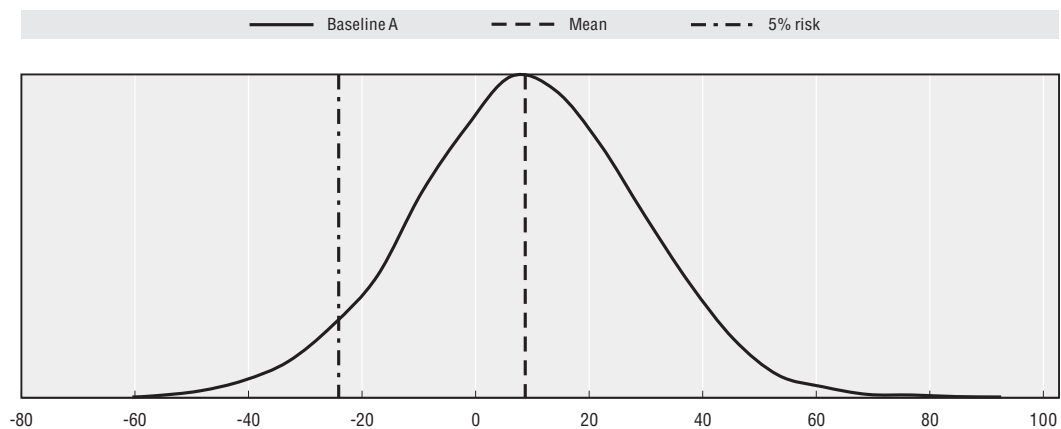
Stochastic methods correct most limitations inherent in direct estimates and sensitivity analyses. Yet their results are more difficult to communicate and the underlying calculations are more costly in terms of analytical complexity and data requirements.¹⁶ The characteristics and country applications of five basic methods (and variants thereof) are summarised in Table 3 in broad chronological order. The first two sets of methods borrow techniques from financial analysis to the public sector. The third includes structural and dynamic stochastic general equilibrium (DSGE) macroeconomic models, enhanced with a detailed fiscal block. The last two methods consist of ad hoc reduced-form specifications to compute indicators of risk-adjusted debt sustainability and of fiscal stress.

The first method represents an attempt at estimating the “fair spread” on government bonds, that is, the sovereign risk premium, on the basis of macroeconomic fundamentals and the government’s balance sheet, as compared to the spread observed in financial markets shown in Figures 1 and 2. The fair spread model is focused on calculating sovereign default probabilities which, through the term structure, are used to estimate a given country’s fair spread. In the method, as initially developed by Xu and Ghezzi (2003), default probabilities are driven primarily by the level of treasury foreign exchange reserves, whereby default is approached, rather mechanically, upon exhaustion of the reserves. It was first applied to a handful of emerging-market economies, and then replicated rather successfully for Brazil by de Costa and others (2004). The model has been further extended by Gray and others (2006, 2008, 2012, 2013) and Keller and others (2007) along the lines of a contingent claims analysis (CCA) from the financial analysis of credit risk. A major advantage of the method is that it can be used to simulate systemic shocks across the sovereign, banking and real sectors, drawing on a fuller set of balanced-sheet and macroeconomic variables. But a drawback is that balance-sheet aggregates for the public sector neglect the role of contingent liabilities. Various versions of the CCA approach were applied not only to emerging-market economies, but also to EU member countries and the United States.

Barnhill and Kopits (2004) adapted to the public sector the Value-at-Risk (VaR) method,¹⁷ well known in the private financial sector for assessing the potential losses from an investment portfolio. The method is used to calculate the effect of macroeconomic volatility, within a comprehensive inter-temporal balance sheet of the public sector – with all assets and liabilities, including the probability of realisation of explicit and implicit contingent liabilities, expressed in present value terms. The worse potential outcome of stochastic shocks on fiscal sustainability is estimated at a given confidence level. Specifically, the shocks are subject to a very large number of Monte Carlo simulations by modelling the variance and covariance of the various sources of risk (output, price level, exchange rate, interest rates, risk premium, and oil price, among others). In the empirical part, the VaR was tested for Ecuador in the year 2000 when the country was hit by fiscal, banking, currency and climatic crises. The baseline simulation of the effect of all shocks is shown in Figure 3 with a probability density function for the net worth of the public sector, exhibiting a fat tail risk at a 5% probability. Upon removing sequentially each source of risk,

Table 3. **Summary of stochastic methods of fiscal risk analysis**

Methods, authors	Risk indicator						Source of risk										Application			
	Net worth	Assets, liabilities	Contingent assets and liabilities	Gross public debt	Overall balance, primary balance	Interest yield, risk premium	Synthetic risk indicator	GDP	Domestic prices, external prices	Oil price	Interest rate	Exchange rate	Foreign exchange reserves	Assets, liabilities	Contingent assets, liabilities	Primary balance	Tax revenue	Selected fiscal variables	Financial competitiveness variables	
Fair spread model; contingent claims analysis (CCA)																				
Xu and Ghezzi (2002)						X		X			X	X							Brazil, Colombia, Peru, Russia, Turkey, Venezuela	
da Costa and others (2002)				X		X		X			X	X		X					Brazil	
Gray and others (2006,2008, 2012, 2013)						X		X				X	X	X		X			Indonesia, 15 EU countries, United States	
Keller and others (2007)						X		X				X	X	X		X			Turkey	
Value-at-Risk analysis (VaR)																				
Barnhill and Kopits (2004)	X	X	X	X	X			X	X	X	X	X		X	X				Ecuador	
da Costa and others (2004)		X			X			X			X	X		X					Brazil	
Budina and van Wijnbergen (2009)					X			X			X	X							Turkey	
Structural and DSGE models																				
Mendoza and Oviedo (2004, 2006)					X			X									X		Brazil, Colombia, Costa Rica, Mexico	
Kamenik and others (2013)				X	X	X		X			X	X				X			Austria, Czech Republic, Germany	
Vector autoregressive model (VAR)																				
Celasun, Debrun and Ostry (2006)					X			X			X	X				X			Argentina, Brazil, Mexico, South Africa, Turkey	
Fiscal stress index																				
Baldacci and others (2011)							X											X	Cross country	
Berti and others (2012)							X											X	X	EU member countries

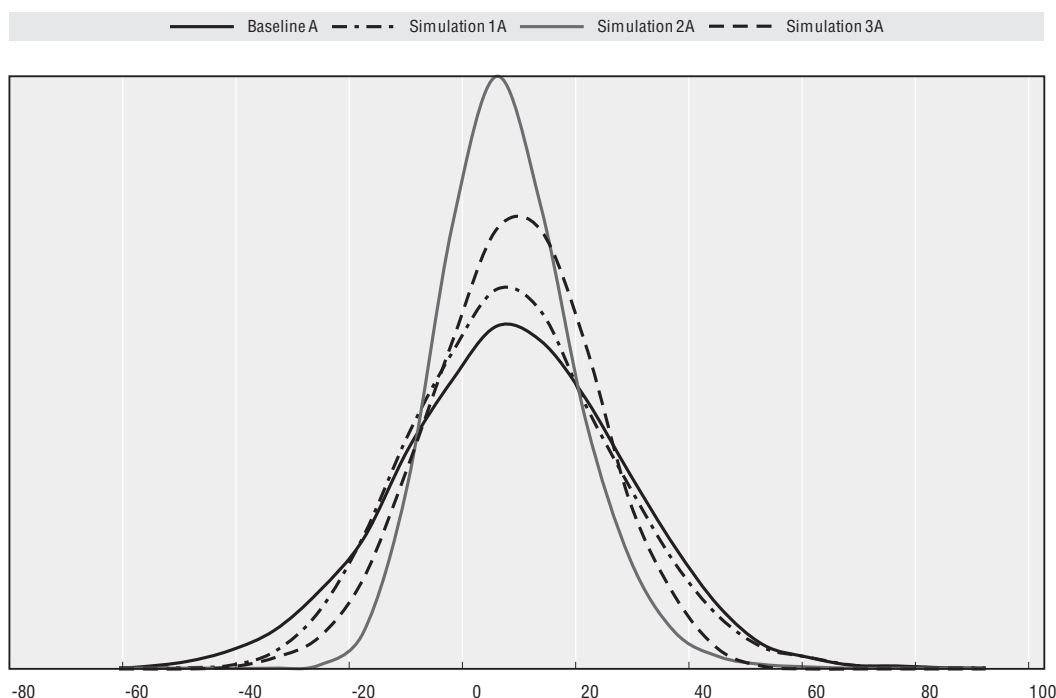
Figure 3. **Stochastic approach: Value-at-Risk baseline simulation**

the distribution of outcomes becomes tighter around the mean and the tails become less prominent, as shown in Figure 4. Following the same approach, de Costa and others (2004) conducted VaR simulations in Brazil for 2001, 2002 and 2003, allowing yearly comparisons of risk-adjusted public debt ratios, but without explicitly accounting for contingent liabilities. Budina and van Wijnbergen (2009) specified a highly stylised version of VaR analysis to the public sector in Turkey and calculated the fiscal adjustment required to stabilise the debt ratio following the 2001 crisis.

Mendoza and Oviedo (2004, 2006) constructed structural and general equilibrium models, allowing stochastic features, to explain the ability of governments in emerging-market economies to borrow in international financial markets. The capacity to borrow is primarily determined by the high volatility of tax revenue – while implicitly excluding other sources of volatility – when compared to the case of advanced economies. This rather restrictive specification serves to set the natural limit to indebtedness, a constraint that the government is willing to meet with an adjustment in expenditures alone, subject to the political tolerance of the private sector. On the empirics, the cases of Brazil, Colombia, Costa Rica and Mexico provide sufficient diversity as regards revenue volatility, vulnerability to debt crises, and propensity to adopt a fiscal stance to remedy the crisis.

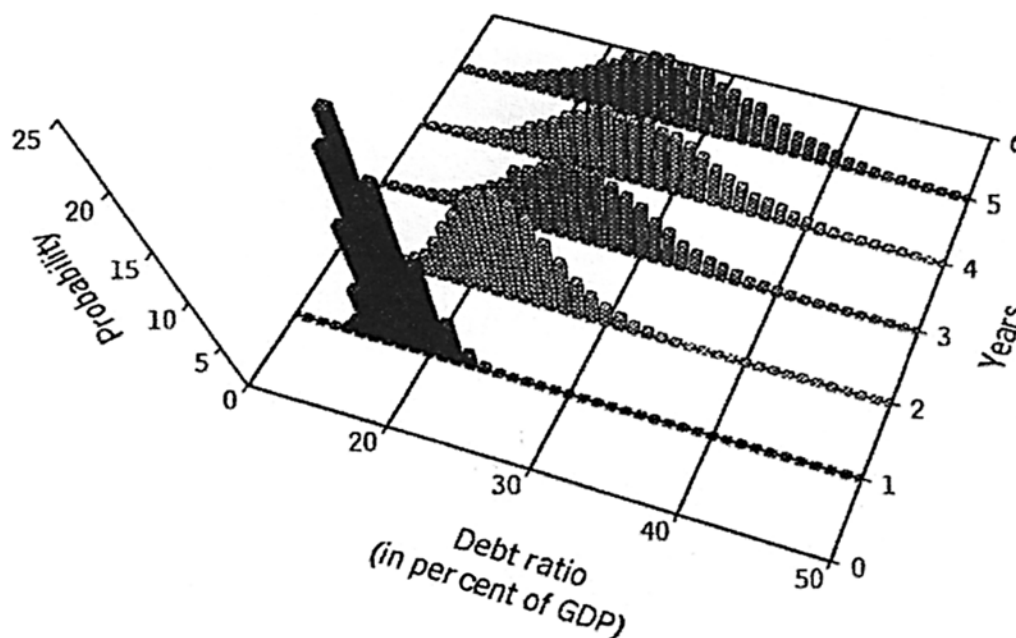
The macroeconomic model developed by Kamenik and others (2013) is the most recent stochastic approach at measuring fiscal risk, focused exclusively on three advanced economies (Austria, Czech Republic and Germany). It essentially consists of a simple and flexible semi-structural model modified with DSGE features, applied to historical data for each economy. The authors compare the actual public debt ratio with the target debt ratio implicit in the fiscal policy derived from the model over a decade, to assess the fiscal outlook facing each economy. In addition, a forward-looking fiscal stress test is conducted with projected probability distributions based on the model over two decades, incorporating fiscal reaction functions, to assess the risk of failure to comply with the debt rule. The results of the test are presented in fan charts showing uncertainty bands around baseline projections of key performance variables: government debt, overall budget balance, primary balance, and interest cost, all stated as proportion of GDP.

With the objective of remedying the limitations of the IMF sensitivity analysis for debt sustainability, Celasun, Debrun and Ostry (2006) formulated an algorithm consisting of three blocks. The first, the basis of stochastic simulations, calibrates a joint probability distribution

Figure 4. **Stochastic approach: Value-at-Risk alternative simulations**

of shocks to historical data for each of five selected countries (Argentina, Brazil, Mexico, South Africa, Turkey) with a vector autoregressive (VAR) model. This provides the basis for estimates of the effects of the variance and covariance of growth, interest and exchange rates, on public debt. In the second, a fiscal policy reaction function (expressed by the primary balance) is estimated on a cross-country sample – of questionable relevance to the five selected economies. The third block combines the estimates from the other two blocks to generate stochastic simulations around a medium-term baseline projection of the public debt-to-GDP ratio. This method presumably inspired the elaborate guidance note issued by the IMF (2013a) in an attempt to tailor it to the specifics of each country. The results of a simulation exercise of this kind can be illustrated by a three-dimensional fan chart, as shown in Figure 5, indicating that as the time horizon of the projection lengthens, uncertainty increases and the probability density function becomes flatter, with larger tails.

Borrowing from the methodology of early warning systems (EWS) for currency, banking, and debt crises,¹⁸ Baldacci and others (2011) developed a fiscal stress index. The index rests on threshold values that signal vulnerability to a fiscal crisis, on the basis of a composite of 12 fiscal variables classified into three clusters (basic fiscal variables, long-term fiscal trends, and asset and liability management).¹⁹ The variables are selected depending of their past contribution to fiscal distress episodes for some 80 countries, estimated with logit regressions over the period 1995-2010. Incorporating some financial-competitiveness variables, Berti and others (2012) expanded the index and applied it to EU member countries. The index proves to be a useful device for discriminating among major variables in signalling fiscal stress in these economies, including during the recent financial crisis. However, as in the case of other EWS techniques, the ultimate test of the operational usefulness of the method lies in correctly signalling country-specific fiscal vulnerability beyond the estimation period.

Figure 5. **Stochastic approach: Fan chart simulations**

Although admittedly to be regarded as experimental at this stage, the five stochastic methods outlined above offer insights and potentially useful toolkits for an increasingly thorough and realistic evaluation of fiscal risks in their different dimensions. They all face a major challenge in communicating the methodology and the results in clear and nontechnical terms to policymakers, legislators, the general public, and in some cases, even to financial markets. Failure to address this challenge may render any practical application a black box, only accessible to specialists.

Nevertheless, each approach has some advantages vis-à-vis the others. Among them, the CCA, VaR, fiscal stress index, and VAR analyses seem to be most amenable to operational application if tailored to the environment of a given country. In this regard, the usefulness of the fiscal stress index and the VAR for actual policy formulation could be enhanced by shifting reliance from cross-country parameter estimates onto country-specific estimation and simulations. Further refinement of the stress index in this direction might improve its reliability as a leading indicator of vulnerability to a sovereign crisis.

By contrast, the macroeconomic models are set in the context of full-fledged theoretical framework, at the cost of being too specialised, restrictive, and least communicable. Yet a distinct advantage of these models is that, by their very nature, they allow for the endogeneity of shocks by tracing the linkages between key macroeconomic variables. Therefore, they can be used to perform more realistic sensitivity analysis than ordinarily done by treating simulated shocks as exogenous. Moreover, DSGE models capture explicitly stochastic behavioural relationships throughout the economy.

As an exception among the methods reviewed, recent extensions of the CCA can capture economy-wide systemic risk through inter-sectoral linkages in determining sovereign default risk. However, potentially, the VaR method seems the most versatile in its coverage of fiscal risks. Within a consistent analytical framework, it can incorporate model-based stochastic simulations of major macroeconomic shocks. Beyond its

usefulness in assessing general risks (including those associated with natural disasters, such as *El Nino*), it can also be employed to estimate the effect of specific risks associated with contingent liabilities, and to help assess systemic risks stemming from the financial sector. Thus the VaR approach, like recent extensions of the CCA, could trace negative feedback loops between the financial and the public sectors – of concern for policymakers, for example, within the euro area.

Inevitably, to a greater or lesser extent, all methods are vulnerable to the Lucas critique. In particular, the normative reaction functions specified in the structural models and the VAR model, relying on historical policy adjustments undertaken to correct past fiscal imbalances, at most have very limited relevance for coping with a future crisis episode in a given country. Any pre-crisis estimates underlying the posited adjustment are likely to be invalidated by a regime shift in the wake of the recent crisis.

5. Management

The most important aspects of managing fiscal risks are analysis, disclosure, and external oversight. Successful tackling of these tasks requires, of course, political will based on a wide consensus which shapes standards of good governance, on the one hand, and a set of technical skills, on the other. These, in turn, eventually become an integral part of political and financial culture of a nation – as evidenced in a handful of advanced economies. A summary of the use and effectiveness of risk management practices in OECD member countries can be gleaned from the results of the recent survey summarised in Table 4.

Table 4. **OECD countries: Use and effectiveness of fiscal risk management practices**

Practice	Effectiveness				Not adopted
	High	Medium	Low	None	
(In per cent of practice)					
Statement of risks	9	19	31	0	41
Long-term sustainability report	6	47	25	0	22
Parliamentary approval of risks	3	16	6	3	72
Assessment by independent institution	6	31	19	0	44

Source: 2014 OECD Survey of Fiscal Risks.

5.1. Scope for managing fiscal risks

As a basic step in managing fiscal risks, it is necessary to engage in a minimal level of analysis and estimation of recurrent specific risks of a significant magnitude. In this regard, statements of risks, pioneered in New Zealand (Box 1), are viewed as an elementary standard of good practice in many countries where the government is under a legal obligation to present an annual listing of specific risks and a description within each risk category.²⁰ The practice has spread throughout much of the OECD membership, motivated above all by progress toward increased fiscal transparency. More than one half of the member countries surveyed prescribe a statement of risks, though only in one tenth of the countries is the practice seen as highly effective. As an exception, some governments (Chile and Sweden) apply sophisticated techniques, such as stochastic simulations or option pricing models, to calculate the probability that certain contingent liabilities will be called.

Box 1. New Zealand: Management and Mitigation of Fiscal Risks

New Zealand has been at the forefront in developing best practices in the conduct of public finances. The cornerstone of these practices is a high level of transparency, a well-designed set of fiscal policy rules, as well as guidelines for the sound management and mitigation of fiscal risks. Effective enforcement of these practices over the past 25 years has served well New Zealand's economic performance, in terms of stability and growth, by anchoring fiscal expectations – in tandem with a monetary framework that helps anchor inflation expectations.

Key elements in managing fiscal risks consist of two statements in which the government is obliged to disclose in a comprehensive and orderly manner a number of well-defined fiscal risks. Pursuant the Public Finance Act of 1989, as amended, the Treasury prepares twice (or three times) a year the *Statement of Specific Fiscal Risks* (attached to the annual budget, half-year and pre-election updates) containing information on policy risks and explicit contingent liabilities from legal obligations (New Zealand Treasury, 2014). Cost estimates are required for items in excess of NZD 100 million over a five-year period. For simplicity, the statement flags the status of the risk relative to the preceding year (unchanged, changed or new). Excluded from the statement are mostly policy risks involving national security, as well as potential budgetary losses from negotiation, litigation, or commercial interests. Also in the same document, the Treasury presents regularly an assessment of general macro-fiscal risks. The general risks affecting the baseline projection are subject to a sensitivity analysis under explicit alternative macroeconomic and demographic assumptions. In a separate document, at least every four years, the Treasury is required to publish a *Statement on the Long-Run Fiscal Position* to ascertain the sustainability of public finances over forty years into the future (New Zealand Treasury, 2013). Both statements have a wide coverage (including SOEs, sub-national governments, decentralised agencies) and are accompanied by notes on selected issues affecting the forecasts or projections and associated risks, such as post-earthquake reconstruction, health care, public pensions, immigration, and terms of trade shocks.

Management and mitigation of fiscal risks is undertaken on several fronts. Two fiscal policy rules – supported with strict reporting requirements – originally enshrined in the Fiscal Responsibility Act of 1994, instructs the government to target a prudent ratio of public debt to GDP and, once the target has been achieved, to observe an operational budget balance or surplus over time. At the individual agency level, operationally, government spending departments are primarily responsible for monitoring and provisioning for contingent liabilities and various risks, under oversight by the Treasury. In fact, the Treasury has ultimate authority and control over borrowing, contracting obligations, debt management, and assessing fiscal risks. Although without a formal independent fiscal institution, the Treasury exercises some of these functions in co-operation with, or under surveillance by, outside entities. Specifically, the budget contains a set of independent tax forecasts prepared by the Inland Revenue Department, generally with an explanation of significant differences with the official forecasts; official macroeconomic forecasts are usually reviewed by a panel of independent experts prior to finalisation; and the Treasury's debt management office is responsible for constructing and updating the government's consolidated balance sheet. Ultimately, significant fiscal risks are subject to parliamentary debate and approval, with technical support from the Office of the Auditor General which publishes reports on selected areas of fiscal risk. Besides departmental provisions, the Treasury sets aside a small general contingency account for urgent items that cannot be managed within existing departmental resources, appropriated on a supplementary basis during the fiscal year.

Relatively few governments or independent fiscal institutions attempt an in-depth assessment of general risks. However, according to the 2012 OECD Budgetary Practices and Procedures Survey, a fiscal sensitivity analysis is now published in two thirds of member countries as part of the budget documentation.²¹ In a number of countries, the analysis is illustrated with fan charts and is extended to medium- or long-term macro-fiscal projections assuming a marginal change in key macroeconomic variables. Also, such tests are often conducted as part of periodic long-term public debt sustainability reports.

A large majority of OECD member countries prepare long-term debt sustainability reports, but with low to medium effectiveness (Table 4). In addition to marginal sensitivity tests on baseline long-term scenarios, a few governments run sensitivity analysis on alternative macroeconomic scenarios or well-specified fiscal policy scenarios. Thus far no government is known to have applied a full-fledged stochastic approach to assess general or systemic fiscal risks.

Beyond disclosure and analysis, managing fiscal risks merits as much attention as managing public debt. This entails a formal framework for monitoring and regulating the terms of public sector liabilities, and ultimately setting limits to exposure to fiscal risk within a strategic context. To this end, it is necessary to clearly allocate responsibilities among various public sector entities.

5.2. Role of the government and the legislature

The primary responsibility for identifying and estimating fiscal risks rests (and should rest) with the government, that is, the finance ministry. Overall co-ordination of risk management in all its technical aspects can be entrusted to a specialized office, directly under the authority of the ministry of finance. As an alternative, this can be accomplished by assigning this responsibility for managing the issuance and monitoring of contingent liabilities to the debt management office.²²

Each line ministry or department should estimate and monitor the potential budgetary costs for specific risks relating to the category of expenditures corresponding to that ministry, under co-ordination by the finance ministry (Box 1). Equally, sub-national governments and state-owned enterprises should conduct risk assessments regarding their own operations. The reason for this is the presumption that the government and its decentralised agencies are in the best position to manage risk. In any case, accountability by each public sector entity, under the oversight of the finance ministry, should help reduce a possible common-pool problem and the attendant deficit bias.

However, for the most part, assessment of specific risks associated with contingent liabilities by the finance ministry should not extend beyond explicit contingent liabilities. Recognition of implicit liabilities could lead to moral hazard. In the event, for example, holders of bank deposits or homeowners would expect to be bailed out beyond the limits of their insurance policies. Similarly, facing default or bankruptcy, sub-national governments or state-owned enterprises may expect bailouts from the national government notwithstanding a formal no-bailout provision.

The finance ministry should be well equipped to carry out sensitivity analyses or stress tests to assess general risks at the time of preparing the draft budget. General risk estimates and stress tests are a critical input in sound budgetary decisions. An important implication of general risk assessments is that they induce the government to avoid an optimistic bias in formulating macro-fiscal projections.

Apart from the executive branch of the government, the legislature should have an important role in debating and overseeing the budget bill, with unrestricted and timely access to information about the risks underlying legislative proposals. The legislature should be able to benefit from the assistance provided by non-partisan analysis of fiscal risks by an independent fiscal institution, as outlined in the next subsection. Within the legislative body, the budget or finance committee has a pivotal task of steering the flow of (preferable non-partisan) analytical material to legislators, to ensure and open an informed debate among them.²³ Legislative approval of the budget bill and of a medium-term budgetary programme can be meaningful only if it is exercised upon appropriate consideration of explicit fiscal risks. Yet legislative approval of explicit fiscal risks is exercised only in one fourth of OECD member countries surveyed, with some effectiveness (Table 4).

5.3. Role of the independent fiscal institution

An independent fiscal institution (IFI), through its surveillance function, shares the responsibility for assessing fiscal risk with the government. In this role, the IFI verifies the estimates of specific risks prepared by the government. Lacking government estimates, with sufficient staff resources, the institution should be authorised to prepare and divulge its own estimates as part of the impact analysis of selected measures contained in the budget bill or other fiscal proposals. In the assessment of risks from contingent liabilities, the IFI can play an important complementary role in identifying and disclosing the estimated cost of implicit contingent liabilities – to the extent there is material probability that they may be called – which the government cannot, or refuses to, acknowledge.

The majority of IFIs – especially in the European Union – have been established only in recent years, in the aftermath of the financial crisis. In more than one-half of OECD member countries surveyed, IFIs make assessments of fiscal risks, which are deemed relatively effective (Table 4). Whereas only a handful of IFIs have an explicit responsibility to evaluate fiscal risks, this task has been assumed by most IFIs even without a statutory mandate. Indeed, IFIs attempt to at least identify or express a view on specific risks in qualitative terms. As a further step, in a number of countries (for example, Canada, Korea, Netherlands, and the United States) IFIs prepare quantitative estimates of risks associated with specific legislative proposals, as part of their remit to make budgetary and economic impact assessment of each proposed tax or spending measure.²⁴ In very few countries (Australia and Netherlands), the IFI prepares a quantitative assessment of the party's policy proposals during electoral campaigns.

In addition, most IFIs also monitor the government's aggregate medium-term macro-fiscal projections, or long-term scenario calculations, including sensitivity analyses, for two reasons. One reason is to anticipate the government's ability to comply with fiscal rules in the future and the other is to determine public debt sustainability. However, in a few cases (Belgium, Canada, Ireland, Slovakia, the United Kingdom, and the United States), IFIs prepare their own macro-fiscal projections and sensitivity analyses or stress tests, for assessing general risks.²⁵ Presumably to gain credibility, even absent an IFI, governments outsource the preparation of macro-fiscal projections, coupled with sensitivity analysis (Germany),²⁶ or solicit an outside opinion of an independent panel of experts (New Zealand).

Over time, there is scope for IFIs to develop the capacity to engage in stochastic analysis not only of specific and general risks,²⁷ but also of systemic risks. For general risks, it can choose among the various methods discussed above, for application to the country's public finances, within the given institutional setting and economic conditions. For starters,

consideration should be given to methods that are amenable to country-specific practical adaptation. The candidates that may be worth considering from an operational perspective are the vector autoregressive model and the fiscal stress index, to be applied to the public sector as whole, including sub-national governments and state-owned enterprises.

Although IFIs are not prevented from conducting an analysis of systemic fiscal risks, at present none of them is known to do so. Management of systemic risks with a broad coverage, possibly including the financial sector is, of course, a very ambitious task. Such a task must inevitably entail close co-ordination with the central bank or any other authority in charge of macro-prudential supervision. The Value-at-Risk approach and the contingent claims analysis, adapted with country-specific features, seem to be most amenable for this task. The scope of the analysis may have to be limited to a realistic context, excluding systemic risks that are entirely exogenous to the country in question, such as the global or regional calamity of a climatic, political or financial character.²⁸

6. Mitigation

In general, fiscal risks are contained through prevention and correction. Prevention calls for high transparency standards, appropriate policy stance, fiscal rules, hedging schemes (pricing, insurance), and effective no-bailout provisions. Corrective approaches include recourse to various types of reserve funds to cushion the adverse impact of shocks and contingencies. The suitability and effectiveness of these approaches depends to a considerable extent on whether the risks are endogenous or exogenous.

Exogenous risks stemming from an adverse shift in the terms of trade or from a sudden stop in financial inflows can be mitigated with a combination of a countercyclical fiscal and monetary expansion, as permitted by the availability of sufficient fiscal space and of an adequate stock of foreign exchange reserves that can be drawn upon rapidly to contain the effects of the shock. For a small open economy that exhibits vulnerability to such shocks, it is particularly important to undertake preventive steps in the form of a build-up of reserves and of a concerted effort at reducing public debt to a prudent level relative to GDP. Demographic pressures stemming from an unanticipated acceleration in ageing over time can be mitigated by tapping into accumulated pension reserves.

In principle, endogenous risks are somewhat easier to cope with since they are generated internally by the government – or with the explicit or tacit approval by the government – often with acquiescence from the legislature. Above all, the authorities should follow internationally accepted standards of transparency. This implies avoiding recourse to off-budget operations and public-private partnership infrastructure projects (PPPs) with the sole objective of helping to narrow the headline budget deficit and comply with some fiscal rules in the near term. Instead, PPPs and other government guarantees should be accompanied by clear risk-sharing arrangements.

To contain the proliferation of specific risks, the authorities should require: mandatory insurance especially in areas (such as health-care benefits) where moral hazard might be endemic, as well as pricing of, or limits on, various government guarantees (such as bank deposits). In the same vein, there should be a clear understanding about the enforcement of no-bailout clauses regarding sub-national governments, state-owned enterprises, and the financial sector, and unambiguous rejection of implicit contingent liabilities.

A well-designed rules-based fiscal framework is potentially a very useful tool to stave off endogenous risks for it helps create long-run fiscal space, maintain (or restore) policy

credibility, and anchor fiscal expectations of economic agents and financial markets.²⁹ For a fiscal rule to be an effective deterrent to fiscal risks, it must be transparent, enforceable, efficient, and technically sound.

This, however, can only be accomplished if, wherever necessary, compliance is underpinned by structural reforms in key areas such as taxation, social entitlement programmes, and sub-national government finances. By contrast – as evidenced in a number of EU member economies in recent years – if a government attempts to meet fiscal targets with improvised policy measures, opaque public accounts, accumulation of contingent liabilities and other short-run schemes, fiscal rules will exacerbate, instead of alleviating, fiscal risk.

Finally – learning the main lessons from the financial crisis – systemic risks must be identified and monitored early on, as financial asset bubbles emerge, requiring joint oversight by an independent fiscal institution and the central bank (or a dedicated financial supervisory agency). While the latter is responsible for macroprudential regulation and supervision of the financial sector, the former is in charge of monitoring the conduct of fiscal policy, with the twin goals of maintaining financial stability and fiscal sustainability, respectively. The need for effective co-ordination between these institutions is underscored by the recent experience of several European countries where illiquid (in some cases insolvent as well) financial entities and highly indebted governments have been operating in a mutually dependent lethal embrace. In all, only a few countries have undertaken initial steps toward establishing a suitable mechanism to prevent systemic risks in the future.

Table 5 lists actual practices in OECD member countries to mitigate fiscal risks. Between 40 and 60% of governments claim to apply with medium to high degree of effectiveness countercyclical fiscal policies, prudent targets for public debt, fiscal rules to constrain expansionary policies, and structural reforms. The overwhelming majority of governments report the lack, or low effectiveness or ineffectiveness, of pricing of government guarantees and mandatory insurance and of sound risk-sharing arrangements with the private sector. Of greater concern is that only one fifth of the respondent governments have credible repudiation, that is, a credible no-bailout provision, as regards perceived or implicit liabilities. Nevertheless, more than one half of member governments have accumulated more or less effective pension reserve funds to compensate for deteriorating demographic trends.³⁰ By contrast, only a mere third of the countries have accumulated stabilisation

Table 5. OECD countries: Use and effectiveness of fiscal risk mitigation practices

Practice	Effectiveness				Not adopted
	High	Medium	Low	None	
(In per cent of practice)					
Counter-cyclical fiscal stance	16	28	31	12	13
Targeting prudent debt level	16	25	19	9	31
Fiscal rules	25	22	28	13	12
Structural reforms	19	41	25	0	16
Pricing guarantees, mandatory insurance	3	25	34	12	25
Risk sharing	3	9	44	6	37
Credible no-bailout provision	3	0	9	6	81
Pension or demographic reserve fund	22	12	25	13	28
Stabilisation reserve fund	9	6	19	3	62

Source: 2014 OECD Survey of Fiscal Risk.

(“rainy day”) reserve funds, which are viewed as rather ineffective, to counteract the effects of various macroeconomic shocks, presumably under the assumption that they can be cushioned with an appropriate countercyclical fiscal stance.

7. Summary and lessons

As a result of the recent financial crisis, which in many countries metastasised directly or indirectly into significant fiscal stress, governments have become increasingly aware of the need to explicitly cope with uncertainty in public finances. Motivated by such developments, this article seeks to provide an overview of new approaches – that emerged for the most part over the past decade – to coping with fiscal risk, ranging from analytical issues to institutional arrangements, as well as practices in the management and alleviation of risks.

The evolution of a globalised secondary market for sovereign paper led to the development of a high-frequency gauge of the risk premium faced by governments around the world. However, the limitations of this indicator makes a strong case for assessing, more fundamentally, specific, general, and systemic types of fiscal risk, and their underlying sources. According to the 2014 OECD Survey of Fiscal Risks – with responses from 32 out of 34 member countries – not surprisingly, specific risks associated with the financial sector are deemed as most relevant; in comparison, various risk-sharing arrangements and legal claims are considered less relevant. Among the general risks, economic forecast errors, procyclical fiscal stance, financial asset bubbles, and demographic pressures are viewed as very relevant, whereas fiscal gimmickry as being least relevant.

Major progress has been made toward identifying and estimating the cost of specific risks – particularly those consisting of contingent liabilities, whose proliferation is attributable in part to loopholes in the design and enforcement of fiscal rules, especially in the European Union. Also noteworthy are the sensitivity tests conducted to ascertain general risks associated with medium-term macro-fiscal forecasts, as well as long-term public debt scenario calculations.

Although still at an experimental stage, several stochastic methods have been developed and applied over the past decade, which provide useful insights for estimating mostly general risks. Among these methods, the contingent claims analysis (CCA), rooted in the earlier fair spreads model, the Value-at-Risk (VaR) approach, the vector autoregressive (VAR) model, and the fiscal stress index seem to be most promising for practical application. The VaR approach is perhaps the most versatile since it is capable of tracing specific, general, and systemic risks within a comprehensive intertemporal balance sheet of the public sector.

The OECD survey reveals a mix of practices and views on the effectiveness of management and mitigation of fiscal risks. The majority of member governments prepare (or outsource) debt sustainability reports, but identify these as having medium level of effectiveness. Relatively fewer though increasing number of governments are required to publish statements of risks, which are seen as less effective. While independent fiscal institutions (IFIs) have acquired an increasing role in assessing fiscal risks to over one half of the countries, parliamentary approval of explicit risks is reported for only about one fourth of the countries surveyed. In most countries, governments have adopted a prudent target or limit for public indebtedness, a countercyclical fiscal stance, fiscal rules, and structural reforms, which are viewed as being quite effective. On the other hand, adequate pricing of government guarantees and mandatory insurance, and sound risk-sharing arrangements are

less prevalent and viewed as less effective in member countries. While pension reserve funds are widespread and deemed effective, there are relatively few countries with stabilisation reserve funds. The high proportion of countries without credible no-bailout provisions can be regarded with some concern, especially against the background of the recent crisis.

A number of broad lessons can be drawn from the discussion of identification and measurement of fiscal risks, and the survey of country practices. Beyond analysis and disclosure, managing fiscal risks merits as much attention as managing public debt. This entails a formal framework for monitoring and regulating the terms of public sector liabilities, and ultimately, for setting limits to exposure to fiscal risk within a strategic context. To this end, it is necessary to clearly allocate responsibilities among various public sector entities.

In general, the government should have primary responsibility for the management and mitigation of tasks, to be undertaken at every level of government and the rest of the public sector under the tutelage of the ministry of finance. Further, technical elaboration and co-ordination may be centralized in a dedicated government agency or the debt management office, also under the authority of the ministry. In the final analysis, as an integral part of the budgetary process, the legislature should assume an active role in debating and approving specific risks, particularly those contracted by the government.

As part of its external surveillance function, the IFI should be called upon to monitor the government's qualitative and quantitative evaluation of specific and general risks. To the extent the government does not engage in fiscal risk assessment, it behoves the IFI to perform this function by default. In any event, the IFI has a unique role in estimating the probable budgetary cost of implicit contingent liabilities, which the government cannot be expected to estimate lest it creates moral hazard. In the future, with the support of an adequate technical staff, IFIs should be able to develop and apply stochastic methods appropriate for assessing specific, general, as well as systemic risks, possibly within a comprehensive and consistent analytical framework.

To mitigate fiscal risks, governments need to take steps to counteract exogenous risks (slowdown of real or financial activity abroad, deterioration in the terms of trade, natural disasters, etc.) by hedging through various insurance schemes, by building special-purpose reserves, and by enacting well-designed fiscal rules, along with unambiguous no-bailout provisions or limits thereon. Overall, governments learned that they must contain endogenous risks through prudent fiscal policymaking, and in particular, restrain the proliferation of explicit or implicit contingent public sector liabilities. At the policy level, this involves stepped-up compliance with sound fiscal rules, adoption of a countercyclical policy stance especially during economic booms, enforcement of transparent accounting and forecasting, and where necessary, implementation of structural reform in key areas. An additional overarching lesson from the financial crisis is the need to focus more intensely on the likelihood of systemic risk. Management of such risk requires close co-ordination between the IFI and an appropriate independent macroprudential supervisory authority, with the latter having primary responsibility for the prevention and mitigation of systemic risk in the financial sector.³¹

Notes

1. Reflecting on his experience in the private and public spheres, former US Treasury Secretary Rubin (2003) expressed succinctly the imponderables faced by decision-makers under uncertainty.

2. Herein the term bailout is used to signify a financial transfer without conditionality, as distinct from financial assistance subject to conditions as regards corrective policy action by the recipient national government (typically in the case of an IMF stand-by arrangement) or sub-national government (*vis-à-vis* the central government).
3. For sovereign national governments, or sub-national governments, within a common currency area (e.g., states within the United States or euro area members) spreads reflect default risk and are devoid of currency or country risk – subject to the underlying assumption of an effective no-bailout provision. Spreads, of course, collapse to zero absent a no-bailout provision.
4. See the distinction drawn by Kopits (2004).
5. For a taxonomy and discussion of contingent liabilities, see Polackova Bixi and Schick (2002), and more recently, see OECD (2013a, 2013b). Explicit contingent liabilities are backed by government guarantee, insurance or contract; implicit contingent liabilities are not backed by contractual agreement.
6. The survey was conducted by the OECD Secretariat in February and April 2014, with responses to a questionnaire received from 32 out of 34 member countries. Tables 1, 2, 4 and 5 classify responses from finance ministries in 23 member countries (Austria, Canada, Chile, Czech Republic, Estonia, Finland, France, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Netherlands, New Zealand, Norway, Poland, Slovenia, Spain, Switzerland, and Turkey) and from independent fiscal institutions in 9 member countries (Australia, Belgium, Denmark, Greece, Mexico, Portugal, Slovak Republic, Sweden, and the United Kingdom) on the basis of experience and practices over the past decade.
7. See, for example, Alt and others (2014).
8. Contrary to the myopia of some policymakers, fiscal space and fiscal limits are in fact only relevant in the long run; see von Hagen (2013).
9. Steuerle (2014) provides estimates – based on the difference between tax revenues and mandatory expenditures – of the very limited scope for discretionary fiscal action in the United States in recent years.
10. The unsuccessful experience with the Netherlands' structural balance rule, the first of its kind, calculated with an increasingly overstated measure of potential output in the early 1970s, is documented in Wellink (1996).
11. The Irish fiscal crisis was preceded by an expansionary stance on top of the financial asset boom; see Kopits (2014).
12. Frankel (2011) and Frankel and Schreger (2013) find a marked optimistic bias in official macro-fiscal projections (increasing from one-year ahead to three-year ahead projections) in more than a dozen EU member countries, presumably owing to the incentive to gaming the EU fiscal rules. However, to the extent these projections extend into the period through 2011, they may also reflect the effect of the sharp unanticipated decline in economic activity experienced during the Great Recession.
13. The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus
14. See IMF (2012) on the Code of Transparency. The Code was initially based on the report by Kopits and Craig (1998), discussed and endorsed by the IMF Executive Board.
15. The term exogenous or endogenous in measurement refers to the assumed nature of the effect of a simulated change shock in a given variable, as being independent or dependent from other variables. This is to be differentiated from the term as used in the preceding section where it refers to the source of risk, that is, whether it is generated by the government or it stems from outside sources.
16. These costs explain in part the reason why each method has been developed and applied by more than a single author.
17. Adaptation of VaR to the public sector was originally suggested by Dornbusch (1998) in the context of the Asian financial crisis.
18. For example, Goldstein, Kaminsky, and Reinhart (2000) on banking and currency crises, and Manasse, Roubini, and Schimmelpfennig (2003) on sovereign debt crises.
19. The clusters are drawn partly from a rather rudimentary and arbitrary “risk octagon” chart in Cottarelli (2011).

20. For a description of statements of risks in selected countries, as well as a proposed structure, see IMF (2008).
21. See OECD (2014).
22. For a well-functioning case, see the Swedish experience in Hörngen (2003).
23. From this perspective, the usefulness of the German practice of holding closed hearings for government officials on the assessment of fiscal risks is highly questionable.
24. In the United Kingdom, for example, the Office for Budget Responsibility, as part of its remit in preparing official macro-fiscal projections, conducts sensitivity analysis for general risks from the historical dispersion of key macroeconomic variables around the baseline projections. On this basis, it declares the probability of deviations from forecasts. In addition, the Office estimates deviations of alternative scenarios and events from the central no-policy baseline scenario over the medium to long term. As a separate exercise, it focuses on major quantifiable contingent liabilities. These features are summarised in Chote (2014).
25. See a wide variety of country practices in Kopits (2013).
26. Every four years, an academic institution is under contract with the Federal Ministry of Finance to prepare a baseline long-term macro-fiscal scenario and alternative policy scenarios, published by the Ministry. For the latest English-language version, see Germany (2011).
27. Thus far, Slovakia's Council for Fiscal Responsibility is the only IFI known to be developing a stochastic approach grounded on an intertemporal public sector balance sheet to assess specific and general fiscal risks; see Odor (2014).
28. For instance, the criticism levelled by Cuthbert (2013) at OBR for not assessing, either quantitatively or qualitatively, the repercussions of the hypothetical collapse of the euro area, is entirely unreasonable.
29. See a discussion of the conditions for a successful rules-based framework in Kopits (2012).
30. This finding is broadly in line with the results on potential risks associated with entitlement spending from the 2012 OECD survey. In the latter, most governments reported that they specifically evaluate such risks, one third take risk into account in all entitlement spending, while another third consider it in some manner (through risk adjustment, budgeting margin, or simply on an ad hoc basis). See OECD (2014).
31. See IMF (2013) for a review of the key components of a macroprudential policy framework.

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The challenge of budgeting for healthcare programmes

by
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The OECD has created a Joint Network on Fiscal Sustainability of Health Systems. This article, developed as input to that project, seeks to summarise both why budgeting for healthcare is particularly challenging and why the challenge is often misunderstood. I argue that sustainability is a political, not fiscal, issue; that common explanations of increased spending, such as “ageing” and “technology”, are either inaccurate or unhelpful; and that the nature of public support for healthcare means that standard budgetary worldviews may not be appropriate in a representative system. For example, both a focus on “fiscal space” and distrust of dedicated revenues may be contrary to budgetary values of both representation and balance. I offer explanations of why demand for healthcare spending both is peculiarly intense and tends to expand because notions of “necessary” care expand. Budget-making is made more difficult by a uniquely confusing proliferation of ideas about how to control spending, many of which are supported more by disciplinary biases than by hard evidence. I conclude by considering the impact of two structural features: whether services are delivered by a bureau or as an entitlement, and whether it is funded by dedicated revenues. The challenges can be met, but hard-headed and sceptical budget analysis is especially important.

JEL classification: H51, H6, E62, H2, I1, J11, O33, P16, Z18

Keywords: Budgeting, healthcare spending, ageing society, Baumol’s disease, dedicated revenues, efficiency, entitlements, redistribution, technology, unsustainability

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1. Introduction

Since governments directly or indirectly assumed responsibility for citizens' access to healthcare, that commitment has created peculiar problems for government budgeting. Total healthcare spending is already a large part of any modern economy, and spending tends to grow more quickly than per capita GDP. Therefore, if governments finance care, that spending will be a large part of budgets and take up a large part of any available increments.

Recent experience within the OECD might suggest that many of these conditions have become less important. As budget processes caught up with the change in economic conditions from the financial crisis that began in 2008, the long-term pattern of healthcare spending increases suddenly stopped. Average spending growth of 5% from 2000 to 2009 was succeeded by "sluggish growth of 0.5% in 2010 and 2011". Average spending across the OECD declined from 9.5% of GDP to 9.3%. Governments that faced the most severe economic crises made substantial spending cuts, but many others reduced the trend to plus or minus one or two per cent.¹

Yet one should not base policy and projections on conditions created by the worst economic crisis since the Great Depression. We can only hope that at some point those conditions fade. What then?

The OECD has created a Joint Network on Fiscal Sustainability of Health Systems to bring together the expertise of both budgeting and health policy researchers and practitioners. This report offers one perspective on why budgeting for healthcare is especially challenging. It does not provide a list of benchmark policies. Its goal is to set out an understanding of the problem, which might help policy-makers assess alternative responses.

1.1. Healthcare and other policies

We can see how healthcare is especially challenging by comparing spending patterns for healthcare with education and pensions among a set of very roughly comparable OECD members.²

In 2010 total healthcare spending ranged from 9.1% of GDP in Australia to 12.0% in the Netherlands; the United States, then, was an extreme outlier at 17.6% of GDP. Public expenditure on health ranged from 6.1% of GDP in Greece to 9.5% in Denmark.³ The healthcare spending share of GDP across these countries grew by nearly 2 percentage points between 2000 and 2010.⁴

Total spending on education is lower in each of these countries. In 2009 total spending ranged from 4.9% of GDP (Italy) to 8.0% of GDP (Iceland). Public spending ranged from 3.6% of GDP (Japan) to 7.5% (Iceland).⁵ Spending growth has also been slower.⁶ The dynamics that drive spending higher appear to be weaker for education than for healthcare.⁷

Pensions are a more comparable source of budgetary stress. Public expenditure on pensions in many countries is a larger share of GDP.⁸ But government responsibility for the pension system appears to be much less broadly agreed across countries. This can be seen in the greater dispersion of spending shares: in 2009 public expenditure on pensions was under 6% of GDP in 7 countries (Australia, Canada, Iceland, Ireland, the Netherlands, New Zealand and Norway) and over 11% of GDP in six others (Austria, France, Germany, Greece, Italy, Portugal). Effects from aging populations could increase spending for both pensions and healthcare, and more directly so for pensions. Pension spending did rise more quickly as a share of GDP in some countries, mainly ones with higher proportions of elderly in the population.⁹ In spite of this more direct effect of aging, however, healthcare spending as a share of GDP grew more quickly than pension spending in most countries.

Moreover, there were countries in which the pension spending share actually declined, or grew much more slowly than the healthcare share. Thus governments may for political or historical reasons spend more on pensions than on healthcare, and history does constrain choices. Yet there appears to be more room to restrain pension spending, either because it is politically easier or it is easier to find effective policy instruments.

Due to the large and usually growing budgetary share for healthcare, many observers see programmes as a threat to budgetary sustainability, or fiscal stability.¹⁰ Yet the fact that healthcare is a major challenge may not justify claims it is “unsustainable”.

1.2. Meanings of “Sustainability”

It is common for budget-makers to worry about “fiscal space”.¹¹ From a fiscal space perspective long-term commitments, whether to pensions or medical care security, are inherently unwise. Citizens, however, may strongly prioritise those guarantees. Fiscal space arguments can claim that health care commitments displace productive public investment. But voters in many countries may, with good reason, have more confidence that money will be spent well for health care than for public investments. If healthcare spending crowds out other spending, that could be viewed as the legitimate result of representative government. Voters may also be willing to pay extra revenues in order to maintain health care programmes, and extra revenues would reduce any “crowd out”. In short, if health care is a priority for citizens, budget-makers who prefer lower taxes or other spending risk imposing their own preferences in the guise of “maintaining fiscal space”.

This is not to say just any spending is justified. Spending can be excessive and have major negative effects on the budget. If healthcare spending per person in the United States resembled the levels in other countries, much of the projected US long-term deficit problem would disappear. But that means US health care should be managed more efficiently. It does not mean care guarantees themselves would drive the budget out of control.

Nor should we assume healthcare spending must have “unsustainable” effects on national economies. That topic is addressed more fully below, but one reason for doubt should be mentioned here. The United States currently spends a share of its GDP on healthcare which would seem unthinkable and horrifying to policy-makers in any other country. It seems unnecessary and wasteful to many Americans. Yet the US economy certainly has survived that level of spending. If the United States can survive its much higher spending, why would that level be “unsustainable” for other countries?

The most plausible way in which spending can be “unsustainable” would be if political support for the expense could not be sustained. Fundamentally, this means political support for redistribution. In all modern economies, the average cost of medical care is now unaffordable for a significant portion of the population. All healthcare finance systems accordingly redistribute not just from the healthy to the sick, but from those with higher incomes to those with lower incomes. Systems are funded roughly in proportion to ability to pay; and if they are not then some people are likely to receive much less care. Therefore the capacity to spend on healthcare for all citizens depends on ability to collect necessary funds from the higher income strata within the country.

As the United States is an extreme case that suggests doubts about economic sustainability arguments, it is the clearest evidence of the political sustainability problem. The United States faces the most extreme redistribution challenge both because spending is so high, so costs are less affordable for individuals, and incomes are especially unequal, so average costs are even more daunting for the lower income groups.¹² In the US, limits on redistribution work not to make national health insurance unsustainable but to prevent its creation. The political struggle over health insurance expansion in 2009-10 showed both the importance and difficulty of redistribution. The major source of funding for expansion through the Affordable Care Act (as amended by the further Reconciliation Act) was a tax increase on high-income taxpayers. Yet the reform as passed did not promise universal coverage, because President Obama set a limit on total spending that could not possibly cover everyone. He judged that he could not enact enough redistribution to pay for full coverage.

Nations’ political systems have different levels of tolerance for redistribution; and economic growth, as always, makes spending easier to support. Yet in any given country there may be a point at which the political system is no longer able to collect enough money from people with higher incomes to pay for care for those with lower incomes. From this perspective “unsustainability” means that governments would have to break current promises to give relatively (never totally) equal access to necessary (however defined) medical (also however defined) care for all citizens. We can see this as a budgetary problem, but it is fundamentally a social challenge. The key consequence is worse healthcare and a perception of major inequities for a substantial portion of the population.

There will be political forces in any given country which do not see such inequalities as inequities. These citizens may see redistribution of income as more unfair than unequal access to healthcare. Whether budget-makers agree with this view will depend on their own values or whom they think they should represent.

Defining sustainability in terms of redistribution has further implications. From a budgetary perspective measures that reduce total spending by reducing the promised care might seem entirely reasonable, because that meets the challenge of matching the funds collected to the funds spent. Budget-makers are most concerned with national and budgetary aggregates. Voters, however, focus on their own budgets, which may be endangered by the same policies that improve government budgets. This difference largely explains why US policy experts hail a recent slow-down in the growth of healthcare costs, while opinion polls show that “almost sixty per cent of the American people” say, “the cost of healthcare for the nation has been going up faster than usual in recent years”.¹³ The slowdown in total spending may be attributed in large part to individuals having to pay more for care, so doing without.

Second, controls on spending that do not reduce adequacy and equity of care would satisfy both budgetary and consumer perspectives. Yet that should draw attention to another form of redistribution: healthcare spending redistributes income towards the providers of care. If one country provides the same services as another for less money, then the former is redistributing less income to medical providers.

Third, as in all public finance, the ways in which revenue is collected will shape the ease of collection. In general, less visible taxes are more viable than more visible ones, and taxes dedicated to popular purposes may be easier to raise than general revenues.¹⁴ Yet the advantages of less visible or more dedicated revenues would be true regardless of whether taxes are collected from higher-income citizens or others. In fact, less visible taxes (e.g. consumption levies) and dedicated payroll contributions tend to be regressive compared to income taxes.¹⁵ If healthcare is financed from less progressive sources it will redistribute less. Yet it still is fundamentally redistributive, compared to buying medical care on the market.

The following pages address some of these themes in more detail. Section 2 reviews how healthcare spending, as an independent variable, may influence the economy. Section 3 considers why the demand for healthcare spending appears to be especially strong and difficult to resist. To the extent this demand comes from the mass of citizens, it might be moderated by making the delivery of care more efficient. Section 4 therefore reviews why the pursuit of efficiency is so challenging. In Section 5 we turn to an overview of how systemic design differences – such as between “Beveridge” and “Bismarck” systems – might influence the challenge of budgeting for healthcare.

2. What is the effect of healthcare spending on a national economy?

Two arguments are especially prominent. The first presumes that higher spending on healthcare, usually through government budgets, will not be matched by higher revenues or offsetting cuts in other programmes. Then healthcare will lead to growing deficits, and so (all other things being equal) to lower national savings. Lower savings in turn will lead to lower investment, and so less economic growth.¹⁶ The second concern applies when healthcare costs are paid largely out of the income flow of employers – either through social insurance payroll contributions (as in Germany or France or Japan) or when employers purchase insurance as part of employee compensation (as in the United States).¹⁷ Then healthcare can raise the price of labour, so that employers hire fewer employees.

These concerns are widely shared. All things being equal, the effects likely run in the presumed, negative direction. There is little evidence, however, that the effects are large enough to justify viewing healthcare spending as a major threat to economic performance.

2.1. Effects from budget deficits

The effect of healthcare spending on the economy through effects on the budget depends on how the budget balance affects the economy. That is a highly contested topic; fundamental issues such as the effects of deficits on interest rates and inflation evoke deep disagreement.¹⁸

Yet claims that healthcare would reduce investment and so economic growth are less convincing than their ubiquity may suggest.

Analysis by the US Congressional Budget Office (CBO), for example, estimated during the 1990s that between 20% to 50% of any deficit reduction would be offset by individuals reducing their own savings so as to maintain consumption. Then between 32% and 47% of net savings would be devoted to reducing net capital inflows. Moreover, growth from higher investment would stop once that level of investment was needed to replace the extra depreciation on a larger capital stock. Thus in the 1990s mainline estimates of the overall effects of reducing the deficit by 3% of GDP ranged from GDP eventually being 1% to 6% larger; CBO's analysis was about 3%.¹⁹ These estimated effects in 20 or 30 years would have been far smaller than other factors influencing per capita real income, including simple uncertainty about projections.²⁰

An OECD analysis in 2004, based on 16 countries with data from 1970-2002, reiterated the slippage between budget savings and investment. It concluded that, "the evidence of partial, yet substantial, direct offsetting movements in private savings is strong. The aggregate initial offset is about half in the short term after allowing for income, interest rate and wealth effects (which have an important impact on saving), rising to around 70% in the long term".²¹ More recent CBO estimates of the effect of alternative fiscal scenarios in the US show effects similar to the 1990s projections. Thus if deficits were "larger by 0.2% in 2012, 2.5% in 2013, and 4.0% on average over the 2014-22 period", then "by the end of 2022 real GDP would be between 2.1% smaller and 0.2% larger".²² The baseline would benefit whoever received the larger growth – but would hurt whoever lost the 4% of GDP in lower spending and higher taxes.

An economy without the modest extra growth associated with higher savings is not "unsustainable". Beliefs about "unsustainable" budgets therefore must be based on doomsday scenarios about spiralling interest costs. There are two versions, which we might call slow-track and fast-track.

In the United States during the 1990s, Government Accountability Office (GAO) and CBO developed models of the slow-track road to collapse. They projected that over a long enough time, if left unchecked, deficits would become large enough to feed on themselves as interest costs burgeoned; eventually government borrowing would soak up all investment capital, there would be no way to offset depreciation, capital stock would decline, production fall, and the economy totally collapse.²³ Given this assumption that nothing else would ever be done, many budget commentators argued that social insurance programmes were unsustainable.

The slow-track argument, however, had some weaknesses. First, the United States actually balanced its budget from 1997-2001 with barely noticeable reductions in entitlement spending. Second, the idea that programmes are "unsustainable" confuses programmes with deficits. It presumes voters would not choose to pay for programmes or make them more efficient if the alternative were cutting benefits. This presumption so far does not fit US experience.²⁴

The fast-track argument involves market dynamics of interest costs. At some point, bond-holders could become less willing to hold a nation's debt because of fears the government would "either default on... or monetise the debt... in a way that would result in rapidly increasing price inflation that reduces the existing debt's relative value".²⁵ Some, however, would be willing to buy the debt at higher interest rates – raising deficits further in a fast version of the interest costs spiral to budgetary and maybe economic failure. Events since 2007 have heightened attention to this possibility.

Yet some of the nations that have suffered most from rising interest rates since the financial crisis, such as Portugal and Spain, had relatively conservative pre-crisis fiscal policies. Loss of confidence among bondholders could have had only a tenuous relationship to healthcare spending, and should have been more clearly related to the collapse of housing prices, attendant problems with private lending, and the current account balance.²⁶ The United States and Japan have run very large deficits without attendant increases in interest rates.²⁷ In Greece, where a true sovereign debt crisis is strongly related to the pre-crisis trend of budget deficits, healthcare costs appear to be at best a minor cause.²⁸

It seems fair to say that with better control of healthcare spending, or policies which collect extra revenues to match extra healthcare spending, allow more conservative public finance; and more conservative public finance can reduce the risk of capital flight and/or spiralling interest rates. Yet there is little if any visible link between healthcare spending and which countries have experienced the most severe debt and interest rate pressures in recent years.

None of these arguments that healthcare spending through government budgets will be economically “unsustainable” are convincing. Effective financing and control of spending are important for more traditional budgetary reasons, and political sustainability is still a major issue.

2.2. Effects on employment

Healthcare spending could directly affect employment in countries where it is funded largely by payroll contributions. This includes nations for which spending is not directly on-budget, the Social Health Insurance countries like France and Germany, as well as if an on-budget system has a dedicated payroll tax, as in American Medicare. The employer contribution then appears to be an extra cost for hiring each worker, raising the question in Germany of, as one article puts it, “how high can non-wage labour costs be raised without affecting international competitiveness?”. The authors reported that, “non-wage labour costs are increasingly viewed as the main cause for worldwide industries’ reluctance to invest in Germany and to create new jobs”.²⁹ A later OECD study made the same assumption that “rising healthcare costs have also put a strain on employment”.³⁰ Similar concerns are raised about the costs of coverage provided by US employers.³¹

Payroll contributions can only raise the cost of labour, and so reduce hiring, if employers cannot reduce wages by the same amount. Therefore any effect on hiring requires that wages be “sticky”.³² If a wage is already close to a legislated minimum, employers will not be able to reduce it as much as they are paying for healthcare. Wage cuts might also be prevented by union contracts, or competition within the labour market. These effects may be common, yet we should normally expect any effects on employment to be somewhat offset by wage restraint. They might also be offset by employment of those who provide the funded healthcare.

There is very little research to address the net effect of these factors.³³ Two exceptions are from the United States and Germany. The US study addressed the underlying dynamic, rather than the specific effects of mandated contributions. It asked if “industries where benefits were a larger share of total compensation were hit harder by rising healthcare costs”, looking at trends from 1987-2005. It concluded that, “industries with a higher share of benefits suffer greater employment and output loss due to rising medical prices”. The

report could not, however, measure possible offsetting increases in health-related employment.³⁴

The German study was conducted in the 1990s by the official Advisory Commission for Concerted Action in Healthcare. It may provide the most thorough review of relevant factors. One is that labour productivity in healthcare tends to be low; in a closed economy then, “employment could be increased simply by shifting demand from more productive, but less labour-intensive industries to less productive, but more labour-intensive healthcare services” – so long as the extra demand does not raise prices instead.³⁵ In an open economy, industries open to foreign competition could lose more jobs due to higher payments for healthcare; at the same time healthcare, and especially its labour-intensive services, face less international competition than other industries. Effects at that time would have varied by industry also due to different levels of insurance contributions and shares of non-wage labour costs within total labour costs. The Advisory Council commissioned a simulation based on the business cycle model of the German Institute for Economic Research, and it estimated that in Germany at that time, a one percentage point increase in the contribution rate, if used entirely for further consumption of healthcare, would result in a quite small increase in employment.³⁶

As the Advisory Council emphasised, such estimates deserve a great deal of caution. Effects should depend further on the conditions of the labour market. “Nonetheless”, the Council noted in a subsequent report, even “unproductive health services do stimulate demand and, given underutilised resources, increase employment and economic growth”.³⁷ The economic effects would be more positive if the services created better health among workers, who therefore could be more productive. From this perspective healthcare spending can be an investment as well as consumption. At the first meeting of the Joint Network, Professor Dr. Klaus-Dirk Henke built on this research to argue that, there “is no optimal health expenditure quota”.³⁸

As with the economic effects through budget deficits, the effect on employment from taxation of payroll to pay for healthcare should be complex and depend on many other factors. Yet rhetoric about unsustainability seems extreme. There are powerful reasons to worry about the prospects for employment in advanced industrial (or post-industrial?) economies. Globalisation likely means that, “the enormous growth in the global labour supply will affect the composition of employment, the distribution of wages and incomes, transitions into and out of employment and unemployment, job security, and other important aspects of the labour market”.³⁹ It is less clear that the effects of healthcare charges on employers are either strong in relation to the underlying trends, or clearly worsen employment.⁴⁰

2.3. Conclusion: A significant concern, but “unsustainable” only by assumption

A third argument is less amenable to analysis. It assumes that government spending or taxes inherently distort economic activity, so must be inefficient. For example, the George W. Bush Administration in the United States argued that spending for homeland security, unless offset by other spending cuts, would damage the national economy by reducing private investment. Moreover, raising taxes to pay for new homeland security would damage the economy further, for “every dollar collected in taxes results in distortions that reduce the efficiency of the economy and lower national income”.⁴¹

By this logic any government spending, or taxes to pay for it, hurts the economy; and it would be difficult to justify the systems of healthcare finance in any OECD member state. It suggests that perhaps policy-makers will have to live with existing inefficiencies, but any increase in spending or revenues should be resisted strongly, regardless of the cause served by the increase – whether it be healthcare or protection against terrorism. Policy-makers who take this view need no know more: policy is determined by the underlying assumptions about macroeconomic cause and effect.

Evidence related to more mainstream economics does not support the idea that healthcare programmes are economically unsustainable. Policy-makers still have good reason to worry about financing healthcare, because the programmes are a large share of budgets, and the social and political stakes in budget decisions are so high.

3. Demand for public spending on healthcare

We have seen that pressure to spend more on healthcare is stronger than pressures on even the largest other categories of spending, education and pensions. There are two basic reasons.⁴² First, public demand for the social definition of needed care is especially strong. Second, that social definition of need expands more quickly and continually than understandings of need for other expenditure, such as education or public investments. This process of “need” expansion may be mistaken for an increase in “technology”.

3.1. Socialised risks and consumption

Medical care is a good consumed by individuals. It may have community benefits, but those benefits are neither its essential nature nor the main reason for political demand.

When needed, medical care is as important to people as food, shelter, or clothing. Yet among those necessities of life, only medical care is generally provided, for everyone, through some socialisation of finance. Socialised finance is the norm, even in the United States, because costs are so high and incidence uncertain. It is not practical to pay from current income for the most important care. Yet it is also not practical to save, since many people could not save enough money without foregoing vital other consumption, and even those who arguably could save enough over many years might well need to pay for medical care before they had saved enough. Nor is borrowing practical for the most important care, because very sick people are not good credit risks.

Hence systems of private insurance, government insurance, government-mandated SHI, and government healthcare bureaus all redistribute from the healthy to the sick, and all but market insurance redistribute from lower to higher incomes. Only quite a small portion of citizens could imagine paying for all care they might need from their own funds; and many of those will have relatives and friends they want to be protected.

Public support for public or semi-public Statutory Health Insurance (SHI) healthcare systems is based on a mix of self-protective prudence and beliefs about equity. No system offers precisely equal care to everyone. In any given country there is some safety valve so that well-to-do patients can obtain better amenities and perhaps more personal service; in some countries this means they can avoid waiting lists by “jumping the queue”. There is however, much more equality of healthcare consumption, for a given level of illness, than of housing or shelter or clothing. I do not know of survey data that explains why, but the simplest answer is most likely to be true. There appears to be something basic about healthcare that makes inequality less acceptable in any country with enough wealth to do something about it.

Death and fear of death, or pain and fear of pain, are likely to attract more empathy than differences in diet or clothing or shelter. Anyone can imagine getting sick, so what it would be like to be sick and have no hope of rescue. Above some level differences in food or clothing or shelter can be viewed as wants rather than necessities. It is harder to view someone else's desire for the same chance to survive illness, or equal remission of pain, as simply a consumption choice. That is especially difficult if an economy clearly has the resources needed to offer everyone similar prospects for rescue. Therefore the standard for equality of chances is likely to be much closer to the maximum level of consumption for healthcare than for other necessities.

Equity here means equity of care, so relatively equal access to rescue, not equality of health. Outside of the public health community there seems to be little pressure for equal health in any country. It is doubtful that voters anywhere think government can or should equalise health. Government cannot be expected to eliminate the bad luck that allocates much of disease. Moreover, equalising the social determinants of health would involve massive restructuring of societies, in ways to which voters could object for many reasons unrelated to health. When a large portion of any society has access to life-saving rescue, however, it is logically possible to offer that to everyone without changing much else – except for collecting more money and training more caregivers. Inequality of rescue is both more frightening and less necessary than other inequalities.

Equality here means access to some social standard of necessary care – there will always be extras that are defined as consumption people might choose but not need. Countries define necessary care differently; there is wide variation in the terms of socialisation of dental care, mental healthcare, long-term care, and even the costs of prescription drugs.⁴³ The bounds of necessity are important questions for policy, and decisions can either limit or expand sharing. Yet if there is a plausible argument that a category has become a larger part of normal care over time – as certainly has happened with pharmaceuticals – there will be strong pressure to expand coverage. This is partly due to changes in practice, yet there is also a process of idea formation. When the health policy world declares that chronic care is the new crisis, or that chronic care can save money and pain by preventing the need for acute care, then unequal access to “preventive” medicines becomes a grave inequality.

Economists may assume that any non-market subsidy for consumption creates excess demand.⁴⁴ That is not helpful because no country could have a politically (and arguably morally) acceptable healthcare system without such “excess”. It also begs the question of why governments (or SHI systems) that are paying for care do not have sufficient incentive to control costs. For budgeting purposes, demand is political: how pressures to spend for healthcare compare to pressures to spend for other purposes or to restrain taxes. Support for healthcare spending appears to be unusually high.

3.1.1. Expanding “Need”: Outcomes, outputs and inputs

For the reasons given above, it is especially difficult for budget-makers to resist need for healthcare. Yet intensity of demand is not the same as extent of demand. Intense demand to meet perceived need would only create the kind of spending increases that are common if perceived need grows relatively quickly. What, then, drives perceived need for healthcare?

Policies involve outcomes, outputs, and inputs. In healthcare the outcome is recovery from, prevention, or amelioration of maladies. The outputs are services. The inputs are what is needed to produce the services and so (hopefully) outcomes. Therefore there are three basic ways the need for inputs (spending) can expand or decline. In order: i) conditions may change, ii) the production function may change, or iii) the definition of desirable outcomes and outputs may change.

If conditions become closer or further from a desired outcome level, that in turn will call for fewer or more outputs and so fewer or more inputs. If there is more crime, more police patrols become necessary. If there is an epidemic, more care is needed.

Here the basic question is how other factors shape health and so demand for healthcare. Increased wealth might reduce disease, but expanding inequality might increase it.⁴⁵ Economic development may increase wealth and so factors like nutrition and government spending on sanitation that improve health. Yet it also may be accompanied by overconsumption that leads to diabetes, or by pollution that makes people sick.⁴⁶ Immigration might bring into a country, populations with greater medical needs because of previous poverty or lack of treatment, but it also may attract especially healthy people who can overcome the barriers to immigration.⁴⁷ There are many possibilities, yet there is little reason to believe that, when they are all combined, over the past few decades social factors have made the residents of rich democracies systematically less healthy.

The exception is population aging. In any society, up until very advanced age, older people have on average higher healthcare costs than the rest of the population. As people live longer and have fewer children, both the average age of the population and the proportions that are old or very old rise. Thus many would expect an “ageing society” to raise healthcare costs. Yet while the direction of effect is likely right, numerous studies have projected that it is not large enough to cause a crisis. Cross-sectional studies have generally shown little or no correlation between a country’s age profile and its healthcare costs.⁴⁸ Time series analyses also suggest significant but small effects. One OECD study estimated that, “between 1981 and 2002... public health spending grew on average by 3.6% per year for OECD countries, of which 0.3% per year was accounted by pure demographic effects”.⁴⁹ A 2013 update reported average growth in real health spending between 1995 and 2009 at 4.3% per year, of which 0.5% was ascribed to ageing.⁵⁰

As a recent overview reports, “there is a growing consensus that ageing does not have to be an inevitable drain on healthcare resources”. Two “strands of research” explain why. First, much of the observed higher costs at higher ages are caused by the cost of dying. More 85-year-olds than 75 year-olds, on average, die. Dying is expensive; “proximity of death is a more important predictor of healthcare expenditure than ageing itself”, and so, “the high annual healthcare cost associated with older people is in large part the consequence of the fact that they are more likely to die within a year”.⁵¹ As people live longer there will be more 85 year-olds but that will be in part because fewer 75-year-olds die, which suggests that group will become less expensive. To put this another way, “if mortality falls over time, due to a permanent increase in longevity, fewer will be at the very end of life in each given year, mitigating healthcare costs”.⁵²

This reduction in deaths at each age then would interact with another observation: that in any nation, past a certain age, the costs associated with dying tend to decline, as do rates of healthcare utilisation.⁵³ There is also reason to believe that ageing is associated with “compression of morbidity” – that is, that most of the extra years are relatively

healthy. OECD's 2013 report assumed a healthy ageing effect and that, "consistent with a large number of previous studies... what matters for health spending is not ageing but rather the proximity to death".⁵⁴ Overall, then, in these projections "the demographic effect only accounts for a small increase in [public] expenditure. In OECD countries and on its own, it pushes spending from 5.5% of GDP on average to 6.2% in 2060".⁵⁵

On balance, ageing populations therefore should be expected to change objective conditions in a way that increases public healthcare spending. But that cannot explain the unusually high growth of healthcare spending compared to other public programmes, and justifies only modest worries about the future. Nevertheless, two other factors should be kept in mind. Population ageing could increase need to spend on long-term care by larger amounts, and much more proportionally, than the demand to spend on traditional healthcare.⁵⁶ Second, the most important effect of ageing on the ability to finance programmes may be on the revenue side. If healthy ageing is accompanied by a vibrant job market that allows extended working careers, there will be more revenue to pay for care for both working and non-working elderly. If healthy older workers cannot find employment, budget difficulties will be more severe. Hence analyses by OECD and the European Community have concluded that labour-market developments and policies greatly mediate any budgetary effect of ageing.⁵⁷

Need or demand for spending may also change because of changes in the production function – the relationship of inputs to outputs and outputs to outcomes. The production function determines the efficiency of care. Usually we hope innovations will create efficiencies. So perhaps electronic surveillance can replace expensive human patrols; or a cheaper drug will replace an expensive surgical procedure. But the inputs required may change in the opposite direction: criminals may find new ways to evade detection, requiring more effort; or experience may show a treatment has risks that require replacement by more expensive inputs.

Hence one question is whether the relatively rapid increase in healthcare spending as a share of GDP might occur because the production function becomes *relatively* inefficient over time. This is hypothesised as the Baumol effect or "Baumol's disease", on the grounds that healthcare is labour-intensive and so cannot be made more efficient as quickly as the rest of the economy. Thus if output grew at the same rate as the rest of the economy, inputs would grow more quickly.⁵⁸

The Baumol argument can be interpreted as reason not to worry so much about healthcare costs. If productivity of other goods and services is rising, then we are getting more even if healthcare consumes a larger share of income.⁵⁹ Yet this scenario is at the level of the entire economy. Given unequal incomes, pooling funds to pay for individuals' care still requires redistribution. If healthcare becomes a larger and larger share of total product, then ever more must be redistributed. The Baumol theory doesn't solve the budgetary challenge at all if the challenge is really about redistribution.

More important, is the theory actually true? There are many examples of technological change in medical care, including creation of less invasive procedures, doing a much larger share of procedures outside hospitals, drugs replacing psychoanalysis, and what the vendors and physicians call major quality improvements in imaging. It is hard to measure outputs in a comparative way, and hard to measure outcomes. But one indicator of improved production of outcomes is the fact that, across 16 nations over the decade to 2006-07, death rates from "amenable mortality" – conditions that could be successfully treated – declined by at least 20%.⁶⁰

If quality (outcomes) has improved substantially, that is not much help to budget-makers. Yet it does redefine the problem as how to resist or pay for demand for quality, rather than inherent inefficiency. Long-term care is more evidently a domain in which quality would be less dynamic and changes in delivery less common. OECD's recent spending model projects a Baumol effect for long-term care, but not for other healthcare.⁶¹

On balance, the Baumol theory does not seem helpful for policy-makers, and using it to explain previous spending growth requires too many assumptions. While the healthcare production function may be less amenable to efficiency improvements than other industries, the important questions for policy would be how it could be improved. OECD and other organisations have done extensive evaluations of alternative policies to improve the healthcare production function.⁶² Section 4 of this overview will identify some challenges to improving efficiency. For this section's discussion of forces that expand need, we might only note two factors.

First, both inputs and outputs are at least potentially choices. Somebody chooses to pay for inputs, and to approve payment for particular services (outputs). They do not happen automatically, or naturally. Therefore it does not make sense to see either as a matter of expanding need. They are certainly a policy lever, but if choices lead to higher spending, that is not remotely exogenous to the policy process – unless those who pay for care choose to cede control.

Second, the relationship between outputs and outcomes is complicated by the fact that the processes of the outputs are part of the outcomes. At one level, open heart surgery is an intermediate good: its purpose is to help the patient live longer and feel better afterwards, and we might evaluate it according to this outcome. Yet the service is itself an experience, and an especially unpleasant one. The benefit to the patient is really the result net of the pain and discomfort from the procedure. This is a reason why creating less invasive procedures can lead to greater consumption of care. From the patient's perspective, getting to the same (or a better) end state with less pain or recuperation along the way is a better outcome. In this way "technology", meaning invention of new processes, could legitimately lead to greater demand for spending.⁶³

Demand for spending may also grow because expectations for the desired outcome may change. Here the basic question is: what is this "healthcare" for which it is important to redistribute income so as to have a more equitable society?

In all policy areas, budgetary claimants work to increase the political priority of their programmes. One of their tactics is to highlight or redefine need. The military may redefine security to mean ability to deter more and more threats, education advocates may claim the job market requires more skills than it did twenty years ago, and environmental advocates will identify more and more threats.

This process may be more powerful for healthcare, however, because it involves far more than lobbying. It is a pervasive part of modern societies.

One way "need" expands is through the medicalising of social and individual conditions. Children are not doing well in school, because they are not paying attention. This has always been common, but it is transformed into Attention Deficit Hyperactivity Disorder. People are unhappy; it becomes a medical diagnosis, depression. A problem previously not discussed in polite company becomes medical (so ubiquitous in advertisements in the United States) as "erectile dysfunction". Alcoholism becomes not bad behaviour but a disease.

Some redefinitions are more easy to justify, and some less so. In all cases, however, they expand the concepts of disease and so of need. The incentives to do so range from desire to reduce blame on “victims”, to individuals and institutions finding medical definitions less challenging than the alternatives (if the child is sick it’s not the schools’ or parents’ fault), to simple pursuit of profit by drug makers. Once a problem is officially medical, and a treatment is reimbursed by healthcare systems, there are strong incentives to diagnose and perhaps over-diagnose it.

Perceived need also expands due to increasing expectations of what is possible, so desirable. As people age, they have increasing aches, pains, and mobility problems. That could be viewed as an inevitable consequence of aging, or as something to be fixed. In the United States, Medicare spending for physical therapy burgeoned in the early 1990s. That could have been recognition of previously untreated need, redefinition of need, fraudulent services, or more likely a mix of all three.⁶⁴ Yet clearly service volumes increased without obvious change in need or technology.

In other cases improved technology has made care more desirable. Joint replacements made it possible to greatly relieve pain and immobility. That in turn would increase demand for care. Arthroscopic surgery made treatment of knee injuries much more attractive than it was in the early 1970s, when treatment was both much more invasive and seemingly less reliable. This dynamic should not be confused with, but can be combined with, a change in incentives for providers of care. If new technology makes providing a service more profitable (which means if payment rules do not recognise that change), providers are more likely to try to sell it to their patients.

This example points to a well-known pattern: demand by patients is largely induced by providers. We do not need to get into common health policy disputes about that process to recognise that this makes citizens’ ideas of “need” for healthcare more easily manipulated by the sellers of care than is true for the “need” for defence or education.⁶⁵ Advocacy occurs in physician offices and other sites across the country every day.

Forces that expand demand further pervade societies, in news coverage of new treatments described as advances, and in some countries through advertisements. The idea that medical progress offers new miracles is deeply engrained in modern cultures, with some help from promotion by the medical industry. To a lesser extent in some countries than others, but probably everywhere, “new” is expected to be “better”. This gives the benefit of doubt to sellers which create new drugs and devices and treatments and expect buyers – governments or insurers – to pay more for those new products than for the products they might replace. The promise is that new outputs will yield better outcomes. And, if better outcomes are possible, they should be available to everyone due to the social desire for relative equality of rescue.

I cannot prove the case, but it seems likely that a significant portion of the excess growth in healthcare costs over per capita income is due to this dynamic – expanded services due to the belief that they will produce better outcomes, and in many cases to a further expansion of the aspects of life that are viewed as amenable to medical correction. We certainly have seen a vast expansion over time in the range of medical services, rationalised in these terms. Perhaps healthcare spending grows as a share of the economy in part because people view a larger part of life as a matter of health or medicine.

In this interpretation, if policy-makers want to better control healthcare costs, they will need to find better ways to resist the pressures to do more good through medical care.

That raises tough questions. After all, lives might be improved by ADHD drugs, or anti-depression medication. Should only rich people be able to resist depression with medications, as a consumption choice? In practice, however, these choices are not new. They were always present in the decisions about how much to socially fund services such as long-term care and mental healthcare.

Given the analysis above, in what sense can “technology” be a major cause of either past or projected growth in healthcare spending? In this framework “technology” per se does not tell us enough to mean much. Yet we can use the foregoing discussion to understand how technological developments can influence costs.

We should first distinguish new methods for delivering care (i.e. medical technologies such as new surgical processes, drugs and equipment) from management technologies (such as information systems that could reduce administrative personnel in hospitals). Management technology is rarely if ever described as a reason costs rise quickly.⁶⁶ Instead, “technology” generally means medical technology, and tends to be a residual after other variables are included in a model.⁶⁷ Even when measured, the variables can seem quite indirect – the 2013 OECD study uses information about patents and R&D expenditures.⁶⁸

The “effects of technology”, therefore, can easily be the effects of unmeasured policy choices. For example, new technology might be priced poorly. In fact, the expenses associated with any service, whether new technology or not, depend on its price. They do not occur at all without a decision to purchase it. Therefore the effects of technology on spending must be mediated through policy decisions. Sellers of any technology will claim it has a “cost” that must be paid if it is to be provided. Yet in many cases, such as drugs and devices, this includes substantial development costs. These can be spread over more or less years, and because they are sunk costs the seller has incentives not to risk receiving no payment at all. In other cases the “cost” includes expectations of income for sellers such as physicians and hospitals; again, there is unlikely to be an objective level.

Any claim that new technology “causes” a specific increase in spending makes sense only if we assume the pricing and purchase decisions could not be different. Yet we know these choices must vary, because the technology that could be used is the same in all rich democracies, yet both levels of spending and increases vary substantially. At best, the argument that technology “causes” spending increases must involve some minimum increase that, over time, no nation’s policy-makers have been able to resist.

The discussion above suggests some ways that minimum increase could occur, but also shows why “technology” may not be the best way to think about it. Increased medicalisation of social and individual problems appears to be a common trend. It has been termed “technology” because it is a residual in models of cost growth. Yet that does not mean the explanation is correct. The increase in physical therapy in US Medicare was not due to technical advances. Invention of ADHD drugs, or of new drugs for depression, probably encouraged more diagnoses, and success stories (accurate or not) probably encouraged worried parents and individuals to seek treatment. In these cases the availability of technology likely did induce demand. Yet even in these cases social factors other than technology, such as teachers’ (in)ability to maintain order in classrooms, shape the extent to which these services spread.

Thus new technology can create pressures for more spending, but the independent effect of technology from this dynamic is not likely to resemble the claims that simply define technology as a residual encompassing all other policy weaknesses and pressures

for extra services. And there is a further puzzle about technology as a “cause” of increased spending.

As the Baumol disease argument suggests, in many industries technological advance reduces the input costs of services. By standard economic logic, competition among sellers then should reduce prices. To take a healthcare example, as it became less expensive to do cataract surgery, prices should have fallen such that the incomes of ophthalmic surgeons did not increase much: in a competitive market, the benefits of efficiency-enhancing technology should mainly accrue to consumers.

This market logic may not work so well in many cases, but it clearly does not apply in healthcare. Consumers are either very poorly informed compared to providers; in no condition to shop; not interested in shopping; have little incentive to shop because the insurer is paying most of the charge; or all of the above. Normally payment rates are set or negotiated by large payers such as the government or cartels of insurers. Yet there is reason to doubt that these payers adjust prices enough in response to technological change. The common claim that “proceduralist” physicians see their incomes rise more quickly than “evaluative” physicians⁶⁹ shows the reason for doubt. If proceduralists are able to do more and more procedures, that means they have more output for their input. Yet the system is not capturing this efficiency; they are.

One of the puzzles in health policy discussion is how the “Baumol disease” argument and the “technology causes cost increases” arguments could both be believed. There has to be technology for it to cause cost increases. The question is why it would cause cost increases rather than greater efficiency. The answers can tell us something about the reasons healthcare spending has generally increased faster than GDP. First, some increases in spending are caused by increased demand that is created not by “technology” but by social processes of medicalisation and expansions of the standard for healthcare outcomes. Second, policy choices may overpay for or allow overuse of new technology; that is a failure of other policies, not an effect of technology. Last, healthcare policies in some countries mean that the efficiencies created by new technology are not fully captured for the system.⁷⁰ As a result prices do not go down as much as they should when new technology creates efficiencies. This too is not an effect of technology, but of other choices.

4. The challenge of efficiency

Regardless of the pressures that increase demand, the discussion above might only confirm that increasing efficiency – the ratio of output or positive outcomes to inputs – is the best way to resolve the tension between budget-makers’ need to restrain spending and public demand for care.⁷¹

Common methods to limit the input for a given amount of output are limiting the prices (inputs) paid for individual services; limiting the capital stock available to produce services; or reducing overhead costs by simplifying insurance. National differences in spending and spending growth are largely due to differences in these policy choices. They certainly explain most of the difference between the United States and other countries.⁷² Efficiency in this sense is also related to how institutions are managed. For example, the ways physicians are paid and managed can shape the productivity of hospital physical plant.⁷³ Hospital managers can be given incentives to meet targets for output improvement – though they may reduce what isn’t measured.⁷⁴ The staffing of a general practice can be more or less efficient, and the organisation of specialty care involves myriad opportunities for greater efficiency.

Yet improving efficiency in producing specific outputs faces a series of obstacles, ranging from resistance by the affected interests to measurement issues. Doctors and drug companies prefer and fight for higher prices. Hospitals are very complex organisations so hard to manage well, and they have so much overhead that cost allocations to specific services are quite arbitrary. Moreover, shifting a service from one venue to another does not eliminate all the costs in the first venue, because the overhead still exists. If the seller (particularly a hospital) can do so, it will shift the charges for overhead costs to other services. This is why “improvements in efficiency” that are almost universally endorsed among health policy analysts and budgeters may not save money. The primary example is shifting patients from inpatient surgery to outpatient surgery. Budget-makers must be very careful to avoid false efficiencies caused by flawed accounting.⁷⁵

Producing hospital services more efficiently, either within or outside the hospital, involves producing the same output more efficiently. Many efficiency ideas, however, seek to improve outcomes by changing outputs. For example, increasing primary care might provide better management of chronic conditions such as diabetes. If the new service (such as primary care) is less expensive than the old service (acute hospital care), then better outcomes will result from fewer inputs. This is the promise of many ideas, such as that evidence-based medicine (EBM) with cost-effectiveness analysis (CEA) will lead to reducing less efficient services and increasing the supply of more efficient services, and so both save money by keeping patients out of the hospital and improve patients’ outcomes. The promise is seductive; achieving it is rather difficult.

One problem is political. The providers who profit from selling the service that is to be replaced may challenge the analysis and exert political pressure against change. They may frighten patients with claims that “bureaucrats” are limiting their care, or form alliances with politicians who are opposed to the agency that sponsors change for some other reason. Policy-makers might make change less threatening to patients by making new services available first, hoping they are chosen by patients, and then (if the theory is correct) benefiting from savings on the other services. But then the policy begins with a new expense, and only promises of later reductions, and so requires a leap of faith from budget-makers. This may be particularly awkward because, often, policy-makers cannot be so confident that spending and outcomes will change in the desired ways.

In the most ambitious versions of theories about changing outputs, all activities should be compared and a package chosen that would maximise the overall output of “health”. This involves not just comparing different kinds of care for diabetics, but comparing care for diabetes with care for cancers or dementia. These ambitions are analogous, in principle, to budgeting for performance. Efforts to budget for performance, or results, occur in many countries, recur in many countries (especially the United States), and do not work very well.⁷⁶ A short list of why performance budgeting rarely succeeds would include the following:

1. Performance is very hard to measure even for a single activity, especially because it logically requires measuring a beginning state and end state, and then distinguishing the effect of the activity from other factors.
2. Results for different activities involve different outcomes, and any metric that seeks to compare them may seem (or be) arbitrary.
3. Different activities may serve different people with different utilities, and again any interpersonal utility metric may be questioned.

4. Not only citizens but policy-makers may evaluate different programmes differently, so performance budgeting means one set of policy-makers' preferences must prevail over others' preferences.
5. The level of performance does not actually say much about what funding is appropriate. Poor performance may be due to insufficient funds, so suggest more funding is needed so as to attain an important goal. Good performance could mean no more funding is necessary, and perhaps satisfactory results could be achieved with a little less.

The health policy equivalents may seem more plausible because it is easier to imagine comparing the outcomes of joint replacements and statin therapy than comparing the outcomes of defence spending and early childhood education. In theory, all health outputs can be compared in terms of their effects on quality-adjusted life years (QALYs) for patients. Yet even if it is easier to imagine a shared metric, that does not eliminate the other difficulties with performance comparisons. Moreover, hardly anyone in most political systems other than some health policy analysts accepts that QALYs are a reliable and objective metric.⁷⁷ Whether to spend a certain amount on asthma screening or joint replacements is a distributional question, so in that sense political.⁷⁸ Although it is possible to assess individual procedures or treatments (whether observers agree or not) in principle, there are far more services than could possibly be evaluated. Thus organisations such as the English NICE leave the vast majority of services unassessed – and NICE's judgments can still be very controversial. When the focus turns to the funding of alternative organisations, such as individual hospitals, there are continual disagreements over whether seemingly worse outcomes are due to having sicker patients (the risk-adjustment problem).

The obstacles to providing credible evidence that some services produce more health for the money than others do are aggravated by the timing issues mentioned above. Providing more primary care to the chronically ill first requires training and equipping more primary care providers. Extra spending on preventive care might (though it usually does not⁷⁹) lead to larger savings on acute care; but policy-makers who discount for uncertainty and have to worry more about short-term than long-term deficits may rationally want rather better proof of the return to investment than they usually will be able to obtain. This tension between long-term and short-term cost/benefit equations is common in many policy areas, but especially significant for most ideas about shifting the mix of healthcare services. Many of the most widely-promoted ideas at present, such as developing more evidence about treatments, investing in prevention and reorganising delivery, must cost more in the short-run in return for uncertain benefits in the long run. In practice, politically rational budget-makers might prefer more definite short-term savings, such as by underinvesting in the capacity to deliver hospital care, even if it might eventually blow up in political protest against a later government.

As the review above hints, there is one further challenge for policy-makers: too many alternatives. Budget-makers in any country should easily recognise this pattern, though they may not have defined it as a problem.

One only needs to browse the health policy journals, such as *Health Affairs* or *Health Policy*, to see a range of alternatives that could not possibly be matched in any other policy area, such as education or pensions.⁸⁰ The range can be bewildering. Get better evidence for care (EBM). Select more cost-effective care (CEA). Get people out of hospitals (they're expensive places). Do more primary care. Replace physicians with other caregivers. Create "medical homes". Integrate care through chronic care case management. Create

Accountable Care Organisations (ACOs, whatever that means). Pay for performance (P4P). Cut pay for non-performance (e.g. hospital-acquired infections). Standardise care. Reduce prices through limiting patents. Prescribe generic instead of brand-name drugs. Create better electronic medical records (EMR). Gatekeeping for services. Put financial risk on primary care gatekeepers. Regulate prices. Do a better job of regulating prices. Create price competition by deregulating prices. Bundle payments to limit incentives for increased volume. Charge the patients more so they will only consume what they really need. Reduce litigation. “Streamline” administration. Create competition among insurers. Simplify insurance by standardising it. Integration! Decentralisation! Incentives!

Some of these ideas will save money; some won't. Some have been extensively tried and some are more like “policy unicorns” – pretty creatures that have not been observed in nature.⁸¹ Many require technologies that have not been developed sufficiently for the ideas to work as promised – such as outcome measurements or risk adjustments. The flaws, however, have little or no influence on the advocates, and the advocates appear to be permanent parts of policy debate. “Managed competition”, like communism, cannot fail. All disappointing results are blamed on insufficient implementation, not flaws in the basic theory.

Policy choices proliferate in part due to the immense division of labour in healthcare. Should policy target physicians' offices, hospitals, or drugs? Can some functions be shifted to less expensive (and critics would say less skilled) labour, such as nurses instead of doctors or nurses' aides instead of licensed nurses? The division of labour creates interest groups which clamour for other groups' business, claiming that will save money for the system – or resist, claiming that supposed savings are false. Policy alternatives proliferate further because of the many different tribes of experts in the healthcare policy community. Economists of various leanings, public health specialists, health service researchers, and other social scientists generate proposals which follow from their training and emphasise different problem definitions and policy instruments.⁸²

Many decision processes require procedures to reduce many alternatives to a few, and then more carefully investigate those. Selection of policies to increase healthcare efficiency does not require as much reduction, because multiple approaches can be implemented together. There is also some merit in trial-and-error. Yet having so many alternatives creates a risk that policies will be chosen not based on evidence of success, but more based on which seems to face least political opposition. After all, virtually anything will have credentialed experts who say it will work.

One goal of this project is to better link the work of the Health Policy division to budget-makers. That work may help budget-makers sort through alternatives. Yet there will be eminent experts in any country promoting virtually any idea, without regard for more neutral assessments. In the United States two of the world's leading health economists, David Cutler and Karen Davis, rejected estimates by the Congressional Budget Office and Medicare actuaries that the package of reforms in versions of the Affordable Care Act would do little to reduce spending. Rather than believe those estimates, they wrote, “it is imperative to cast a wider net than traditional evidence standards”.⁸³

5. Effects of programme structure – beyond “Bismarck” vs. “Beveridge”

Budgeting strategies often include a macropolitics of structure.⁸⁴ Healthcare systems vary substantially in the structure of financing, and moderately in how care is delivered.⁸⁵ The budgetary challenge is affected by these choices.

5.1. Bureaus vs. Entitlements

The first involves the form of the promise to provide healthcare. Government spending programmes have two main forms: *bureaus* and *entitlements*.⁸⁶ In a bureau programme, government creates an organisation that will provide services – such as the national (or county) health services in many countries. Citizens are promised access to the bureau, which is responsible for providing care. In the entitlement approach, a government promises to pay cash benefits or reimburse for services according to some eligibility rules. In healthcare, that is the logic of social insurance or government insurance systems. Some providers in these systems might be owned by governments, but many will not be. The promise is that specific services will be paid for, as needed.

In a bureau or health service programme, funds are allocated to the organisation, their amount is a direct budget allocation, and the level of service that follows depends on how the organisation is managed. Budget control then follows from the original allocation – unless the budget is spent before the end of the year in a way that forces a supplemental appropriation. In an entitlement programme spending depends on the rules of payment for services and the demand for services, so it is hard to enforce a total in advance – although there are examples of automatic fee adjustments that can be effective.⁸⁷

Systems can involve mixes of the two principles. In many countries with entitlement systems governments own hospitals – though a different government may own the hospitals than operates the insurance system (Australia), or the insurance may be non-governmental (France, Germany). In a bureau system providers may not be officially employees of the state (as with general practitioners in the British national health services). The two approaches, however, clearly shape the budget challenge.

Bureau systems allow more direct management of providers – so greater ability to implement process efficiencies (e.g. “targets and terror”) if political authorities know how to do so. Cost overruns can be made less likely by sanctioning managers. Control of physical capacity can be easier if it is financed entirely from capital budgets; if anything, normal budget behaviour is likely to lead to underfunding capital in order to maintain operational funding.⁸⁸ Scholars and managers of bureaucracy are likely to notice all the limits on hierarchical control of organisations, and they are right.⁸⁹ Nevertheless, the range of instruments available for controlling behaviour is much wider within hierarchies than for outsiders trying to influence organisations. It is probably no accident that the best-known implementation of a policy that requires extensive planning and co-ordination such as electronic medical records are within large bureaucracies, such as the US Veterans Health Administration. Organisations are created because of their power to co-ordinate activity – however much that may fall short of the ideal.

If budget-makers are fortunate, they may in addition, be able to displace blame for public disappointment with the level of service to the “bureaucrats”, the agency managers who in theory, if they only managed better, could reduce waiting lists. If nothing else, policy-makers can spend many years responding to complaints by implementing new management initiatives. Cost controls for entitlements generally have to be more specific: definitions of exactly which services will be discouraged and exactly which providers will be paid less.

From a budgetary perspective, the entitlement form has fewer advantages. One could be flexibility. Governments that do not own capacity have fewer sunk costs in it, so may have more ability to shift resources.⁹⁰ If entitlements include semi-public bodies

responsible for management of the system, as with the German sickness funds and their associations, or the French CNAMTS (*Caisse nationale de l'Assurance Maladie des travailleurs salariés*), governments may sometimes be able to obscure or share the blame for cost controls. In the ideal case, those managers may be able to negotiate cost control with the providers, using the threat of government intervention to obtain agreements that might be as good as the government would have obtained, at less cost to the government. In the entitlement model governments also may bear less responsibility for failures or scandals in the delivery system. If cost control might lead to delivery failures, it seems better to have bought the services from somewhat separate organisations than for the organisations to be part of the government.

Policy-makers in many countries seem to be seeking some of the advantages of the bureau form within an entitlement design. They attempt to do this by bundling: paying not for individual services but for a package of services. When Dutch policy-makers hope insurers will control costs, they are asking insurers to take on the management responsibilities of a bureau. When American policy-makers have tried to move patients into Health Maintenance Organisations (HMOs) and now ACOs, the idea has been to make a lump-sum payment to these insurers and then have them manage costs – like a bureau. Attempts to pay all costs for an episode could only make sense if some organisation is created to manage across the different providers involved. In any of these cases, the potential advantage is that the bureau would get the blame for measures to limit costs, including any restrictions on output.

The risk is that organisations will try to do as little as possible for their lump payments, so as to maximise their operating margins. The result could be worse outcomes and less value for money – at best, economy without efficiency. In the theory of managed competition informed patients would recognise skimpy performance, risk adjustment would eliminate incentives to avoid sicker patients, and market forces would prevent organisational shirking; but this has yet to be demonstrated in practice. Concerns about government oversight also seem ubiquitous. From a bundling perspective, the logical way to pay hospitals is by giving them budgets. Yet numerous countries have moved towards efforts to pay hospitals by case and diagnosis, on the grounds that this provides better incentives for productivity.⁹¹

In the terms of this paper's previous discussion, the bureau form may be seen as a way to somewhat limit demand by directing it at the bureaus (in part) rather than the payers. The bureau form *probably* increases ability to make production of outputs more efficient. Neither form has a clear advantage for better linking outputs to outcomes, because that depends most on good theory about medical cause and effect. The entitlement form *may* have a slight advantage if policy-makers want to change the mix of outputs.

5.2. Dedicated vs. General Revenues

A second major choice is whether healthcare is financed by dedicated or general revenues. Social health insurance systems, like any social insurance system, are built on an assumption that entitlement to benefits is based on contributions towards the fund from which they are paid. Government programmes normally are funded from a pool of general revenues. So there is an historical association between the entitlement approach (as social insurance) and dedicated revenues, while bureau programmes are more likely to have general revenues. Yet there are numerous exceptions. Early social insurance systems often funded bureaus in the form of polyclinics. Canada's entitlement system is not traditional

social insurance, for most provinces do not have dedicated contributions. Increasingly, the finance of entitlements in traditional SHI systems is being supplemented with general revenues.⁹²

From a public finance perspective, dedicated revenues are problematic. As Alan Auerbach summarises, “We may end up relying too heavily on some taxes rather than others, thereby reducing the tax system’s efficiency. Also, our mix and level of public spending may be distorted by the connections of particular types of spending to specific sources of funding. Money is fungible, in principle, so financing a particular type of spending in part with dedicated revenues ought to have no impact on overall spending of this type. But where dedicated revenues constitute a large share of the funding for a particular type of spending, the level of dedicated tax revenues can have a strong impact on the level of associated spending, with unattractive consequences”.⁹³

On the other hand, policy-makers have many motives for adopting dedicated taxes. Dedicated funding may make raising taxes easier because “taxpayers might be more willing to pay taxes if they perceive that these taxes are spent on something that they value, even if there is no tax-benefit linkage at the individual level”. A dedicated tax might be adopted also “either to protect or limit the amount of a particular type of spending”. Advocates of a programme may seek the security of “a claim on a specific source of revenue... On the other hand, one of the reasons advanced for providing a dedicated source of revenue such as the VAT for healthcare has been to try to force health spending growth to conform to the growth of VAT revenues. In either case, though, the influence of tax dedication on funding need not go in the right direction from a social perspective”.⁹⁴

Choices about dedicated funding therefore could influence both ability to control spending and to raise revenues – but in which direction? Although the issues are analytically separate, they are hard to separate in practice, because if dedicated funding raises revenues, it may reduce the need to limit spending. In a bureau system with particularly strong budget controllers and fiscal pressures, such as the United Kingdom for most of the history of the NHS, relying on general revenues is likely to lead to lower spending. But that doesn’t answer the question of whether budget-makers are better off relying on general revenues than dedicated revenues, because there may have been more room to finance other programmes and control deficits in the United Kingdom if the NHS had had its own dedicated funds.

As a very provisional judgment, it appears that dedicated funds probably inhibit raising spending more quickly than that revenue stream. However, separate revenues make it difficult to cut spending below the amount of revenues.⁹⁵ On balance, if dedicated revenues allow collection of more money, they are likely to reduce budgetary pressures. Dedicated funding also clarifies budgetary consequences. When programmes are funded from general revenues, it is easy for virtually everyone to demand that their spending be protected, yet refuse to pay more because they want other people’s spending to be cut.⁹⁶ If spending is financed from dedicated funds, it is more plausible to say the level accurately reflects public preferences.

As always, there are complications. The income on which most dedicated revenues have been based – wages – becomes steadily less adequate, as costs increase and the labour share of GDP falls in most countries.⁹⁷ This creates pressure to redistribute further by financing a part of care, in systems built on dedicated funding, from general revenues. Ironically, the fact that most of the money comes from dedicated funds may make a

portion of general revenues seem a small price to pay for preserving a large and highly popular programme.

Nevertheless, on balance dedicated funding appears to have budgetary advantages. From a budgetary perspective, the best structural combination may be a mostly bureau system financed mainly from dedicated revenues.

5.3. The scope of coverage

A third structural choice has been discussed in part earlier in this paper. What healthcare will be financed socially, and what will be treated as “wants” rather than “needs”, so as a matter for personal consumption instead of redistribution? In addition to what will count as medical care, it involves issues such as the extent of cost-sharing within the system of coverage, and the roles of gap and parallel insurance in healthcare systems.⁹⁸

The scope of benefits can only be a value choice. There is no “right” answer. Budget-makers, however, have good reason to at least insist that this be a choice – that expansions of the medical realm not continue without reflection. The extent of cost-sharing is almost a theological issue. It involves questions of fact – what the effects of cost-sharing are, for which types of people. Yet how people evaluate these facts, and even what facts they choose to accept, seems to vary greatly, partly with belief in equality in general and partly with faith in the merits of market forces. Budget-makers can only seek the best and most comprehensive research, and then decide based on their own values. Yet they should be aware that cost-sharing tends to be unpopular, for the same reasons as demand for healthcare programmes is high.

6. Implications from this overview

This analysis has been one scholar’s overview of the challenge of budgeting for healthcare. It questions conventional views in some ways, most notably by challenging the usual understanding of how healthcare programmes can be “unsustainable”. In conclusion, we can identify some of the core observations, and a few implications for policy choice.

1. Healthcare programmes are not “unsustainable” in an economic sense.
2. The sustainability of programmes in a political sense, however, is open to question. This involves the tolerance of political systems for redistribution.
3. Healthcare spending is so hard to control in part because citizens (voters) deeply value healthcare services. Political demand is strong and real. It is a demand for care and rescue, not “health”.
4. The intensity of demand does not explain its scope. That involves social processes which define “necessary care”. Provider-induced demand does not occur only in physicians’ offices. Budget-makers should seek ways to counter the processes that medicalise larger parts of individual and social life.
5. The pursuit of efficiency involves both relating inputs to outputs and outputs to outcomes. Improving the ratio of outputs to inputs is difficult, but less problematic than trying to adjust outputs to achieve outcomes more efficiently. The latter approach faces much the same obstacles as programme budgeting. The search for a better mix of outputs is worthwhile – but should be done very carefully.

6. “Baumol’s Disease” (or, more neutrally, the Baumol effect) is not a useful observation even if true, and is not obviously true.
7. Both “ageing” and “technology” make some independent contribution to spending increases, but in each case the effect is much smaller than policy-makers often assume.
8. The effects of “technology” depend largely on policy choices, and “technology” is often an inaccurate name for the social process that expands ideas about need. Policy-makers should focus on choices such as prices, purchase of equipment, and defining the bounds of social sharing.
9. Pursuit of efficiency is made more difficult by the amazing variety of alternative proposals. Budget-makers must guard not only against policy being captured by interest group claimants, but against capture by enthusiastic tribes of experts. Good budget analysis, based on independence and hard-headed scepticism, is especially important.
10. The budgetary challenge is affected by whether programmes are organized as bureaus or entitlements. There is some reason to believe spending for bureau programmes is somewhat easier to limit.
11. The challenge is also influenced by whether programmes have dedicated funding. This is especially important because the intensity of demand for care means dedicated funding is likely to be possible. Although there are many qualifications to this claim, dedicated funding probably helps meet budgetary challenges.

Government support for citizens’ medical care, whatever the form of the programme, has become a basic part of modern societies – even in the United States. In some cases (Canada, the U.K.) these programmes have become part of national identity. In others, such as Germany, they were part of creating the nation-state. These programmes have had major successes – in enhancing national solidarity and improving the populations’ health.⁹⁹ Unfortunately none of that eliminates the basic challenge of budgeting: how to reconcile preferences about spending and taxing, details and totals. Yet the basic message of this paper should be that it is possible to find acceptable options. The usual suspects for inevitable spending increases – the Baumol effect, aging and technology – are not so important. Unlike with many programmes, dedicated funding is a real option. And there are many alternatives for spending control: the budgeting challenge is how to sort through them and distinguish wishful thinking from evidence.

Notes

1. The most substantial cuts were in Estonia, Greece, Iceland, Ireland and Portugal. “Health spending continues to stagnate, says OECD.” *OECD Health Policies and Data*, 27 June, 2013. At www.oecd.org/newsroom/health-spending-continues-to-stagnate-says-oecd.htm. For a discussion of measures taken for 2010-11, see David Morgan and Roberto Astolfi, “Health Spending Growth at Zero: Which Countries, Which Sectors Are Most Affected?”, *OECD Health Working Papers*, No. 60, <http://dx.doi.org/10.1787/5k4dd1st95xv-en>.
2. Comparisons are based on 23 countries: European OECD members that were not part of the former Soviet bloc, Australia, Canada, Japan, New Zealand and the United States.
3. *OECD Factbook 2013: Economic, Environmental and Social Statistics*. Available at <http://dx.doi.org/10.1787/factbook-2013-en>. Page 249. Note that no public/private breakdown for the Netherlands was provided for 2010; it can be difficult to determine what the classifications in the Netherlands should be.
4. Author’s calculation from *ibid*, table page 249. This involves adding figures rounded to one decimal point and averaging over 23 countries, so is imprecise. The average came to 1.87 percentage points

- of GDP. Only one country, Iceland, saw a spending decrease as a share of GDP from 2000 to 2010, and that was only 0.2%.
5. Ibid, page 195.
 6. For an imprecise comparison see Table B4.2 from OECD, *Education at a Glance – 2013*. The table shows public expenditure on education as a share of GDP for 1995, 2000, 2005 and 2010. The definition of education spending, however, is more extensive than in the OECD Factbook, because it includes subsidies to households for student living costs (e.g. for scholarship students). The change between 2000 and 2010, also, is affected by the general decline in the denominator (GDP) in 2010.
 7. Much of the expansion of education “need” will involve longer periods of training, and only a portion of the population will be eligible for such expansion of tertiary education, while nearly all citizens could be eligible for further medical services.
 8. Examples as of 2009 were Austria, Belgium, Finland, France, Germany, Greece, Italy, Japan, Luxembourg, Portugal, and Spain. Pension figures are in OECD Factbook 2013, op. cit., page 215. For 2009 I am roughly calculating public spending from the tables, “Total expenditure on health as a percentage of gross domestic product” from OECD Health Data, downloaded from <http://dx.doi.org/10.1787/hlthxp-total-table-2013-2-en> and “Public expenditure on health as a percentage of total expenditure on health” from OECD Health Data, downloaded from <http://dx.doi.org/10.1787/hlthxp-pub-table-2013-2-en>.
 9. The old-age support ratio is the number of people of working age (20-64) per person of pension age (65+). An Excel spreadsheet of data is available at www.oecd.org/els/public-pensions/indicators.htm, under subhead 4, “Demographic and economic context”. I used the data part of the spreadsheet to rank-order the countries in this analysis for 2008, from having the largest share of elderly (1) to the least (23). If we look at the tables on health care and pension spending trends in the previous footnote, it appears that pension expenditure as a share of GDP grew more quickly than healthcare spending as a share of GDP in Finland, France, Ireland, Japan, the Netherlands, Portugal, and Sweden. We can see that this is associated with the old age support ratio by the fact that these countries ranked 1, 4, 7, 8, 11, 16, and 23. Ireland, at 23, is clearly an outlier!
 10. For a typical discussion see Benedict Clements, David Coady, and Sanjeev Gupta eds., *The Economics of Public Healthcare Reform in Advanced and Emerging Economies*, Washington, DC: International Monetary Fund, 2012.
 11. For a general discussion of the theme, see Allen Schick, “Budgeting for Fiscal Space”, *OECD Journal on Budgeting* 2009/2.
 12. In 2010 the United States had the largest gap between incomes of the richest and poorest deciles of the population among the 23 countries I am comparing. Among OECD nations, only Turkey, Mexico, and Chile had greater inequality. See OECD *Society at a Glance 2014*, Chapter 5, Table 5.1. as updated 4 Dec. 2013.
 13. Drew Altman, “Healthcare Cost Growth Is Down, Or Not. It Depends Who You Ask”, 5 March 2014. At <http://kff.org/health-costs/perspective/health-cost-growth-is-down-or-not-it-depends-who-you-ask/>.
 14. For a discussion of visibility by one of the most prominent sources for this argument, see Harold L. Wilensky, *Rich Democracies: Political Economy, Public Policy, and Performance*. Berkeley: University of California Press, 2002. For an overview of dedicated financing in the US context, see Eric Patashnik, *Putting Trust in the U.S. Budget: Federal Trust Funds and the Politics of Commitment*. Cambridge: Cambridge University Press, 2000.
 15. See, e.g., Neil Warren (2008), “A Review of Studies on the Distributional Impact of Consumption Taxes in OECD Countries”, OECD Social, Employment and Migration Working Papers, No. 64, <http://dx.doi.org/10.1787/241103736767>.
 16. See, e.g., William G. Gale and Peter R. Orszag, “Economic Effects of Sustained Budget Deficits,” *National Tax Journal* Vol. 56, No. 3 (2003), downloadable from www.brookings.edu/views/papers/gale/20030717.pdf, page 2.
 17. This is simplifying greatly.
 18. In addition, results of any analysis will depend on choices about modelling techniques and how to measure national savings, neither of which are straightforward. The discussion that follows cannot settle these issues, but offers some perspective. For an early example of analysis see R. Herd, “The Impact of Increased Government Saving on the Economy”, *OECD Department of Economics and Statistics Working Paper* No. 68, June 1989.

19. Sources can be found in Joseph White, *False Alarm: Why the Greatest Threat to Social Security and Medicare is the Campaign to "Save" Them*, Baltimore: The Johns Hopkins University Press, 2003, pp. 79-80.
20. Normal productivity growth would swamp the savings effect. In fact, technical adjustments in the Consumer Price Index would at least seem to increase workers' real incomes over that period by substantially more. See *False Alarm*, pp. 83-84.
21. OECD *Economic Outlook* No. 76 (Dec. 2004), Chapter 5, page 2; downloaded from www.oecd.org/eco/outlook/34081006.pdf.
22. United States Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2012 to 2022* (January, 2012), page 29. CBO added that GNP would be a better measure, and at the end of 2022 "real GNP would be between 3.7 per cent and 1.0 per cent smaller". Still, the midpoint is half of the total deficit change.
23. See the discussion in White, *False Alarm*, op. cit., pp. 84-88.
24. Voters clearly have chosen mainly to pay for rather than cut Social Security pensions, with continual contribution increases until 1983. Since then there has been no need. The solvency of the Medicare Hospital Insurance trust fund has been addressed by a combination of cuts to spending but not benefits (i.e. payment reforms), and higher contributions both through taxes and premiums paid by individuals with higher incomes. In short: by greater redistribution.
25. Marc Labonte, "The Sustainability of the Federal Budget Deficit: Market Confidence and Economic Effects", United States Congress, Congressional Research Service, Report R40770 (14 December 2012), available at www.fas.org/sgp/crs/misc/R40770.pdf, quotes page 1.
26. The Eurozone southern tier has also not had the option of monetising their debt, though fears they might leave the Eurozone could affect potential bondholders.
27. In each case interest rates may be low because there is far more capital than safe places to put it and in spite of the deficits Japanese and US bonds appear safer than alternatives. But the Japanese case appears to involve Japanese capital, while the US case involves the world's.
28. From 1999 to 2008 healthcare spending as a share of GDP did rise fairly quickly in Greece, from 8.7% of GDP to 10.1%. During the same time, however, spending rose as quickly in Canada, the Netherlands, New Zealand, Sweden, United Kingdom, and United States – none of which faced the same kind of bondholder response. The Greek crisis can more reasonably be ascribed to indications of fraudulent accounting, "overstaffing and poor productivity in the public sector" across functions, pensions that are extremely generous compared to other countries, and weak revenue collection – in part because the informal economy could exceed a quarter of Greek GDP. In other words, Greece is an exceptional case. For one summary see Rebecca M. Nelson, Paul Belkin and Derek E. Mix, "Greece's Debt Crisis: Overview, Policy Responses, and Implications". United States Congress, Congressional Research Service, Report R-41167 (14 May 2010), available at <http://fpc.state.gov/documents/organization/142363.pdf>, p5.
29. Stephanie Stock, Marcus Redaelli, and Karl Wilhelm Lauterbach, "The Influence of the Labour Market On German Healthcare Reforms", *Health Affairs*, Vol. 25, No. 4 (July/August 2006), quotes pp. 1146-47, 1148.
30. Nicola Brandt, "Moving Towards More Sustainable Healthcare Financing in Germany", OECD *Economics Department Working Papers* No. 612 (2008), p. 5. At <http://dx.doi.org/10.1787/242647737261>.
31. For example, in 2004 the same US corporations would have paid nearly \$1 300 extra in employee healthcare costs to build the same car in Michigan as in Ontario, which should inhibit hiring in Michigan. For a detailed review of the issues in the US context, see Office of the Assistant Secretary for Planning and Evaluation, United States Department of Health and Human Services (ASPE), "The Effect of Healthcare Cost Growth on the US Economy", Final Report for Task Order #HP-06-12, at aspe.hhs.gov/health/reports/o8/healthcarecost/report.pdf Cited hereinafter as ASPE 2008.
32. ASPE 2008 p. 13. This source provides a further review of the "range of factors including the legal or institutional environment under which a firm operates" (14) that would determine any effect on employment.
33. For example, the effect of healthcare costs on employment does not appear to be addressed in the series of OECD *Social, Employment and Migration Working Papers*.
34. See ASPE 2008, quotes pages 29, 34. This report sought to measure effects on overall unemployment by comparing states, and found weak, statistically insignificant indications that greater expenditure was associated with higher unemployment.

35. Advisory Council for Concerted Action in Healthcare, *The Healthcare System in Germany: Cost Factor and Branch of the Future. Volume I: Demographics, Morbidity, Efficiency Reserves and Employment*. Bonn, 1996. At www.svr-gesundheit.de/fileadmin/user_upload/Gutachten/1996/Kurz-f-engl96.pdf, p. 41.
36. *Ibid.*, pp. 41-45; the point estimate was an increase of 35 000 jobs, see page 44. Note that at a given point in time revenues might be increased to make up for deficits in a fund, so for past consumption expansions. If so it would not be financing new consumption, and might lead to a small decrease in employment.
37. Advisory Council for Concerted Action in Healthcare, *The Healthcare System in Germany: Cost Factor and Branch of the Future. Volume II: Progress and Growth Markets, Finance and Remuneration*. Bonn, 1998. At www.svr-gesundheit.de/fileadmin/user_upload/Gutachten/1997/Kurz-f-engl97.pdf, page 15. This second volume reported a slightly different model result, at page 18.
38. See the powerpoint presentation, "Improving value for money from a health economics perspective", from the conference. Downloadable from www.oecd.org/gov/budgeting/49094979.pdf. See also Klaus-Dirk Henke and Karl Martin, "Health as a driving economic force", Technische Universität Berlin Diskussionspapier 2008/2, at www.wm.tu-berlin.de/fileadmin/f8/wiwidok/diskussionspapiere_wiwidok/dp02-2008.pdf. These possibilities are also noted in ASPE 2008.
39. David T. Coe (2007), "Globalisation and Labour Markets: Policy Issues Arising from the Emergence of China and India", *OECD Social, Employment and Migration Working Papers*, No. 63, at <http://dx.doi.org/10.1787/057638253043>, page 18.
40. There presumably would be situations where large differences in charges for comparable industries between comparable countries would be more significant, as in the Canada/US automobile industry comparison mentioned above.
41. US Government, White House Office of Homeland Security, *National Strategy for Homeland Security* (July, 2002), page 65. At http://permanent.access.gpo.gov/lps20641/nat_strat_hls.pdf. The report estimated the "deadweight loss" of taxes as an extra \$0.27 per dollar of revenue.
42. Arguably there is a third, but not much could be said about it. At any given time all citizens could need medical care – unlike education or pensions, though any citizen will need all three at some point in the lifecycle.
43. The classic review of the core policy reasons for such differences remains William A. Glaser, *Health Insurance in Practice: International Variations in Financing, Benefits, and Problems*. San Francisco: Jossey-Bass, 1991. See Chapters 12-15 for these four types of care.
44. For one discussion of disciplinary assumptions that may be hidden in plain sight, but determine conclusions in advance, see Thomas E. Rice, *The Economics of Health Reconsidered 2nd ed.* Chicago: Health Administration Press, 2002.
45. The effect of inequality is controversial; for one sceptical review see Angus Deaton, "Health, Income, and Inequality", *NBER Reporter Research Summary* (Spring 2003) at www.nber.org/reporter/spring03/health.html.
46. On pollution see Brad Plumer, "Coal Pollution in China is Cutting Life Expectancy by 5.5 Years", *Washington Post Wonkblog*, 8 July 2013 at www.washingtonpost.com/blogs/wonkblog/wp/2013/07/08/chinas-coal-pollution-is-much-deadlier-than-anyone-realized/.
47. Alexander Domnich, Donatella Panatto, Roberto Gasparini and Daniela Amicizia, "The 'healthy immigrant' effect: Does it exist in Europe today?", *Italian Journal of Public Health* Vol. 9, No. 3 (2012).
48. See the discussions in Bernd Rechel, Yvonne Doyle, Emily Grundy and Martin McKee, "How can health systems respond to population aging?", *European Observatory on Health Systems and Policies Policy Brief* 10, 2009. At www.euro.who.int/_data/assets/pdf_file/0004/64966/E92560.pdf and in Joseph White, "(How) is Aging a Health Policy Problem?", *Yale Journal of Health Policy, Law and Ethics*, Vol. 4, No. 1 (2004).
49. OECD Economics Department, "Projecting Health and Long-Term Care Expenditures: What Are the Main Drivers?", *Working Paper* No. 477 (2006), p. 11, at www.oecd.org/tax/public-finance/36085940.pdf.
50. Christine de la Maisonneuve and Joaquim Oliveira Martins, "A Projection Method for Public Health and Long-Term Care Expenditures", *OECD Department Working Papers* No. 1048 (July 2013) Table 2.1, page 9. At <http://dx.doi.org/10.1787/5k44v53w5w47-en>.
51. Rechel et al., *op. cit.*, p. 10.
52. OECD Economics Department (2006), *op. cit.*, p. 11.

53. See discussions in Rechel et al., op. cit.; OECD Economics Department, op. cit.; White “(How) Is Aging a Health Policy Problem?”, op. cit.
54. De la Maisonneuve and Martins, op. cit., p. 13.
55. Ibid., p. 17. Note that these figures are lower than might otherwise be expected because they include the OECD countries that are at lower ends of healthcare expenditure because at earlier stages of economic development. For other studies with similar results see OECD Economics Department (2006), op. cit, and also Jonathan Gruber and David Wise, “An International Perspective on Policies for an Aging Society”, in Stuart H. Altman and David I. Shactman eds., *Policies for an Aging Society*. Baltimore: The Johns Hopkins University Press, 2002, pp. 34-62.
56. See the long-term care tables in OECD Economics Department, op. cit.; also Martin Karlsson and Florian Klohn, “Some notes on how to catch a red herring: Aging, time-to-death and care costs for older people in Sweden”. University of Oslo Health Economics Research Programme, *Working Paper 2011:6*. At www.med.uio.no/helsam/forskning/nettverk/hero/publikasjoner/skriftserie/2011/2011+6.pdf.
57. See for example European Community Economic Policy Commission, Progress Report to the ECOFIN Council on the Impact of Aging Populations on Public Pension Systems (7 November 2000) at www.consilium.europa.eu/uedocs/cmsUpload/Progress%20Report%20on%20the%20impact%20of%20ageing%20population.pdf; OECD, “Work Force Aging: Consequences and Policy Responses”, OECD Working Paper No. AWP4.1, 1998) at www.oecd.org/els/public-pensions/2429096.pdf; Jean-Philippe Cotis, “Population Aging: Facing the Challenge”, OECD Observer, 26 Sept. 2003, at www.oecdobserver.org/news/archivestory.php/aid/1081/Population_ageing:_Facing_the_challenge.html.
58. For the most recent of a half century of these arguments, see William J. Baumol, *The Cost Disease: Why Computers Get Cheaper and Healthcare Doesn't*. New Haven: Yale University Press, 2012. For a review that refers to many studies of the overall claim (not just limited to healthcare), and an argument that the basic dynamic exists, see William D. Nordhaus, “Baumol’s Diseases: A Macroeconomic Perspective”, *National Bureau of Economic Research Working Paper 12218* (May 2006). At www.nber.org/papers/w12218.pdf?new_window=1.
59. See the interpretation in Amy Wallace, “The Case for Calm Over Rising Health Costs,” *New York Times* (6 Oct. 2012) at www.nytimes.com/2012/10/07/business/cost-disease-offers-a-case-for-health-care-calm.html?_r=0.
60. Ellen Nolte and Martin McKee, “Variations in Amenable Mortality – Trends in 16 High-Income Nations.” *Health Policy* 103(1), November 2011: 47-52.
61. De la Maisonneuve and Martins, op. cit. They note that it might have been possible to make such estimates for individual sectors (p. 13), but I’m sceptical because part of any efficiency increases would be substitutions across sectors.
62. Elizabeth Docteur and Howard Oxley, “Healthcare Systems: Lessons from the Reform Experience”, OECD Economics Department Working Papers, No. 374 (2003). At <http://dx.doi.org/10.1787/884504747522>. Isabelle Joumard, Christophe André and Chantal Nicq, “Healthcare Systems: Efficiency and Institutions”, OECD Economics Department Working Papers, No. 769 (2010). At <http://search.oecd.org/officialdocuments/displaydocumentpdf/?doclanguage=en&cote=eco/wkp%282010%2925>. Rodrigo Moreno-Serra, “The impact of cost-containment policies on health expenditure: Evidence from recent OECD experiences,” Paper prepared for the second meeting of the Joint Network on Fiscal Sustainability of Health Systems, 25-26 March 2013, OECD, Paris (unpublished). OECD Health has numerous studies of specific approaches. An excellent review for the US context is US Congressional Budget Office (CBO), *Key Issues in Analyzing Major Health Insurance Proposals* (December 2008). At <http://cbo.gov/sites/default/files/cbofiles/ftpdocs/99ss/doc9924/12-18-keyissues.pdf>.
63. Assuming there are no policy choices to ensure spending does not burgeon as a result. “Technology” is discussed further below.
64. See US Government Accountability Office (GAO), “Medicare: Outpatient Rehabilitation Therapy Caps Are Important Controls But Should Be Adjusted for Patient Need”, HEHS 00-15R (8 October 1999). At www.gao.gov/products/GAO/HEHS-00-15R.
65. One common dispute is whether “induced demand” means that attempts to control prices do not work because providers will simply induce extra volume to compensate for the lost income. The answer, at least in the United States, is “No”. For evidence see CBO, “Major Issues”, op. cit., p. 109; Medicare Actuaries. 1998. Memorandum: Physician Volume & Intensity Response (13 Aug). www.cms.gov/Research-Statistics-Data-and-Systems/Research/ActuarialStudies/downloads/PhysicianResponse.pdf; Technical Review Panel on the Medicare Trustees Reports. 2000. Review of the Medicare Trustees’ Financial Projections (December). www.cms.gov/Research-Statistics-Data-and-Systems/Research/ActuarialStudies/downloads/PhysicianResponse.pdf.

- Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/downloads/TechnicalPanelReport2000.pdf*. The other is whether medical care providers know that what they advise is the right course of treatment for the patient. The answer appears to be, “sometimes”.
66. Various technology fads may waste large amounts of money in US hospitals, and perhaps elsewhere. But I’m not sure that makes hospitals different from other institutions, and at any rate arguments that technology causes rising costs focus on medical services.
 67. For one overview see Kaiser Family Foundation, “Snapshots: How Changes in Medical Technology Affect Healthcare Costs” (2 March 2007) at <http://kff.org/health-costs/issue-brief/snapshots-how-changes-in-medical-technology-affect/>.
 68. De la Maisonnette and Martins, op. cit. (2013), p. 42.
 69. Until the evaluators, in the United States, buy an imaging machine and start running a lot of tests. But that does not work for, say, endocrinologists. And it only works so long as policy allows them to buy the machines.
 70. But not in Japan, which has a very flexible price-setting system. See John C. Campbell and Naoki Ikegami, *The Art of Balance in Health Policy: Maintaining Japan’s Low-Cost, Egalitarian System*. Cambridge: Cambridge University Press, 1998.
 71. The OECD and CBO studies cited earlier are very useful. My own analyses include “Cost of Healthcare in Western Countries”. In David A. Warrell, Timothy M. Cox, and John D. Firth eds., *Oxford Textbook of Medicine*, 5th edition, Vol. 1, 112-116. Oxford: Oxford University Press, 2010; and “Targets and Systems of Healthcare Cost Control”, *Journal of Health Politics, Policy and Law* (24:4), August 1999.
 72. Mark Pearson, “Written Statement to Senate Special Committee on Aging” (30 September 2009) at www.oecd.org/unitedstates/43800977.pdf.
 73. One issue is how to get satisfactory productivity from salaried physicians. This involves all the issues that normally apply to salaried personnel – sense of mission, possible sanctions, oversight, culture... But payment methods can be both more and less problematic than salary. At one end of the spectrum, if hospital physicians receive fees for each procedure, they have strong incentives to push hospital managers to maximise throughput. At the other end, if physicians are paid per session (e.g. 4 hours), and the time for a procedure does not divide neatly into that unit (perhaps it is normally 3 hours), then physicians might not work for all the time for which they are paid.
 74. The English NHS regime, under the Blair Government, of “Targets and Terror” to reduce waiting times has been described as an example of successful, if perhaps unpleasant, management. For one discussion with some citations see www.kingsfund.org.uk/projects/general-election-2010/key-election-questions/performance-targets. See also Carol Propper, Matt Sutton, Carolyn Whitnall and Frank Windmeijer, “Did ‘targets and terror’ Reduce Waiting Times in England for Hospital Care?”, *Centre for Market and Public Organisation Working Paper No. 07/179* (November 2007). At www.bris.ac.uk/cmpo/publications/papers/2007/wp179.pdf. But the comparative data used for these analyses is a bit shaky; see the discussion of data problems in Sheelah Connolly, Gwyn Bevan and Nicholas Mays, *Funding and performance of healthcare systems in the four countries of the UK before and after devolution*. London: Nuffield Trust, 2011 (not 2010 version) At www.kingsfund.org.uk/projects/general-election-2010/key-election-questions/performance-targets.
 75. Uwe E. Reinhardt, “Spending More through ‘Cost Control’: Our Obsessive Quest to Gut the Hospital”, *Health Affairs* 15(2) 1996: 145-154.
 76. For a discussion of the “long, if irregular history” of performance budgeting in the United States, see Allen Schick, “The metamorphoses of performance budgeting”, *OECD Journal on Budgeting* Vol. 13, No. 2 (2013), pages 49-79. For an update on US experience with further commentary, see Joseph White, “Playing the Wrong PART: The Programme Assessment Rating Tool and the Functions of the President’s Budget”, *Public Administration Review* 72(1), January 2012, 112-120.
 77. For a good discussion of doubts about the concept see M. Ashmore, M. Mulkey and T. Pinch, *Health and Efficiency: A Sociology of Health Economics*. Milton Keynes and Philadelphia: Open University Press, 1989. For all their problems, QALYs are better than measures such as the US PART scores, which were pretty arbitrary. See White, “Playing the Wrong Part”, op. cit., for why.
 78. It also involves judgments about efficiency that can be questioned: How much asthma or asthma-related misery will be reduced by screening? What is the value of the mobility advances from joint replacements? How do we know to whom to give the screening or surgeries, and doesn’t the result depend on who gets them and who does them?

79. For a short recent summary of the issues see (no author) "The Economics of Prevention," *Academy Health Research Insights* (2012) at www.academyhealth.org/files/FileDownloads/RI_Econ_Prevention.pdf.
80. The September/October 2009 and May 2013 issues of *Health Affairs* are good examples of the variety. A quick look at the *Health Policy* website on 11 April 2014 found articles on 14 different aspects of costs either published in 2014 or in press as of that date.
81. See Bruce Vladeck, "Managed Care's 15 Minutes of Fame," *Journal of Health Politics, Policy and Law* Vol. 24, No. 5 (1999): 1207-11.
82. For one review see Joseph White, "Healthcare Reform: What is the Problem?" in Theodore R. Marmor and Philip R. De Jong eds., *Ageing, Social Security and Affordability* (Aldershot UK, Brookfield USA: Ashgate, 1998).
83. David M. Cutler, Karen Davis and Kristof Stremikis, "Why Health Reform Will Bend the Cost Curve", Commonwealth Fund Issue Brief (December 2009), page 10. At www.commonwealthfund.org/?/media/Files/Publications/Issue%20Brief/2009/Dec/1351_Cutler_Davis_Health_Reform_129_CAPAF.pdf.
84. Roy T. Meyers, *Strategic Budgeting*. Ann Arbor: University of Michigan Press, 1996.
85. The most common distinction is between "Beveridge" (essentially health service) and "Bismarck" (Social Health Insurance) systems. A good source on that distinction and how it is weakening is H. Rothgang, M. Carace, L. Frisina, S. Grimmeisen, A. Schmid and C. Wendt, *The State and Healthcare: Comparing OECD Countries*, New York: Palgrave MacMillan: 2010. For an alternative typology see Michael Moran, "Understanding the welfare state: The case of healthcare," *British Journal of Politics and International Relations* Vol. 2, No. 2 (2000): 136-60.
86. Joseph White, "Entitlement Budgeting vs. Bureau Budgeting", *Public Administration Review* Vol. 58, No. 6 (November/December 1998).
87. The major example is how the Germans have paid for physician services for many years. In essence, fees for each service are defined not in euros but in points; then the number of points each quarter is added up and divided into the budget allocation to create what is essentially a retrospective fee for each service. A similar approach has been designed, though perhaps not totally implemented, for public hospital payments under the French version of a DRG system.
88. Henry J. Aaron and William B. Schwartz, *Can We Say No? The Challenge of Rationing Healthcare*. Washington, DC: The Brookings Institution, 2005.
89. For a comprehensive explanation of the admittedly extreme circumstances of the United States, see James Q. Wilson, *Bureaucracy: What Government Agencies Do and Why They Do It*. New York: Basic Books, 1989.
90. This is one rationale for replacing ownership by contracting in an "internal market". How well it works in practice, however, is not so clear.
91. For a discussion of this developments see Reinhard Busse, Alexander Geissler, Wilm Quentin and Miriam Wiley eds., *Diagnosis-Related Groups in Europe: Moving towards transparency, efficiency, and quality in hospitals*. Maidenhead, Berkshire, England: Open University Press, 2011. There is great variation in use of DRGs, and in many cases they are being used more as a measurement tool than a payment category, but the trend away from set hospital budgets is clear.
92. On the current transitions see Rothgang et al. *The State and Healthcare*, op cit.; for the earlier history see Glaser, *Health Insurance in Practice*, op. cit.
93. Alan Auerbach, "Public Finance in Practice and Theory", Paper presented as the Richard Musgrave Lecture, CESifo, Munich (25 May 2009) p.20. At www.iipf.org/Auerbach_Alban_Public_Finance.pdf.
94. Ibid, p. 21.
95. This judgment is based on comparison of trends across countries as reported in Colleen Flood, Mark Stabile and Carolyn Tuohy eds., *Exploring Social Insurance: Can a Dose of Europe Cure Canadian Healthcare Finance?* (Montreal and Kingston: McGill-Queen's University Press: 2008). The main motivation for the conference is an example of calculations about possible effects. The organisers wanted to explore whether creating new social insurance for pharmaceutical benefits could both make coverage more adequate and equitable, and help provincial budgets by replacing general revenues that were being used for non-universal pharmaceutical benefits. In my chapter (pp. 233-249) I relied on both my own less systematic data and my interpretation of data reported in Sherry Glied's chapter, "Healthcare financing, efficiency, and equity".

96. For explanations of this dynamic see Anthony Downs, "Why the Government Budget Is Too Small in a Democracy", *World Politics* Vol. 12, Issue 4 (July 1960), pp. 541-563; Joseph White, "Making 'Common Sense' of Federal Budgeting", *Public Administration Review* Vol. 58, No. 2 (March/April 1998).
97. OECD, "Labour Losing to Capital: What Explains the Declining Labour Share?", Chapter 3 in *OECD Employment Outlook 2012*, OECD Publishing. At www.oecd.org/els/emp/EMO%202012%20Eng_Chapter%203.pdf.
98. The literature about cost-sharing is massive; a good review is Dahlia K. Remler and Jessica Greene, "Cost-Sharing: A Blunt Instrument", *American Journal of Public Health* Vol. 30 (2009), pp. 293-311. See also the discussions in the sources cited above in footnote 66. On the roles of private insurance, which sometimes is called "complementary" or "supplementary" but inconsistently across authors, see Joseph White, "Gap and Parallel Insurance in Healthcare Systems With Mandatory Contributions to a Single Funding Pool for Core Medical and Hospital Benefits for All Citizens in Any Given Geographic Area", *Journal of Health Politics, Policy and Law* 34:4, 2009, 543-83.
99. Recall the striking advances even over a recent decade in preventing avoidable mortality, as reported in Nolte and McKee, "Variations in Amenable Mortality", *op. cit.*

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The abuse and misuse of the term “Austerity” Implications for OECD countries

by
Barry Anderson and Elizabeth Minneman*

Austerity has become a widely used term in economic research and popular media as many countries have recently implemented deficit reduction policies. This article begins by exploring definitions of austerity used in research and the ways these different definitions impact analysis of policy effects. The article then takes into account a number of factors that can affect the outcome of these so-called austerity measures, including economic conditions, time period, and parties impacted by the policies. Without a clear definition of austerity and the contexts under which it is implemented, a conclusive analysis of austerity’s effects cannot be conducted. This article concludes that the term “austerity” will remain a confusing term that can breed misunderstanding, social uprisings, political unrest, and ill-prescribed solutions to economic problems.

JEL classification: H10, H12, H41, H60

Keywords: Austerity, spending cuts, deficits, tax increases, recession

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1. Introduction

The merits of austerity measures have been the subject of intense debate as many OECD countries have resorted to deficit cutting strategies during the recent periods of economic recovery. Austerity protests across Europe have drawn millions of people to cities like London, Madrid, and Athens to oppose cuts in social programmes and pensions, leading to extensive media coverage and a rise in public interest surrounding the subject. In 2010, Merriam Webster dictionary named austerity its “Word of the Year” following a surge of over 250 000 searches for the term on its website. Throughout history and across countries, however, the term austerity has been used to refer a wide range of deficit reduction policies, ranging from tax increases on the wealthy during economic booms to significant cuts to social welfare programmes during recessions.

Austerity’s widespread use in the media and academic literature has led to many attempts at evaluating its merits, despite a lack of consensus on which policies qualify as austerity measures. Studies of austerity’s effects have yielded mixed results, with some arguing that austerity can be detrimental to economic recovery, and others finding evidence of positive effects of decreased deficits during recessions. This article aims to investigate the definitions of austerity used in policymaking today and further understand how these characterisations impact both public opinion of the policies and the analysis of their effects. While many scholars have set out to determine the effects of austerity measures on the economy, a conclusive analysis cannot be conducted without first clearly defining what qualifies as austerity, in addition to taking into account the economic and political conditions under which the policies are implemented.

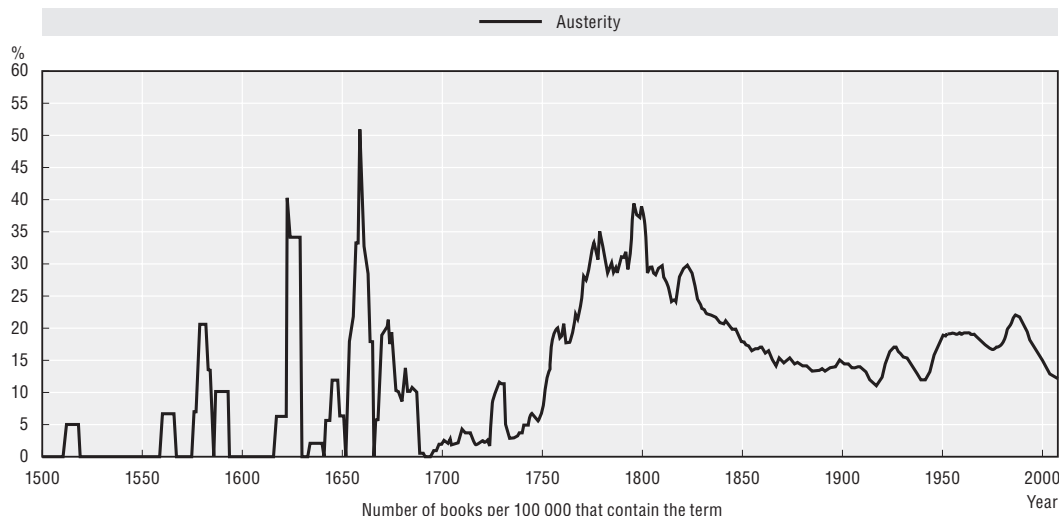
This article concludes that the overuse of the term austerity in policymaking and mass media has led to confusion in predicting and evaluating the economic effects of deficit reduction policies. Factors such as the size of fiscal consolidation, the economic and political atmosphere, and the parties affected by such policies must be taken into consideration to get a full picture of austerity’s effects on the economy. Under the current use of the term, austerity remains too broad of a concept for definitive conclusions of its effects to be made.

2. Evolution of austerity

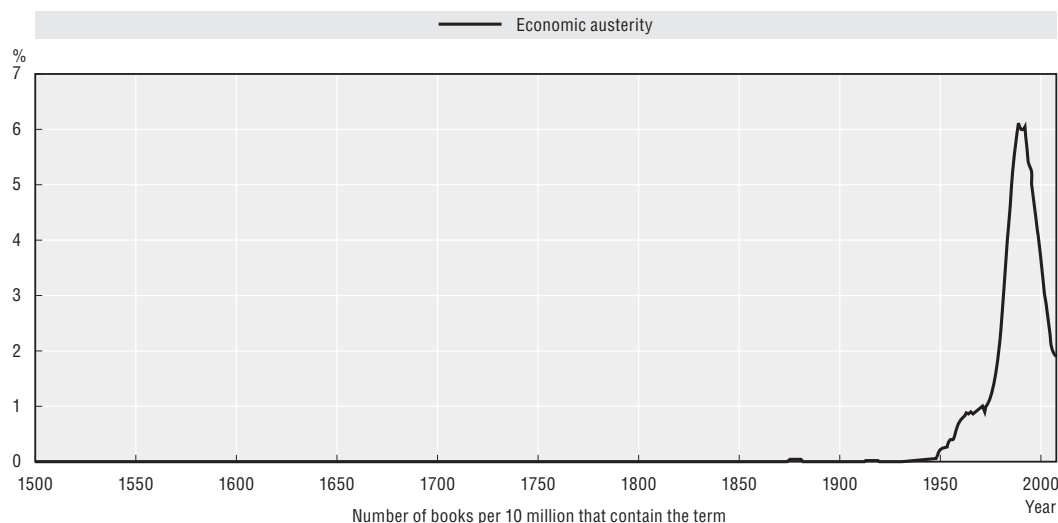
While the concept of cuts to government expenditures or tax increases has existed for over 2 000 years (Schui, 2014, p. 1), the use of the term austerity to describe such measures is a much more modern development. Austerity comes from the Latin word *austerus*, meaning harshness or dryness (Schui, 2014, p. 11). Prior to the Second World War, austerity was primarily used to refer to dry, stark conditions or barren physical qualities; it was not until more recent years that austerity has come into use as an economic term. Beginning in the 1950s, economists and historians began to use the term austerity to describe periods of restricted consumption and other spending, especially during periods of war.

Figures 1a and 1b. **Austerity as an economic term began to appear about 1950, while the general term austerity is common throughout history¹**

Use of the term “austerity” in English language books 1500-2008



Use of the term “economic austerity” in English language books 1500-2008



1. Sample of books contains about 4% of all books ever printed in English from 1500-2008. Graphs average frequency of usage over each 3 year period.

Source : Michel, J.B. et al. (2010), “Quantitative Analysis of Culture Using Millions of Digitized Books”, *Science Magazine*, Vol. 331, No. 6014, <https://books.google.com/ngrams>.

Rationing of consumption in the U.S. and Europe during World War II is often cited as one of the most prominent periods of austerity in the past century, although the policies implemented during that time were drastically different from those at the center of the austerity debate today. During this era, governments set strict limits on the consumption of food products, clothing, fuel, and other consumer goods. Largely as a result of wartime rationing, spending on household durable goods in the UK fell by 74% during World War II, and spending on food decreased by 13% (Braun and McGrattan, 1993). However, these spending decreases were offset by massive military spending with government purchases making up half the economy during the wartime period (Braun and McGrattan, 1993). The period of 1949-59 in Israel is also often considered a time of austerity. The newly formed

country faced an influx of 210 000 immigrants and a shortage of many consumer goods, leading the government to set limits on consumption (Seidman, 2008). Similarly, the Cuban government instituted a period of rationing following the fall of the Soviet Union in 1991 that is today regarded as a time of austerity, leading to a 20% decrease in domestic consumption (Hunt, 2014).

Unlike austerity under debate today that focuses on deficit reduction, these examples of past austerity measures involved government rationing of consumption due to scarce resources. During these periods, consumer goods were not widely available as a result of war and poor economic conditions, and governments were forced to set limits in order to maintain order and conserve resources necessary for military efforts. Government actions that are considered austerity measures in more recent times typically involve fiscal consolidation through spending cuts or increases in taxes, rather than direct rationing of consumer goods out of necessity.

3. Austerity today

Following the financial crisis of 2008, austerity measures have come into the public eye again as some OECD countries have enacted deficit reduction strategies, primarily through limits to government expenditures and tax increases. These policies have been implemented in part due to increased concerns over high interest rates and public debt default risk. In addition, fiscal rules under the Stability and Growth Pact, low investor confidence, and bailout requirements imposed during the European sovereign debt crisis have caused many EU member countries to commit to reducing their deficits. After accepting IMF loans totalling an estimated EUR 110 billion, Greece took measures to cut its deficit by EUR 30 billion from 2010-12 through increases in value-added and corporate taxes, cuts to pensions, and increases in the retirement age (Brabant, 2010). Amidst concerns of investors losing faith in the bond market, countries such as the UK have also implemented spending cuts during periods of high unemployment. The 2013 sequestration process in the United States resulted in discretionary cap reductions and mandatory cuts, estimated to total USD 2.1 trillion over the following decade (CBO, 2011).

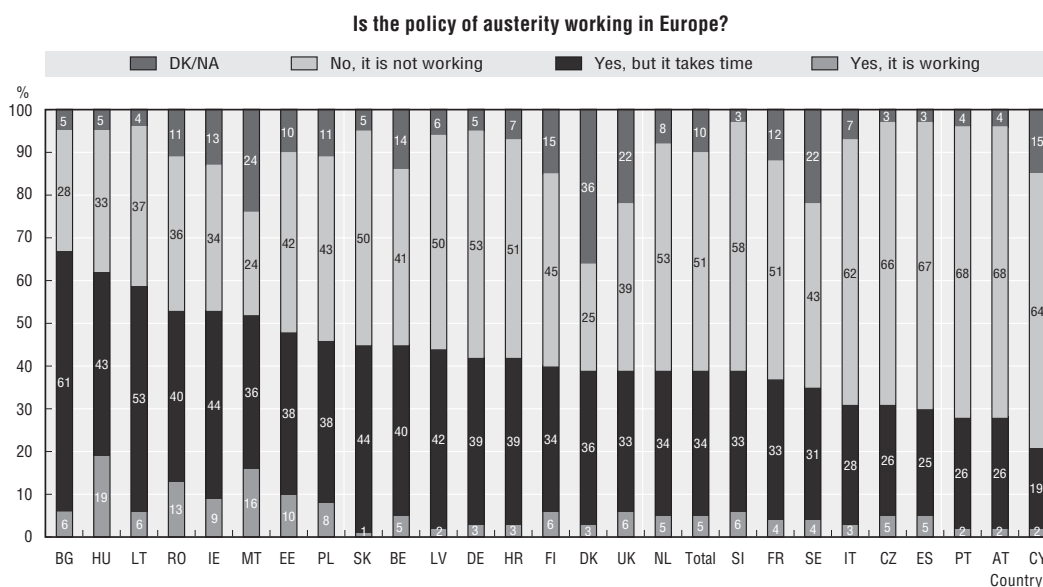
Measures of fiscal consolidation have garnered widespread attention and in some cases led to public protest and strikes, especially when spending cuts and tax increases were directed at the middle and lower classes. On 14 November 2012, the European Trade Union Conference organised anti-austerity protests in 30 countries in Europe and Northern Africa. General strikes also occurred in Spain, Portugal, Greece, and Italy, causing a significant disruption to economic activity (Wearden, 2012). The global Occupy movement, which has ignited protests in over 900 cities across five continents since 2011, has also cited opposition to government cutbacks as one of its unifying principles (Adam, 2011). Many of these protests have led to significant political and social unrest, and eight euro area countries have seen changes to the leadership and parties in power in their governments during this period.

Opposition to the general idea of austerity has served as a unifying concept for these social movements, despite large differences in policies considered austere and the economic conditions under which they are implemented. Intensified by the recent rise in austerity protests across European countries, austerity is now frequently associated with inequality and lack of economic opportunity. This may have contributed to swaying public opinion to reject deficit reduction policies in some countries. Following anti-austerity

demonstrations in Britain in 2011, a poll showed that 58% of people believed spending cuts were being made too rapidly, a higher percentage than in previous polls (Moore, 2013).

Particularly in instances when economic conditions have not improved following spending cuts, the public has placed the blame on austerity measures for the slow economic recovery. A 2013 Gallup poll showed that respondents from EU member countries with poorer economic conditions such as Greece and Portugal were more likely to believe that austerity measures were not helping the economy, compared to respondents from countries with stronger economies like Germany and the UK (Gallup, 2013). As a result, austerity has developed a largely negative connotation in countries facing economic crises. “Austerity” is a frequently used term in news articles and academic papers that criticise deficit reduction policies, while articles that favour similar policies tend to refer to them in less controversial terms such as “fiscal contractions”.

Figure 2. **Survey respondents from countries with less favourable economic conditions tend to believe austerity is ineffective¹**



1. Abbreviations are based on 2-letter country codes by the International Organization for Standardization. For a full list, see www.iso.org/obp/ui/#search.

The increase in public concerns over spending cuts and other deficit reduction policies have prompted numerous attempts among economists to understand the effects of austerity measures on a weak economy. Yet, in both the public eye and the academic community, the term austerity remains broadly defined. Policies considered “austere” in different countries and across history fall under a wide range of categories and contexts. In 2011 the OECD defined fiscal consolidation “as concrete policies aimed at reducing government deficits and debt accumulation” and described the wide variety of consolidation plans for OECD countries between 2009 and 2015 (OECD, 2011). Although the severity of recent spending cuts in terms of percentage of GDP are much lower than the wartime rationing of the 1940s, the media and policymakers still often refer to these cuts as austerity measures. Coming to a definitive conclusion on austerity’s effects, therefore, remains extremely difficult without a consensus on which policies are under consideration and under which contexts.

4. Definitions of austerity

A major contributing factor to the ambiguity surrounding austerity is the lack of consensus on which policies qualify as austerity measures. By defining austerity in a number of ways, different economists have claimed a wide range of effects and implications of austerity policies. This section will explore a few definitions of austerity and the ways that these definitions impact economic analysis and public opinion.

As discussed in the previous section, austerity has evolved from its meaning of harshness or government rationing to today's use of the term to refer to deficit reduction policies. While the media has used the term broadly often referring to *any* increase in taxes or decrease in spending including those that result from changes in automatic stabiliser programmes (decreasing tax revenues and involuntary increases in transfer payments like unemployment insurance), most researchers have attempted to narrow the meaning of austerity to apply to different measures of discretionary fiscal consolidations.

Austerity as Discretionary Fiscal Consolidations without Regard to Intent: Some economists place emphasis on discretionary policy actions by simply defining austerity as increases in taxes or decreases in spending that result from specific policy actions, ignoring changes in automatic stabiliser programmes. Under this definition, Alesina and Ardagna (2010) looked at fiscal consolidations of 1.5% of GDP or greater in order to determine the impact of austerity policies. Their study found that spending cuts could actually improve economic growth after recessions. However, the study did not distinguish between policies aimed at reducing the deficit and policies that inadvertently reduced the deficit but had other intended purposes.

Austerity as Discretionary Fiscal Consolidations with Intent of Reducing Deficits: Another approach defines austerity as changes to fiscal policy with the stated purpose of decreasing deficits. To be considered an austerity measure under this definition, policy changes must be enacted in order to reduce the deficit, rather than to achieve other policy objectives such as to fund other initiatives. However, while these policies must have the intended purpose of reducing deficits, they do not necessarily have to be successful in doing so in order to be considered an austerity measure. In a 2010 IMF working paper, Daniel Leigh et al. (2010) used this narrative approach to examine policies intended to reduce deficits over the past 30 years. This study found that a 1% of GDP improvement in the fiscal balance as a result of tax increases or spending cuts was correlated with a 0.5% GDP decrease and 0.3% increase in unemployment over the subsequent two years. However, the study found that over the long-term, fiscal consolidation can have positive effects in countries with high debt default risk.

Austerity as Discretionary Fiscal Consolidations with Intent of Correcting Past Conditions: Guajardo, Leigh, and Pescatori (2011) went a step further by studying only announced deficit reduction policies that were aimed at correcting past conditions, not attempting to influence the future. Using this analysis, this study identified 172 fiscal policy changes in 17 OECD countries from 1978-2009. It concluded that fiscal consolidations in general had contractionary effects on the economy. Defining austerity as large spending cuts without taking into account the economic conditions surrounding the policies was likely to overstate the expansionary effects of these policies, according to this study.

The differences that the three definitions of austerity had on the conclusions of three studies are summarized in Figure 3 below. Under Alesina and Ardagna's (2010) definition, austerity policies actually enhance economic growth. On the other hand, Leigh et al. (2010) and Guajardo et al. (2011) argued that austerity defined as policies aimed at reducing the

Figure 3. **The definition of austerity can affect the outcome of research:
A comparison of 3 studies**

	Discretionary Fiscal Consolidations without Regard to Intent, Alesina and Ardagna (2010)	Discretionary Fiscal Consolidations with Intent of Reducing Deficits, Leigh et al. (2010)	Discretionary Fiscal Consolidations with Intent of Correcting Past Conditions, Guajardo et al. (2011)
Data	OECD economic data on 107 fiscal adjustment periods from a sample of 21 countries	IMF economic data on 173 fiscal policy changes aimed at reducing deficits in 15 advanced economies	OECD and IMF economic data on 172 policy changes from a sample of 17 countries
Time period	1970-2007	1980-2010	1978-2009
Measure	A decrease in the cyclically adjusted budget balance by 1.5% of GDP or greater	Any spending cuts or tax increases with the intent of reducing the deficit	Any spending cuts or tax increases with the intent of reducing the deficit that are not responding to current or prospective economic conditions
Conclusion	Fiscal consolidation through spending cuts are associated with higher GDP growth and a lower debt-to-GDP ratio	A 1% of GDP fiscal consolidation decreases GDP by .5% and reduces domestic demand by 1% of GDP over two years	A 1% of GDP fiscal consolidation decreases private domestic demand by .75% of GDP and decreases GDP by .62% over two years

deficit or correcting past conditions actually slowed economic recovery in the short run. The results of these studies are often cited as evidence in favour or against particular fiscal policies without taking into account the different assumptions and definitions under which the studies were conducted.

The disparities in the results of these studies are not only due to varying definitions of austerity, however. The political and economic conditions surrounding the implementation of policies also have a large impact on their effects. Policymakers and the media continue to debate austerity's merits and drawbacks without taking into account both what qualifies as austerity and under which conditions these policies are implemented. The next section will examine how austerity policies implemented under different circumstances and to different degrees can have varying effects on the economy.

5. Factors for analysing effects of austerity policies

5.1. Tax increases versus spending decreases

Although some studies define austerity as any type of fiscal consolidation, it is important to distinguish between measures that aim to decrease deficits through spending cuts, or tax increases, or a combination of both. OECD countries have implemented a variety of tax and spending changes since the 2008 financial crisis, ranging from decreasing government funding for higher education in the UK to raising value-added taxes in Spain. Alesina and Perotti (1997) found that spending cuts were more likely than tax increases to lead to growth in the short run. Leigh et al. (2010) argued that tax increases were more harmful to economic growth due to their contractionary effects on the banking system. Research by Larch and Turrini (2008) on fiscal consolidations in the European Union confirms that expenditure cuts are more effective than tax increases in making consolidations successful. On the tax side, Romer and Romer (2010) found that tax increases specifically could slow the economy, with a 1% increase in taxes causing a 3% or more reduction in output over 3 years.

Despite these very different assessments, austerity still often remains broadly defined as fiscal consolidation in the form of either tax hikes or spending cuts. Moreover, tax hikes offset by spending increases are sometimes still referred to as austerity in the media and in recent austerity protests, despite that in total these policies having no net effect on the

fiscal balance. In addition, the levels of spending and taxes before the fiscal consolidation policies are implemented can also affect the outcomes. Tax increases in a country with relatively low taxes are likely to have a greater effect than in a country with relatively high taxes; a similar relationship exists for spending cuts in a country with relatively low levels of spending compared to a country with relatively high levels. Ignoring the possible differences between spending and tax changes and their levels will only add to the confusion surrounding the austerity debate.

5.2. Magnitude of consolidation

References to austerity in popular media often regard all spending cuts and tax increases as austere, regardless of the size of the fiscal consolidation. Although studies limit analysis to a specific magnitude of fiscal consolidation in order to qualify as austerity, policymakers and the media frequently generalise the findings of these studies to imply that all sizes of fiscal changes will have a similar effect. For example, a study that finds that a 10% spending cut slows the economy by a particular amount may be used to suggest that all spending cuts will have adverse effects on the economy in a similar respect.

However, some economists have argued that the size of fiscal consolidation can greatly impact its effect. In their study of austerity defined as policies intended to reduce deficits, Guajardo, Leigh, and Pescatori (2011) found that while a 1% of GDP fiscal consolidation would reduce GDP by only 0.62%, larger fiscal consolidations are more likely to have a larger detrimental effect on the economy in the short run. Deficit reduction implemented, in part, to increase investor confidence in public debt may also have diminishing returns; a slight decrease in the deficit may lead to more investment, but decreased consumption resulting from larger spending cuts may overshadow the increases in investment. Following the 2008 financial crisis, OECD countries implemented fiscal consolidations that varied a great deal in magnitude, ranging from fractions of a percentage of GDP to up to 17% in Greece (Greek Presidency and Council of the EU, 2013). These differences are important to consider when defining and debating austerity measures, but the effects of fiscal consolidations of different magnitudes are not always taken into account in the media and public debate.

5.3. Economic conditions

The economic conditions under which policy changes are implemented are another critical factor to consider when defining and analysing austerity. The traditional Keynesian view proposes that fiscal consolidation be reserved for times of economic expansion, while policies of increased spending and lower taxes should be implemented during recessions. On the other hand, some economists argue that high debt as a result of expansionary fiscal policies may slow the economy in the long run (Reinhart and Rogoff, 2010). But austerity in weak economies can be more destructive, but also more likely, than in advanced economies. Regardless of this disagreement, spending cuts and tax increases can have very different implications for the economy depending on the current environment. Yet the impact of economic conditions (to include monetary policy) is not always considered in the current austerity debate.

Many studies regard all policies aimed at reducing the deficit as equal, regardless of whether they are implemented during periods of economic growth or recession. Using the narrative approach to focus on policies aimed at reducing the deficit, the Leigh et al. (2010)

definition of austerity does not delineate between fiscal consolidations during periods of economic expansion from those during recessions. The conclusions of a study during one economic period, however, may not apply to all economic conditions without further analysis.

Related to economic conditions is the issue of fiscal multipliers in determining the impact that changes in fiscal policy will have on output. Fiscal multipliers depend largely on economic conditions and the amount of consumption and investment in an economy, which can be difficult to predict during volatile periods. Auerbach and Gorodnichenko (2011) estimate that multipliers can range from negative in expansionary periods to as high as 2.5 in recessions. Miscalculations of the fiscal multiplier may lead inaccurate predictions of a policy's effects on output and deficits. If the multiplier is higher than anticipated, as Blanchard and Leigh (2013) argued was the case in many recent fiscal consolidations, a small spending cut may lower GDP enough that the debt to GDP ratio actually increases following the cut. Alesina and Ardagna's (2010) analysis of the positive effects of austerity policies defined as fiscal consolidation of 1.5% of GDP or higher used a fiscal multiplier estimate of 0.5, which some economists have criticised as too low of an estimate and a biasing factor in their results.

Therefore, the same policies that are referred to as austerity may have a much different impact in one time period or country than another. While relatively strong economies with a low multiplier may be able to grow under a particular level of fiscal consolidation, weaker countries may face greater reductions in economic growth following the implementation of such measures. Despite years of deficit reduction policies, the UK has seen a decrease in the unemployment rate, which in May 2014 was 6.5%, the lowest level since 2008 (Roland, 2014). Weaker economies, however, have not fared as well. In Spain and Greece, the unemployment rate has risen as high as 27% (Huguen, 2013) following cuts to discretionary spending and tax increases. It is possible that these differences are due in part to fiscal multipliers, although many other factors are also likely at play.

The media often points to examples of the success or failure of particular policies across different economies and time periods as evidence in favour of or against so-called austerity measures today. Perhaps even more important is that the price of large deficits and growing debt is that some nations lose the ability to borrow and thus the discretion of deciding whether and when to make fiscal consolidations. Assuming that a policy implemented in the past will have the same effect under different contexts can lead to unintended consequences. As shown in the examples above, the effect of various fiscal policies depend highly on the environment in which they are implemented.

5.4. Parties impacted by austerity

When austerity is defined broadly as fiscal consolidation, there is also the question of where these measures are aimed and who is affected by the policy changes. Spending cuts and tax increases that affect the middle and lower classes have received a much higher level of media attention than other types of fiscal consolidation and have been the cause of social uprisings in countries like Spain, Greece, and the UK. Public opinion in countries facing fiscal consolidation has recently tended to support policies that increase the burden of tax increases and spending cuts on the wealthy (Gallup, 2013). However, economists do not always consider the differences in who is affected by such policy changes. Analyses of fiscal consolidations, as detailed previously, typically focused on percentage changes in spending or taxes, regardless of which programmes or income

levels the changes affected. For instance, tax increases on corporations or those in high income brackets may be considered in the same way as a rise in sales taxes that affects all consumers. Similarly, cuts to social programmes may be calculated as equal to cuts to pensions for more well off workers.

Nonetheless, different types of deficit reduction policies are likely to have a wide range of implications for short and long-term economic growth. On one side, some policymakers argue that fiscal consolidation aimed at the wealthy will have a less adverse effect on the economy due to diminishing marginal utility of additional income. Lower classes, they argue, cannot recover from higher taxes and decreased entitlements as easily as those with higher incomes. These researchers point to examples like the UK where median household income has fallen following cuts to middle and lower class social programmes (United Kingdom Office for National Statistics, 2013). Similar policies are also blamed for high child poverty in countries like Ireland, Greece, Portugal, and Spain where three out of ten children are impoverished or on the brink of poverty (Davenport, 2013).

Other researchers insist that the adverse effects of increased taxes on job creators will trickle down to decrease economic opportunities for all classes. One study from Djankov et al. (2009) found that higher corporate income tax rates in 85 countries were correlated with lower investment and entrepreneurship, factors that are important contributors to economic growth. Similar studies have argued for cuts focused on decreasing government waste and reducing crowding out of private investment in order to improve economic efficiency, rather than increasing the burden of fiscal consolidation on businesses.

The generational equity debate also comes into play in the discussion of who is affected by spending cuts and tax increases that are referred to as austerity measures in many contexts. Tax increases to help fund growing retirement programmes may adversely affect the working generations while benefitting elderly populations who can be better off. In Italy for instance, individuals born in the 1970s will pay 50% more in taxes than those born only two decades earlier, yet the younger generation will receive half the pension benefits of older generations (Emsden, 2013). Similarly in the United States, most retirees currently earn higher benefits than they paid into the system when working, but these programmes are largely unsustainable for future generations (Kadlec, 2012). Some have questioned whether increased financial burdens on working generations have led to decreased economic growth. And the probability that the burden of inevitable reforms to retirement programmes is likely fall on the current working generation may also hurt economic growth. However, when austerity consolidations are discussed, the differences in which generation is affected by the policy changes are not always distinguished.

Similarly, deficit reduction policies can also have a wide variety of effects depending on which levels of government they affect. Cuts to grants to local and provincial governments may be perceived as a better policy than other consolidation options that impact national government programmes, but localities – to the extent that they have the financial ability to do so – may try to make up for these decreases in funding either through implementing their own spending cuts or tax increases. Local government programmes may also have a greater impact on the day-to-day lives of residents than many national programmes, which means that cuts on the local level will have a more significant impact. For instance, in the United States, individuals may feel a more direct effect of cuts to state education grants than a cut to national defense spending. Therefore, fiscal consolidation on the national level can have varying effects based on which levels of government the policies impact.

From these examples, it is clear that defining austerity as any fiscal consolidation is not specific enough; spending cuts or tax increases aimed at different parts of the economy, levels of government, and age groups can have a wide range of effects that must be considered. While spending cuts or tax increases aimed at one area of government activity may have a particular impact, those effects should not be generalized for all forms of austerity debated in the political sphere today.

5.5. Timing of implementation and effects

Along with considering effects of different types of spending and tax changes, it is also important to take into account the time frame under which these policies are implemented and have an impact on the economy. Economic analyses that define austerity as any deficit reduction policy do not differentiate between measures aimed at reducing deficits through short-term fiscal consolidation and those that implement more long-term reforms. However, some studies have argued that policies that implement severe fiscal consolidation under a short period of time are much more likely than more long-term reforms to slow the growth of the economy. Hakin (2013) argues that the deep cuts in countries like Greece imposed under a short time period as a result of bailout provisions did cause some worsening of economic conditions, while countries like the US could benefit economically from more gradual cuts in spending, such as long-range entitlement reform. For instance, an increase in the retirement age several years down the road with ample warning is likely to have very different effects on the economy than sudden cuts to retirement pensions by next year.

In addition, the distinction between fiscal consolidation policies that may affect economic recovery during one period of the business cycle and those that have a long-term impact on future economic growth is not always made clear. Leigh et al. (2010) found that while spending cuts are likely to decrease output and raise unemployment in the short-run, reducing debt can have a positive effect on long-term economic conditions, especially in countries with high risk of debt default. See also CBO, 2014. On the other hand, some researchers consider austerity in the form of cuts to investment in education and infrastructure as more harmful to the long-term growth outlook of an economy than cuts to other areas. Public contribution to tertiary education in OECD countries decreased more than 10% between 2000 and 2010 (OECD, 2013), leading to more students taking on debt that some economists believe will have a slowing effect on the economy down the road. According to a study by the Federal Reserve Bank of Philadelphia, increases in student loan debt in the US have decreased the formation of small businesses by 25% over the past decade (Ambrose et al., 2014). Following the implementation of the 2010 tuition cap increases, applicants to universities in England decreased 8.8% (United Kingdom Independent Commission on Fees, 2011). This is expected to take a toll on economic productivity in the future as a result of a less educated workforce.

On the infrastructure side, decreases in government investment in areas such as transportation and investment in new technologies may also have larger effects on long-term economic growth. One study found that a USD 250 billion annual investment in infrastructure would boost US economic growth in the private sector by as much as 0.3% of GDP per year (Bivens, 2014). Cuts to this type of spending can decrease business' access to resources and capital necessary for growth, and this may have longer-term effects on the economy than other types of spending cuts or tax increases.

Overall, the differences in various policies' effects over time are crucial to understanding deficit reduction policies, yet these elements are often glossed over in coverage of austerity in the political sphere. In order to understand austerity's effects, analysts should more precisely define which policies are considered austere and under which contexts.

6. Conclusion

Austerity has evolved from a term primarily used to describe harsh physical conditions or wartime rationing to one that can refer to a wide range of policies under different contexts. As mentioned throughout this article, austerity is commonly used in media coverage of recent economic downturns, yet most usage of the term does not specify which policies qualify as austerity. When the media, researchers, and politicians present judgments on the merits and drawbacks of austerity without clearly defining the policies under consideration, these generalisations can create a great deal of confusion. Evaluations of one type of fiscal consolidation under a particular circumstance can lead policymakers to mistakenly assume the same effects will occur for all forms of austerity measures in different contexts.

In addition, policies labelled as “austerity” often unfairly take the blame for poor economic conditions and slow recovery in recent years. With so many different factors at play surrounding austerity measures, it is difficult to determine the true cause of changes in the economy. Headlines such as “Austerity Drives up Suicide Rate in Debt-Ridden Greece” (Kermeliotis, 2012) and “Austerity Leads to More Miscarriages” (Bejenariu, 2013) are common in today's news when it is not at all clear which policies actually qualify as austerity and if these measures actually had any impact on these events, or if they are a result of some other factors or even poor economic conditions in general. In order to eliminate this confusion, the factors discussed in this article should be taken into account, such as the size of fiscal consolidation, which areas of spending or taxes were affected by the policy, and the fiscal multiplier associated with the policy change. Until policies are more carefully characterised based on these and other factors, austerity will remain a confusing term that can breed misunderstanding, social uprisings, political unrest, and ill-prescribed solutions to economic problems.

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