

# **Reforming Public Expenditure in Industrialised Countries:**

## **Are There Trade-Offs?\***

**by Ludger Schuknecht and Vito Tanzi**

**Preliminary Draft, October 2004**

**Abstract:** In this paper, we show that over the past two decades several countries were able to reduce public spending by remarkable amounts. These countries did not seem to have suffered from these large reductions either in a macroeconomic sense, or in terms of lower values for socio-economic indicators. On the contrary, ambitious expenditure reform is correlated with more improvement in fiscal, economic, human development and institutional indicators. Benefits, in some instances, have taken a while to materialize and early and persistent reformers have, hence, already reaped more of these benefits. There seem to be some costs of expenditure reform in terms of income distribution within countries but these costs are small and they are mitigated in absolute terms by faster growth and by the possibilities of better targeting of public spending. Moreover, there is significant divergence across countries that suggest that country circumstances and reform design matter.

---

\* Paper prepared for the workshop on “Fiscal Policy in EMU: New Issues and Challenges” organised by the European Commission’s Directorate General for Economic and Financial Affairs, Brussels, 12 November 2004.

The authors are grateful for invaluable assistance by Anna Foden and Gerhard Schwab. The views expressed in the paper are the authors’ and do not necessarily reflect those of their respective employers.

## **I. Introduction**

In an earlier study, the authors of this paper traced the growth of public spending in industrialized countries for the period between 1870 and the middle of the 1990s. They showed that public spending as a share of gross domestic product (GDP) grew at a fast pace especially in the period since World War One. The pace of growth in the majority of countries was particularly pronounced in the period after 1960 when many of these countries established what came to be called welfare states. That study also attempted to assess the productivity of that growth in spending by looking at its impact on a variety of socio-economic indicators. It did this by dividing the sample of countries into three groups, depending on the level reached by the ratio of public spending to GDP. These three groups were labeled small, medium and large government countries.

The matching of each of these groups with the values of the socio-economic indicators failed to support the conclusion that larger levels of public spending produced better socio-economic indicators. On the contrary, for many indicators, lower public spending seemed to be associated with better or more desirable indicators. The authors of that study argued that a level of public spending somewhere between 30 and 35 percent of GDP was likely to provide the government with the resources to support all the activities that genuinely merit being supported by public money. They speculated that in future years the policymakers of the industrialized countries would come to share this conclusion and would initiate programmes that over a period of time, perhaps a generation, would bring public spending down to that range in spite of pressures that would come from demographic changes.

## *Why Expenditure Should Go Down<sup>1</sup>*

When the welfare states were created, pushing the level of public spending beyond the 30-35 percent of GDP limit, the industrialized countries that had come out of the second World War were part of a world economy that was not well integrated, and had economies that suffered from many inefficiencies. In that period, largely the 1950s and first half of the 1960s, economists developed many new tools – public goods, externalities, cost-benefit analysis, merit goods – that to a large extent gave governments reasons for intervention. The view that markets were inefficient and that needed to be substantially supplemented by public intervention was popular and gave politicians the incentive to expand the role of the government. At that time public choice had not yet developed as a serious field of study. In some countries this expansion was considerable. In other countries it was more limited. But all countries saw public spending go up as a share of GDP. In a few countries this share reached or exceeded 60 per cent and many government programmes created universal entitlements.

Now, half a century later, the situation has changed. First of all markets have become much more sophisticated than they were in the 1950s. Second, countries are much less autarkic than they used to be. Therefore goods and services that cannot be provided by the domestic market can be bought more easily from other countries. Furthermore, policymakers have become more sensitized to the fact that high public spending creates inefficiency on the tax side – because it requires high tax rates – and on the expenditure side – because it requires large bureaucracies, it can cause disincentives to work and because, from the individual citizen point of view, government services have a zero price thus stimulating greater demand for them. Finally, high public spending often leads to macroeconomic difficulties when it is partly financed by fiscal deficits.

---

<sup>1</sup> This section draws from Vito Tanzi, “The Economic Role of the State in the XXI Century”. Paper presented in London at the British Academy on 26 April 2004.

It is now generally accepted that the state must correct shortcomings of the market and not replace the market. A more developed market requires less government spending. It has also become more obvious that when the government enters a market by establishing, de facto, a government monopoly in some activities, it prevents or makes it more difficult for the market to develop fully in those activities. This has happened in many countries in areas such as pensions, education, health, infrastructures, and some other services. In many of these areas, experiments in various countries have indicated that, given the opportunity and with some efficient regulatory guidance by the public sector, the private market can provide the necessary services more efficiently than the government. When this happens, the government can provide targeted assistance to those who may be too poor to buy services such as health and education. In fact the available evidence indicates that the countries that have lower levels of public expenditure as shares of GDP do a better job at targeting public transfers toward those at the bottom of the income distribution.<sup>2</sup>

The prevalent view seems to be that public spending has continued to increase in the past two decades or, at best, has stopped growing. In the rest of this paper we will show that, on the contrary, the trend that we had predicted, toward lower levels of public spending, seems to be happening. We shall show that over the past two decades several countries were able to reduce public spending by remarkable amounts. Furthermore, these countries did not seem to have suffered from these large reductions either in a macroeconomic sense, or in terms of lower values for socio-economic indicators.

It is necessary to stress that this is a broad-brush paper that attempts to pick up trends that have been largely missed by economists. Obviously much more work would be necessary to give more backing to its conclusions. Hopefully such work would follow.

---

<sup>2</sup> See OECD, *Income Distribution in OECD Countries* (Paris: 1995).

## **II. Developments in Public Expenditure in the Past Two Decades**

In this section we shall consider developments in the share of public spending of GDP for 22 industrialized countries over the past two decades. We shall argue that these developments contain lessons that have not been extracted so far. These developments are broadly in the direction that we predicted in a book published a few years ago. See Tanzi and Schuknecht (2000). However, within the sample considered, there are still great differences in trends among groups of countries.

We shall start our story in 1982. In that year total public spending, as a share of GDP, averaged 46.5 percent for the whole sample of 22 countries, and 47.2 percent for the countries of the euro zone. The level had grown significantly in practically all industrialized countries since 1960. There were, however, great differences around this average, with Japan and Switzerland spending less than 33 percent of GDP while Belgium and Sweden spent more than 60 percent. Other countries spending less than 40 percent of GDP were Australia, Greece, Spain and the United States. Other countries spending more than 55 percent of GDP comprised Denmark, the Netherlands and New Zealand. See Table 1.

**Table 1: Total expenditure: 1982, year of maximum spending ratio, 2002**

Percent of GDP

	1982	Maximum public expenditure	2002	Change	Change
	or nearest	ratio	or nearest	1982-2002	Maximum-2002
	(1)	(2)	(3)	(4)	(5)
Australia	38.1	40.2 (1985)	35.6	-2.5	-4.6
Austria	49.0	57.3 (1995)	51.3	2.3	-5.9
Belgium	60.8	61.0 (1983)	50.5	-10.3	-10.5
Canada	46.5	52.8 (1992)	41.4	-5.1	-11.4
Denmark	57.8	60.7 (1994)	55.8	-2.0	-4.9
Finland	41.3	60.4 (1993)	50.1	8.8	-10.3
France	49.8	55.5 (1996)	53.6	3.7	-1.9
Germany	48.1	50.3 (1996)	48.5	0.4	-1.8
Greece	35.4	51.0 (1995)	46.8	11.4	-4.2
Ireland	49.8	49.8 (1982)	33.5	-16.4	-16.4
Italy	48.3	57.1 (1983)	48.0	-0.3	-9.1
Japan	32.9	40.0 (1998)	39.8	6.9	-0.2
Luxembourg	49.5	49.5 (1982)	44.3	-5.2	-5.2
Netherlands	58.6	58.7 (1983)	47.5	-11.1	-11.2
New Zealand	56.5	56.5 (1985)	41.6	-14.9	-14.9
Norway	45.6	54.1 (1994)	47.5	1.9	-6.6
Portugal	40.0	46.3 (2001)	46.0	6.0	-0.3
Spain	35.9	47.6 (1993)	39.9	4.1	-7.7
Sweden	64.3	68.0 (1993)	58.3	-6.0	-9.7
Switzerland	32.8	35.7 (1998)	34.3	1.5	-1.4
United Kingdom	44.8	45.4 (1984)	41.1	-3.8	-4.3
United States	36.2	37.2 (1992)	34.1	-2.1	-3.1
Average	46.5	51.6	45.0	-1.5	-6.6
Euro zone	47.2	53.7	46.7	-0.5	-7.0
Ambitious reformers, early	56.4	56.5	43.3	-13.2	-13.2
Ambitious reformers, late	47.1	56.7	48.1	1.0	-8.6
Timid reformers, early	44.1	45.0	40.3	-3.8	-4.7
Timid reformers, late	45.5	49.4	45.7	0.2	-3.7
Non reformers	36.1	45.8	44.2	8.1	-1.6
Standard deviation	9.2	8.4	7.1		

Source: EU Commission, AMECO

Ambitious reformers, early =Belgium, Ireland, Netherlands, New Zealand

Ambitious reformers, late =Austria, Canada, Finland, Norway, Spain, Sweden

Timid reformers, early =Australia, Luxembourg, United Kingdom

Timid reformers, late =Denmark, France, Germany, Italy, Switzerland, United States

Non reformers =Greece, Japan, Portugal

If we consider the latest years for which data are available – 2002 - or the closest year to 2002 – we notice that the average level of public spending fell marginally, from 46.5 percent of GDP in 1982 to 45.0 percent of GDP in 2002, for all countries, and from 47.2 percent of GDP to 46.7 percent of GDP, for the countries of the euro area. This small reduction gives the impression that little happened over the two decades. This, however, is

a wrong impression because, as we shall show, major changes occurred within these two decades. We shall highlight some of the important changes.

The first change worth highlighting is the significant reduction in the dispersion of the public expenditure ratios around the average. The countries are becoming more similar in this aspect. All the countries that had high levels of public spending in 1982 reduced their spending over the next 20 years. Belgium, Ireland, the Netherlands, New Zealand and Sweden reduced public spending by substantial amounts. These had been the leaders in public spending in 1982. Over the same period, several of the previously low spenders, such as Greece, Japan, Portugal and Spain, increased their spending levels. Between 1982 and 2002, the standard deviation of the ratios of public spending to GDP for the 22 industrialized countries fell from 9.2 to 7.1.

The second and more important change is not obvious when the 2002 data are compared with the 1982 data. The trend in the behaviour of public spending over these two decades has not been the same as it had been in the preceding two decades that ended in 1982. During that earlier period public spending as a share of GDP had increased continually and consistently in practically all the countries in the sample. For many of these countries the year when the highest level of public spending, as a share of GDP, was reached some time between 1982 and 2002. In other words, for many countries, public spending kept rising after 1982 and reached a peak after 1982 but before 2002. This peak was in most countries reached by 1996. By this later year public spending had started falling in most countries, reversing the trend of previous decades.

To identify the breaks in the past trends, it is necessary to identify the specific years when public spending reached a maximum for each country. We can then compare these maxima with the values reached in 2002 to verify whether a change in trend has actually occurred. Column (2) in Table 1 shows the highest ratios reached by public spending in the

countries in the sample. It is evident that, in the 1982-2002 period, public spending followed an inverted U-shaped curve. In the majority of countries, it first rose and then fell. However, the year in which the maximum was reached varied from country to country.

Comparing these maxima with the 2002 data, a change in the behaviour of public spending is evident. For many countries, the 2002 figures were considerably lower than the maximum levels reached in previous years. For the whole group of countries, the 2002 average level of public spending was a remarkable 6.6 percent of GDP lower than the maximum reached in earlier years. It is necessary to repeat that the maximum level was not reached in all countries at the same time. For the euro zone the average fall in public spending was even longer, about 7 percent of GDP. In these countries public spending that, for the years when a maximum had been achieved, had averaged 53.7 percent of GDP, fell to 46.7 percent of GDP. This sharp fall suggests that a significant change in the trend of public spending in industrialized countries may have started.

In our discussion we shall ignore the initial year, 1982, and focus instead on the changes that have occurred since peak levels were reached. Six countries reduced public spending (G) by more than 10 percent of GDP. Classifying them in the order of the size of reduction, the countries are the following ones:

Country	Change in (G)/GDP	Year Peak Level Reached
Ireland	-16.4	1982
New Zealand	-14.9	1985
Canada	-11.4	1992
Netherlands	-11.2	1983
Belgium	-10.5	1983
Finland	-10.3	1993

The remarkable achievement of these countries is not only the size of the reduction from the peak levels but the fact that their 2002 public spending levels were in all cases



below, and in some cases well below, the 1982 levels. In some of these countries the role of the state was changing in a major way moving toward that predicted by Tanzi and Schuknecht (2000) and Tanzi (2004).

Six other countries cut their public spending by between 5 and 10 percent of GDP from the peak level. In their order of reduction they were:

Country	Change in (G)/GDP	Year Peak Level Reached
Sweden	-9.7	1993
Italy	-9.1	1993
Spain	-7.7	1993
Norway	-6.6	1994
Austria	-5.9	1995
Luxembourg	-5.2	1982

While the achievements of this group could also be considered significant, it was less so than in the previous group and not only because of the size of the reduction. With the exception of Sweden and Luxembourg, which not only reduced the spending from the peak level but also from the 1982 level, the other countries had, in 2002, expenditure levels that were either equal to or higher than in 1982. Sweden's 2002 spending level was 6.0 percent of GDP lower than its 1982 level, while Luxembourg's 2001 spending level was 5.2 percent of GDP lower than 1982. On the other hand Spain's level was 4.1 percent higher than in 1982 while in Italy they were approximately the same. In Italy the combination of a high public debt with a high rate of inflation had pushed the expenditure level sharply upward in 1993. Thus the fall in public spending, after Italy joined EMU, significantly reduced its inflation and its interest payments and thus the level of public spending. However, primary spending was affected much less.

### *Categorisation of countries by reform effort and timing*

We define expenditure reductions that follow the year of maximum spending as expenditure reform.<sup>3</sup> As to the timing of reforms, it is possible to distinguish two groups of countries. The first group is constituted by countries that reached the maximum spending level by the mid-1980s so that they started the process of expenditure reduction at that time. Of the countries mentioned above, this group includes Ireland, New Zealand, the Netherlands, Belgium and Luxembourg, and also Australia and United Kingdom. We shall refer to this group as “early reformers”. The second group includes countries that reached the maximum expenditure level in the early to mid-1990s and that succeeded, by 2002, in reducing significantly the share of public spending into GDP. Of the countries mentioned above, this group includes Canada, Finland and Sweden. In addition, Austria, Norway, Spain, Denmark, France, Germany, Italy, Switzerland and the United States also experienced their maximum spending ratio in that period. We shall refer to them as “late reformers”.

Among the early and late reformers another distinction according to reform efforts might be useful. A number of countries sharply reduced the level of public spending. Others reduced that level by much less. A dividing line of five percent of GDP reduction could be used for classifying the countries. Those which exceeded five percent of GDP reduction could be called ambitious reformers while the others could be called timid reformers. However, this distinction suffers from two shortcomings. First, it may be much more difficult for a country that starts with a low expenditure level to cut five percent of GDP from public spending than for a country that starts with a high level. This for example is the case for Australia, Switzerland and the United States. These countries never had high levels of public spending so there was less to reduce or reform. Second, a country that

---

<sup>3</sup> If we were interested primarily in short term discretionary reform efforts, it would be appropriate to look at cyclically adjusted expenditure ratios. However, when looking at medium to long term trends (as is primarily intended here) this distinction is less relevant.

starts with a high public debt to GDP ratio and a high rate of inflation may be able to reduce public spending significantly simply if its inflation rate falls thus pushing down nominal interest rates and interest payments. This was surely the case for Italy and Greece and to a lesser extent for some other countries as well.

Keeping in mind the two caveats mentioned above and choosing a reduction in primary spending by 5 percent as the threshold between timid and ambitious reforms, early and ambitious reformers could include Belgium, Ireland, the Netherlands and New Zealand (see the categorization table below). These four countries reduced this public spending by a remarkable 13.2 percent of GDP from the peak level to the 2002 level. Late and ambitious reformers could include Australia, Canada, Finland, Norway, Spain and Sweden. These six countries reduced their average public spending from a maximum of 56.7 percent of GDP to 48.0 of GDP in 2002, or by 8.7 percent of GDP. Especially large were the reductions in Canada, Finland and Sweden, which averaged 10.5 percent of GDP. All these ambitious reformers provide support to the view that there is life after public spending reductions. In fact, as a group, these countries have been among the best economic performers in recent years. The Keynesian fear, that cuts in spending bring economic showdown, has simply not materialized.

<b>Categories</b>	<b>Countries</b>
Ambitious and early reformers	Belgium, Ireland, Netherlands, New Zealand
Ambitious and late reformers	Austria, Canada, Finland, Norway, Spain, Sweden
“Timid” and early reformers	Australia, Luxembourg, United Kingdom
“Timid” and late reformers	Denmark, France, Germany, Italy, Switzerland, United States
Non reformers	Greece, Japan, Portugal

The countries that were not part of this group of ambitious reformers include some that were genuinely “timid” (France, Germany, Italy, Denmark and to a somewhat lesser extent Luxembourg) and some that, having low levels of public spending to start with, had less need to cut spending (Australia, Switzerland and the United States).<sup>4</sup> Australia was in many ways a major reformer but its reforms did not have as great an impact on public spending because public spending never became too high. The United States could actually be in a category of its own because, for the whole period, it remained a relatively low spending country and, over the period, change in defense spending was a major factor in bringing about changes in total spending. Switzerland reported continued low public spending but could nevertheless also be called a timid reformer. Finally, the United Kingdom reformed in many areas but progress with public expenditure reduction was to a significant extent reversed in recent years. Nevertheless, for simplicity we refer to all these countries as “timid” (in the strict numeric sense of the term) and distinguish “late” and “early” timid reformers.

Finally, there was a small group of countries where primary expenditure peaked in 2002. This group is referred to as non-reformers and include the rather diverse countries of Greece, Portugal and Japan.

### *Stylised facts*

A number of interesting findings emerge from the stylized facts for these country groups. First, most countries that reduced public spending started their reform program in a downturn. Average growth in the period of maximum spending averaged less than one percent per year and in the first year of decline it remained slightly below trend on

---

<sup>4</sup> All ambitious reformers also report primary spending ratio reductions above 5 percent of GDP, all “timid” reformers reduced primary expenditure ratios by less than 5 percent of GDP.

average.<sup>5</sup> This contrasts with the frequently held view that the “optimal” timing of reform is in a boom when reforms associated with spending reductions do not exert a pro-cyclical effect. The problem with this view is that policy makers do not see the need for reform during good times.

Second, expenditure declines between the peak year and 2002 were significant in many cases (Table 1). This contradicts the somewhat gloomy view that political economy constraints render ambitious reform virtually impossible. This view, which seems to be influenced considerably by the experience of the largest countries of the euro zone, is sharply challenged by the experience of the ambitious reformers.

Third, in several cases reform efforts often reversed earlier government expansion. Public spending in the groups of late reformers in 2002, for example, was little changed from 20 years earlier (despite the recent reform efforts) and it was much higher than in the countries that reformed early. Only one country, Ireland, was able to reduce public spending to around 35 percent of GDP thus joining the small group of countries with low expenditure levels (including also Australia, Switzerland and the United States). But Canada and New Zealand also moved significantly toward joining this group with expenditure levels close to 30-35 percent of GDP and close to what the authors of this paper had considered feasible and desirable in a previous work. See Tanzi and Schuknecht (1997, 2000).

Let us now pay some attention to the composition of public spending to see if we can identify, in a broad way, the categories of public spending that contributed most to the total expenditure reduction. In view of the large number of countries involved, our discussion here cannot be detailed. We are interested in broad brushes. Table 2 will help in identifying some patterns.

---

<sup>5</sup> The combination of below trend growth and declining spending ratios suggests even stronger declines in spending in cyclically adjusted terms.

**Table 2: Composition of expenditure changes: max spending ratio-2002**

Percent of GDP

	Change total expenditure	Thereof: interest	Change primary spending	Transfers & subsidies 1/	Government consumption	investment
Australia	-4.6	-3.1	-1.5	1.5	-2.0	-1.0
Austria	-5.9	-0.8	-5.1	-1.5	-1.8	-1.8
Belgium	-10.5	-3.0	-7.5	-4.0	-1.2	-2.3
Canada	-11.4	1.5	-12.9	-7.0	-5.5	-0.5
Denmark	-4.9	-3.7	-1.2	-1.5	0.4	0.0
Finland	-10.3	-2.3	-8.0	-5.4	-2.6	0.0
France	-1.9	-0.8	-1.2	-0.7	-0.3	-0.2
Germany	-1.8	-0.6	-1.2	0.1	-0.8	-0.5
Greece	-4.2	-6.5	2.3	1.4	0.3	0.6
Ireland	-16.4	-6.8	-9.5	-3.1	-5.8	-0.7
Italy	-9.1	-6.1	-3.0	-1.3	-1.0	-0.7
Japan	-0.2	-0.4	0.2	-1.1	2.4	-1.1
Luxembourg	-5.2	-1.1	-4.0	-2.6	-1.5	0.0
Netherlands	-11.2	-2.5	-8.7	-7.7	-1.0	0.0
New Zealand	-14.9	-6.4	-8.5	-8.0	-0.6	0.1
Norway	-6.6	-1.2	-5.4	-5.0	-0.1	-0.4
Portugal	-0.3	-0.2	-0.1	0.2	0.3	-0.6
Spain	-7.7	-2.2	-5.5	-3.7	-1.0	-0.8
Sweden	-9.7	-2.6	-7.0	-5.2	-1.3	-0.5
Switzerland	-1.4	-0.2	-1.2	-1.2	0.3	-0.3
United Kingdom	-4.3	-2.8	-1.4	1.2	-1.6	-1.1
United States	-3.1	-1.9	-1.1	0.2	-1.5	0.1
Average	-6.6	-2.4	-4.2	-2.5	-1.2	-0.5
Euro zone	-7.0	-2.7	-4.3	-2.3	-1.4	-0.6
Ambitious reformers, early	-13.2	-4.7	-8.6	-5.7	-2.1	-0.7
Ambitious reformers, late	-8.6	-1.3	-7.3	-4.6	-2.0	-0.7
Timid reformers, early	-4.7	-2.4	-2.3	0.1	-1.7	-0.7
Timid reformers, late	-3.7	-2.2	-1.5	-0.7	-0.5	-0.3
Non reformers	-1.6	-2.4	0.8	0.2	1.0	-0.4

Source: EU Commission, AMECO

1/ Calculated as residual of primary spending minus invest and consumption.

About a third of the total average expenditure reduction (between the maximum spending period and 2002) was due to the fall in interest payments. Interest spending declined by 2.4 percent of GDP for the whole group and by 2.7 percent of GDP for the euro zone. Undoubtedly the fall in inflationary expectations was important for some countries (Italy and Greece). This fall reduced nominal interest rates and consequently interest payments. However, for some ambitious reformers (mainly Ireland and New

Zealand), the fall in the share of public debt to GDP and not the fall in inflation was the main determinant.

Naturally it is primary spending that better reflects fiscal reform. This spending fell by a little more than four percent of GDP for all countries. However, there were major differences across countries. The reduction from the peak level was a remarkable 12.9 percent of GDP in Canada, 9.5 percent of GDP in Ireland, and 8 percent or more in the Netherlands (8.7 percent), in New Zealand (8.5 percent), and in Finland (8 percent). The experience of these countries deserves to be studied in detail to see how they achieved these reductions and what impact they had on socio-economic indicators. The reductions were also large in Sweden (7 percent), in Belgium (7.5 percent) and significant in Austria, Norway, Spain (more than 5 percent) and a few other countries. This is the category where the differences between ambitious performers and timid performers are most noticeable. See Table 2. As mentioned above, countries that never had a high level of primary spending (Australia, Japan, Switzerland and the United States) had fewer possibilities of reduction.

Let us now consider the composition of primary spending. Going into some details of expenditure dynamics, we find that reduction in “transfers and subsidies” explain half of the total decline of primary spending. This is the category of spending that had grown the most in the 1960-1982 period. Again differences across countries are noteworthy: ambitious reformers reduced transfer and subsidies by about 6 percent of GDP (and much more in individual cases) while spending on this category changed little for the other country groups. Once again, New Zealand, the Netherlands, Finland and Ireland led the way in reductions in this category. Government consumption declined by about two percent of GDP in the groups of early and/or ambitious reformers and little amongst late/timid and non-reformers. Reduction in Ireland and Canada in this category was well

above that in other countries. Public investment fell in all country groups by 0.3 to 0.7 percent of GDP. However, it must be recalled that these are reductions from peak levels.

In conclusion, if there is any major distinguishing feature in the composition of reform, between ambitious and timid (or non-) reformers, it is the different success in curtailing transfers and subsidies. This is the category that had grown the most in previous years. Or putting it the other way round, a country that wants to get its public expenditure ratio down by a significant size has to tackle welfare programmes. Other expenditure categories offer far fewer opportunities for reduction. Of course over the long run a reduction in public debt can make a major contribution to the reduction in public spending when the debt level is high.

Table 3 does not confirm the suspicion that ambitious reformers have cut primarily productive spending. Education and health spending developed only slightly less favourably across ambitious reformers than across timid ones. On the other hand, pension spending was contained much better in the group of ambitious reformers.



**Table 3: Change in expenditure ratio: maximum spending-2002, selected functional categories**

Percent of GDP	health	education	pensions
Australia	0.9	-0.5	1.3
Austria	-0.8	0.3	-0.3
Belgium	0.5	-0.1	0.7
Canada	-0.8	-2.0	0.0
Denmark	0.3	0.6	-0.7
Finland	-0.9	-1.8	-1.2
France	0.0	-0.2	-0.1
Germany	0.3	-0.2	0.2
Greece	0.2	0.9	1.2
Ireland	-0.8	-1.5	-1.9
Italy	0.2	-0.4	0.3
Japan	0.8	0.1	0.0
Luxembourg	-0.2		1.4
Netherlands	0.1	-2.1	-0.5
New Zealand	0.5	1.9	-1.4
Norway	0.8	-1.3	0.0
Portugal	-0.1	0.0	0.0
Spain	-0.1	0.0	0.0
Sweden	0.5	0.2	-0.9
Switzerland	-1.4	0.0	0.0
United Kingdom	1.3	-0.7	4.0
United States	1.0	-0.4	-0.1
Average	0.1	-0.3	0.1
Euro zone	-0.1	-0.5	0.0
Ambitious reformers, early	0.1	-0.4	-0.8
Ambitious reformers, late	-0.2	-0.8	-0.4
Timid reformers, early	0.7	-0.6	2.2
Timid reformers, late	0.1	-0.1	-0.1
Non reformers	0.3	0.3	0.4

OECD, Social expenditure database and national accounts

### III. Costs and Benefits of Public Expenditure Reform

In this section, we look at a number of socio-economic indicators across countries and country groups to gauge the response, if any, of these indicators to the timing and ambition of expenditure reduction. Specifically, we look at public finance, economic performance, human development, income distribution and institutional quality indicators. Once again, this is a broad-brush approach. A more detailed approach would require far more time and space.

*a. Framework for analysing the impact of expenditure reform*

In assessing the impact of expenditure reform, we focus primarily on medium and long-term influences and on different degrees of reform ambition. At the same time, we have to deal with a number of data shortcomings: there are only 22 countries with at most one turning-point (start of reform) per country. Some data on socio-economic indicators are not available on an annual basis but only at 5-year or even 10-year intervals. Therefore we will not endeavour to force the data into a more or less sophisticated econometric analysis. Rather we will try to extract some stylized facts and patterns about the relationships that interest us by employing three approaches.

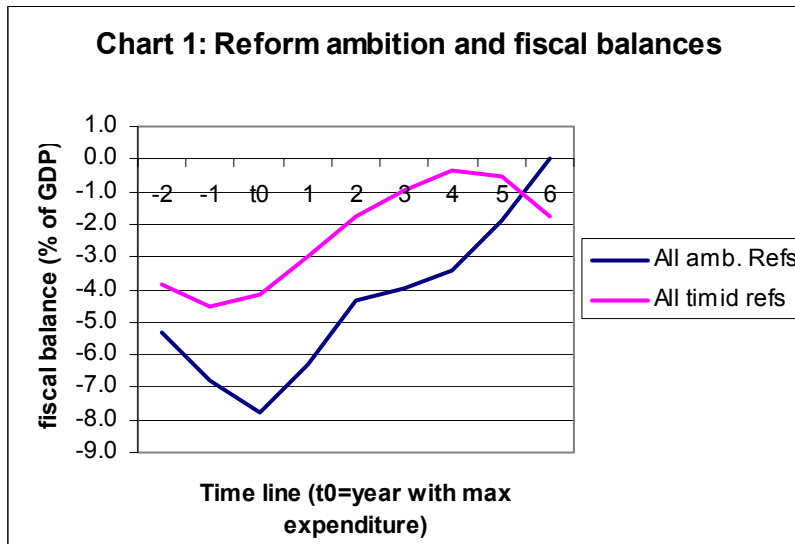
For the medium-term analysis, we use a case study approach where the year of maximum expenditure is set as  $t_0$  and subsequent and earlier years are labeled accordingly. This makes it possible to compare countries with ambitious versus those with less ambitious reforms as well as the impact of timing. We will report the results for these country groups where appropriate. However, because several countries only started reducing their public spending in the early- to mid-1990s this analysis has its limits as the number of observations shrinks rapidly after a few years, say  $t_7$ . Moreover, it is not useful for variables with less than annual data.

For the medium to long-term analysis and for those variables with infrequent data, we look at 5 year averages/intervals and at changes over these averages/intervals. We will pay particular attention to different degrees of reform ambition resulting in expenditure cuts and to the question when the impact of reform appears to set in. Finally, we will do simple cross-section correlation analysis of levels and changes to complement the other methods and to add some robustness to the results.

*b. Soundness of public finances*

One of the objectives of public expenditure reduction is to enhance the sustainability of public finances. The benefits of these reductions are more macroeconomic stability, better financing conditions and (if they promote the stability of the tax system) a more friendly environment to work, invest and innovate (European Commission, 2004). The two most common variables measuring the soundness of public finances are the fiscal deficit and the ratio of public debt to GDP.

The average fiscal deficit across all countries declined significantly over the past 20 years and in particular after several countries started reforming their expenditure. Fiscal consolidation was more successful in the countries with ambitious reforms. In these countries fiscal balances improved by about 8 percent of GDP on average within six years from the peak expenditure level (Chart 1). Timid reformers reported an average improvement of about half that amount. However, several of them had lower initial fiscal deficits.



Medium to long-term trends in fiscal balances confirm that ambitious reformers achieved significant and more lasting consolidation than timid reformers while non reformers showed the least fiscal deficit improvements.

Table 4a shows deficits for 5-year periods between the late 1970s and the turn of the century. Reforming countries were on average in surplus or had only limited deficits for the most recent 5-year period while non-reformers still had significant average deficits. The last column shows the improvement in the deficit since expenditure started to decline, again pointing to a deficit reduction more than twice as high for ambitious reformers. However, as already stated, they started with larger deficits than timid reformers. Moreover, expenditure reduction by ambitious reformers financed an additional significant reduction in the tax burden. This can be measured by comparing the last column of Table 1 with that of 4a. Tax cuts averaged over 5 percent of GDP for ambitious and early reformers. By comparison revenue reductions by timid reformers were limited to 1-2 percent of GDP and the tax burden increased significantly in non-reforming countries.

**Table 4: Fiscal variables and expenditure reform**

a. Fiscal balances, 5-year averages

	First reform wave		Second reform wave		Change since reform
	1983-87	1988-92	1993-97	1998-2002	
Average, all countries	-3.8	-2.9	-3.3	0.2	
Euro area	-4.9	-3.9	-4.1	-0.5	
Ambitious reformers, early	-7.0	-4.2	-1.5	0.6	7.6
Ambitious reformers, late	-1.5	-1.6	-3.6	2.5	6.1
Timid reformers, early	-1.1	-0.7	-1.9	1.8	2.9
Timid reformers, late	-4.5	-3.5	-3.7	-0.8	2.9
Non reformers	-6.1	-4.9	-5.9	-4.8	

b. Gross public debt, 5-year averages

	First reform wave		Second reform wave		Change since reform
	1983-87	1988-92	1993-97	1998-2002	
Average, all countries	55.9	58.2	68.5	62.1	
Euro area	56.1	62.2	72.8	65.5	
Ambitious reformers, early	91.1	91.8	81.9	61.1	-30.0
Ambitious reformers, late	47.3	50.1	68.8	60.8	-8.0
Timid reformers, early	28.8	22.6	29.4	21.1	-7.6
Timid reformers, late	52.5	56.6	70.1	66.1	-4.0
Non reformers	60.4	68.3	86.0	99.4	

Source: EU Commission, AMECO

Expenditure reduction is strongly correlated with progress in debt reduction.

However, the figures also show that debt reduction is a “marathon” and requires time and political tenacity. Table 4b reports debt ratios for the country groups for the same 5-year periods as Table 4a. It is noteworthy that the debt ratio among early and ambitious reformers was initially very high (they include e.g. Belgium and Ireland). Since then, it has come down by an average of 30 percent of GDP since the late 1980s when debt peaked on average. The early and timid reformers started with a low debt ratio which declined further. Amongst late and ambitious reformers, progress with gross debt reduction has, so far, been less spectacular. But the figures disguise that the Nordic countries which are part of this group (Finland, Norway, Sweden) have been accumulating significant public assets during recent years so that the net worth of the public sector has improved by more than shown by the table.

Timid and late reformers, in recent years, have managed to halt and slightly reverse the trend of increasing debt ratios experienced in the previous years. However, because some deficits remained and, as we see below, trend growth has not accelerated, progress in this area has been limited. Note again the significant increase in the debt ratio of non-reformers which reflects Japan’s strong fiscal deterioration but also the continued upward creep in Portuguese and Greek public debt.

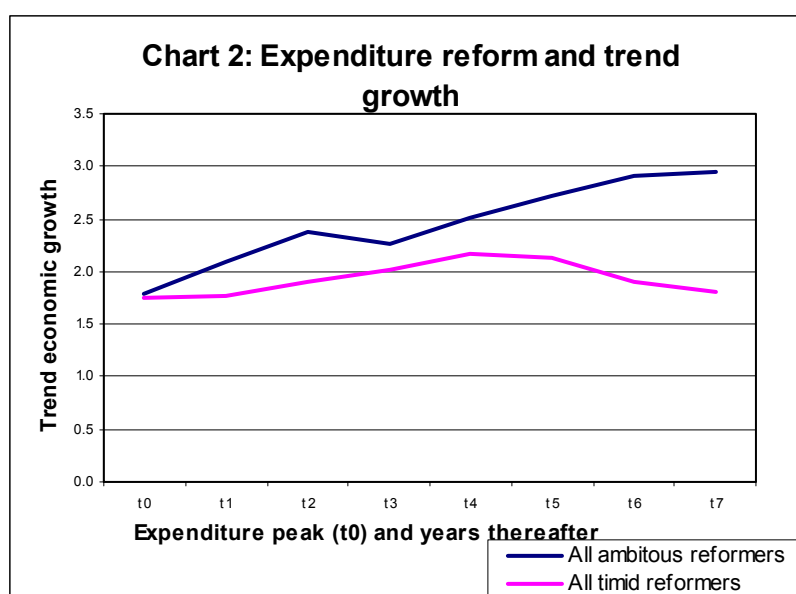
In summary, these findings confirm earlier claims in the literature, by Alesina and others (see e.g. Alesina and Perotti, 1995; Briotti, 2004 for a survey), that expenditure reform is key for successful public finance consolidation and for debt reduction. While reforms can show quick results in improving deficit figures, they must be ambitious and durable in order to reverse the adverse debt dynamics.

*c. Economic and employment performance*

Another benefit of public expenditure reduction should be the improvement of supply side conditions via better tax-benefit systems, more efficient government bureaucracy, and less distortionary taxes (see for surveys, Afonso et al, 2004; European Commission 2004). We look at two variables to proxy the impact of expenditure reform on economic performance: trend growth and the employment ratio.

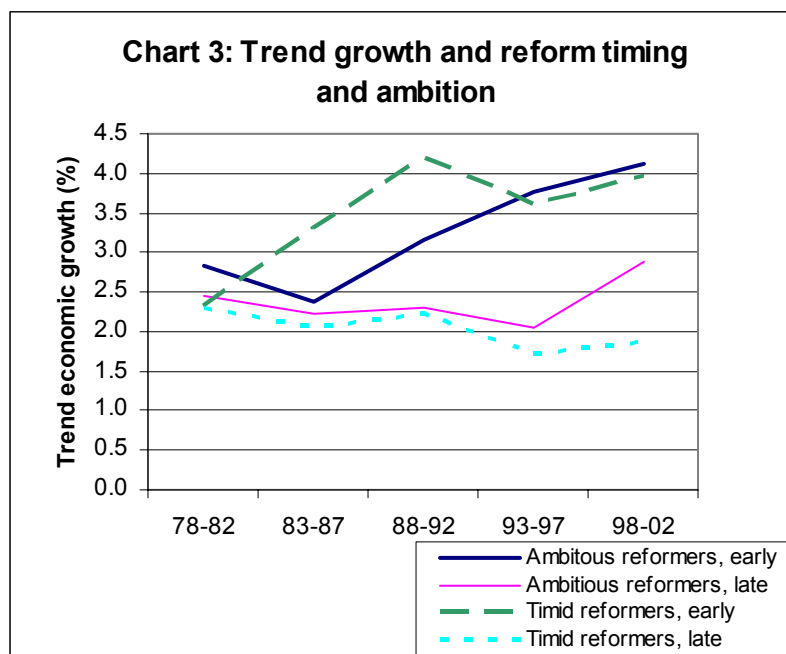
Two main results seem noteworthy. First, the recovery of sustained growth takes time. People must become convinced that the reforms are not reversed. Second, the increase in trend growth is much more significant for the group of ambitious reformers.

Chart 2 shows that trend growth for both ambitious and timid reformers averaged exactly the same uninspiring 1.8 percent of GDP at the peak of public spending, that is at time t0. The growth rate rose about twice as fast in the ambitious country group and reached almost 3 percent after 6 years, that is at time t6.



The medium to long-term analysis confirms this picture but it also illustrates the “head start” of the early reformers. Looking at 5-year period averages (Chart 3), early reformers managed to raise trend growth from near 2 percent in the early 1980s to near 4 percent in the mid-1990s and since then it has stayed broadly constant. Amongst late

reformers, those with ambitious programs reported an average trend growth rate that was boosted from 2 percent until the mid-1990s to 3 percent per annum since then. Trend growth of timid reformers so far remained little changed.



Of course, this analysis provides only stylised facts and there are many caveats. For example, non-fiscal structural reforms may have been more important to boost trend growth than public expenditure reductions. This may have been the case for countries that had low public expenditure ratios in the whole period. Some more robustness checks are clearly needed. Moreover, trend growth is to some extent correlated with the cycle so that part of the initial trend growth increase may reflect the fact that reforms started during a downturn. But the findings are consistent with those of Tanzi and Schuknecht (2003) and Afonso et al (2004) that look at the relationship between public expenditure and growth trends. Tanzi and Schuknecht, for example, reported the stylised fact that a 10 percent increase in the spending ratio has reduced long term growth by about 1.5 percent over the 1960 to 2000 period.

Employment developments parallel the picture for trend growth (Table 5). The employment ratio was relatively similar across country groups in the late 1970s, apart for

the early, ambitious reformers where it was much lower. By the mid 1980s it had fallen in all groups. However, the picture started changing thereafter. Early ambitious reformers experienced a limited increase in the employment ratio in the following ten years, that was not much larger than for the other early but timid reformers (although it is the only group with a rising ratio in the early 1990s). Perhaps there was a significant labor shake out early in the reform process; perhaps confidence took time to build; perhaps the focus of these reforms was not on employment incentives so that initial aggregate changes were limited. However, in the late 1990s, the employment ratio for the ambitious early reformers rose rapidly, so that the overall gain in the employment ratio since the onset of reform exceeded 8 percent (last column of Table 5).

**Table 5: Employment ratio and expenditure reform**

	First reform wave		Second reform wave		Change since reform
	1983-87	1988-92	1993-97	1998-2002	
Average, all countries	65.4	67.1	66.0	69.3	
Euro area	60.2	61.8	60.6	64.7	
Ambitious reformers, early	56.0	57.0	58.4	64.4	8.3
Ambitious reformers, late	69.7	70.7	66.7	70.2	3.5
Timid reformers, early	65.6	68.2	67.5	70.0	4.4
Timid reformers, late	67.7	70.4	69.8	72.2	2.4
Non reformers	64.9	65.7	65.4	67.4	

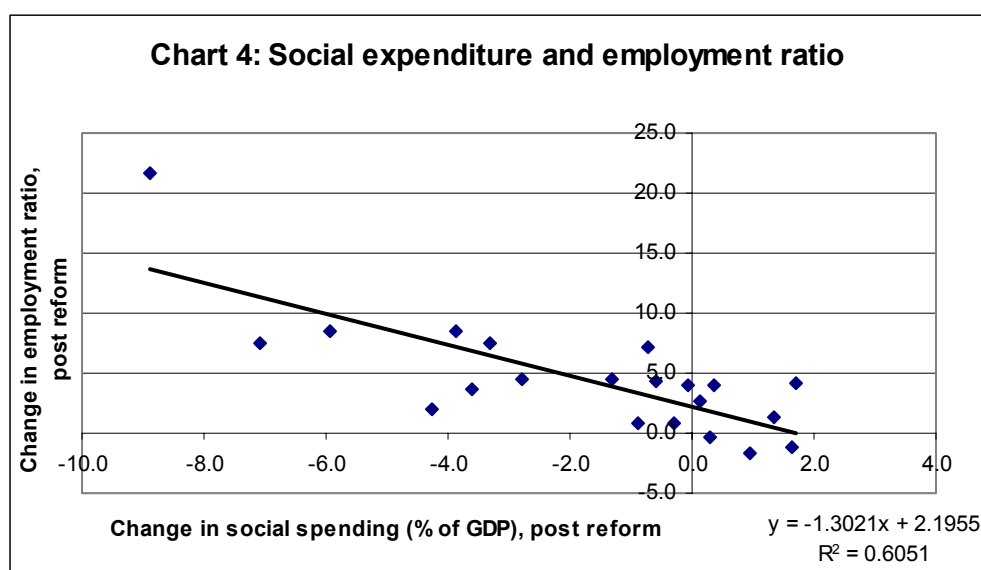
Source: EU Commission, AMECO

The late and ambitious adjusters reported an employment ratio in the mid-1990s that was well below the late 1970s. But it increased strongly together with expenditure reform in recent years. Non-reformers now show an employment ratio that is lower than it was 25 years ago.

The correlation between employment ratios and social expenditure reform is particularly noteworthy. Chart 4 represents the change in the social expenditure ratio and in the employment ratio since the expenditure peak was reached. There is a rather significant correlation between the two with a 1 percentage point decline in the social



spending-to-GDP-ratio being correlated with a 1.3 percentage point increase in the employment ratio.



*d. Income distribution and human development*

Many critics of public expenditure reform point to potential adverse implications for income distribution and human development. As shown in Table 2, expenditure reform has led to cuts in social transfers and spending that presumably disproportionately benefit the less well off. However, this latter hypothesis has not received much empirical backing. Some studies have pointed to underlying reasons why social spending is poorly targeted; public investment is not always productive; and government consumption does not necessarily mean more education or more security but at times more waste and red tape. Higher taxes and less innovation and productivity gains may ultimately translate into less employment and wage gains for lower income individuals. Gross social spending, as used in some analytical studies, may not appropriately reflect the role of the state because the

effect of the tax system, especially tax expenditure, and of private social support is not taken into account.<sup>6</sup>

Here, we consider the possible correlation between expenditure reform and income distribution by looking at three types of indicators available from the OECD for most industrialised countries. Unfortunately these indicators are not available annually. It is nevertheless fortunate that the OECD provides observations for the mid 1980s and mid 1990s (which coincide broadly with the two main “waves” of expenditure reform) and for 2000 so that we have at least an impression of levels and changes in the past 15 years.

The picture that arises from these data and their correlation with public expenditure developments is rather complex.

First, income distribution in industrialized countries has become less equal since the mid-1980s (Table 6a-c, first line). The share of the population that lives on less than half the median income has increased by about 1 percent, rising to about 10 percent of the total population; the Gini coefficient has risen from an average of 0.28 to 0.294; and the income share of the poorest 20 percent of households has fallen from 8.6 to 8.2 percent.

---

<sup>6</sup> See, for example, Tanzi and Schuknecht (2000), Tanzi (2004a and 2004b), Adema (2004) on net social spending, and various other OECD studies on the targeting of social spending, income distribution indicators etc. [to be completed].

**Table 6: Income distribution and expenditure reform**

## a. Share of total population below 50% of median income

	Mid-1980s	Mid-1990s	2000	mid-1980s-2000
Average, all countries	9.0%	9.6%	10.1%	1.1%
Euro area	9.3%	10.1%	10.5%	1.2%
Ambitious reformers, early	6.5%	8.4%	10.6%	4.1%
Ambitious reformers, late	6.4%	6.7%	7.5%	1.1%
Timid reformers, early	6.9%	10.9%	11.4%	4.5%
Timid reformers, late	9.6%	10.3%	10.3%	0.6%
Non reformers	14.8%	14.2%	13.6%	-1.2%

## b. Gini coefficient

	Mid-1980s	Mid-1990s	2000	mid-1980s-2000
Average, all countries	28.0	29.0	29.4	1.3
Euro area	28.7	29.5	29.6	0.9
Ambitious reformers, early	27.8	30.3	29.7	1.9
Ambitious reformers, late	23.6	24.4	26.3	2.7
Timid reformers, early	29.9	30.8	31.5	1.6
Timid reformers, late	28.3	29.3	29.2	0.9
Non reformers	34.5	34.7	35.0	0.5

## c. Income share of poorest quintile of households

	Mid-1980s	Mid-1990s	2000	mid-1980s-2000
Average, all countries	8.6%	8.4%	8.2%	-0.4%
Euro area	9.0%	8.7%	8.5%	-0.4%
Ambitious reformers, early	9.4%	8.9%	8.9%	-0.5%
Ambitious reformers, late	9.9%	10.0%	9.4%	-0.5%
Timid reformers, early	8.3%	8.0%	7.8%	-0.5%
Timid reformers, late	8.3%	8.1%	7.9%	-0.4%
Non reformers	7.9%	7.6%	7.6%	-0.3%

## d. Per-capita GDP poorest quintile, 1995 prices, PPP US\$

	Mid-1980s	Mid-1990s	2000	mid-1980s-2000 % change
Average, all countries	7374	8677	9893	34.2
Euro area	6917	8128	9458	36.7
Ambitious reformers, early	7273	8456	10400	43.0
Ambitious reformers, late	9213	10532	11813	28.2
Timid reformers, early	6936	8141	9036	30.3
Timid reformers, late	7735	9047	9860	27.5
Non reformers	4299	4984	5819	35.4

Source: OECD

Second, and as expected, there is indeed a positive correlation between total public spending and the income distribution indicators, but there is much less correlation between changes in public spending and changes in these indicators. Since it is the changes that are

important in assessing the impact of fiscal reform, this points to a rather limited trade-off from expenditure reform in terms of income distribution. Consider Table 7. The correlation coefficient between total expenditure and the relevant indicators of income distribution for the year 2000 is 0.43 to 0.62.<sup>7</sup> But that for changes in public spending and income distribution since expenditure reform started is only 0.23 for the income share of the poorest 20 percent and 0.37 for the Gini coefficient. Only for the share of households below 50 percent of median income, the correlation is statistically significant. For all these variables, the correlation with public spending is even weaker (rather than stronger) when looking at levels and changes in social spending.

**Table 7: Correlation coefficients, income distribution/human development-expenditure**

	Total expenditure, 2000	Change in expenditure, post reform
(All 2000, post reform)		
Share below 1/2 median inc. Change, post reform	-0.62	-0.59
Gini coefficient Change, post reform	-0.50	-0.37
Income share, bottom quintile Change, post reform	0.43	0.23
Human development index Change, post reform	0.02	-0.36

Source: OECD, UNDP

This finding of a modest relation between expenditure and income distribution changes is consistent with the literature that looks at the “targeting” and distributional implications of social spending. Arjona, Ladaique and Pearson (2001), for example, found that the distributional effects of government spending, net of “churning”, was very small in some “big” government countries such as Germany, France and Italy and hardly exceeded that of the United States. Moreover, the targeting of social spending has improved in a

<sup>7</sup> The correlation coefficient for net spending and income distribution in 1997 is 0.57 (on the basis of data by Adema, 2001).

number of countries that have undertaken significant expenditure reform. In fact these reforms seem to force governments to better target their social spending.

Third, expenditure reform has resulted in an “equalization” of income distribution patterns across country groups. This can be seen in Table 6. Ambitious reformers, for example, reported more equal than average income distribution in the mid-1980s. By 2000, indicators had worsened but they still show a relatively favourable situation for the poor in this group relative to the average for all countries. If expenditure reform had a significantly adverse impact on income distribution, timid reformers should report more favourable changes than ambitious reformers. But this is not the case and changes are rather similar across these country groups. Non-reformers report unfavourable income distribution indicators that also have not improved much relative to the other groups. This supports the above finding that changes in spending and income distribution are only weakly correlated.

So far we looked at income distribution in relative terms. One can also compare absolute income levels of the poorest quintile by countries. Stronger growth has on average moderated and in some cases over-compensated the changes in the income share of the poorest quintile for ambitious reformers. For example, since 1990, the absolute position of the poorest quintile has improved most among ambitious and early reformers (from 5 percent below average to 5 percent above). At the same time, the position of the poor in timid and late reformers may not have deteriorated much within the country but it has relative to those that grew faster. Living standards amongst the poorest quintile are still highest in the group of late and ambitious reformers (15 percent above the average for all sample countries). (See Table 6d.)

Finally, we examine indicators for the “quality of life”. Many indicators could be looked at, including living standards, health and education standards, infrastructure quality,

crime, and environment. We limit ourselves in this study to the UN Human Development Index (HDI) which combines indicators of longevity, educational attainment and enrollment ratios and living standards (per-capita GDP, PPP US\$) (UNDP, 2003). We find no correlation between the level of total spending and the HDI (Table 7).

#### *d. Quality of institutions*

The past 20 years have witnessed a renaissance of classical economists' thinking as to the role of government in setting the rules of the game for itself and for markets. A sound institutional framework can promote growth and economic dynamism in the neoclassical sense of facilitating factor accumulation and productivity. This is because good institutions create an environment in which property rights are protected and contracts are enforced and where people are free to make contracts at a level playing field. As a consequence, incentives to save, invest, work and innovate are boosted.<sup>8</sup>

The fiscal role of the state is indirectly linked with the quality of institutions as it is hard to conceive a functioning market economy without well-trained and well paid policymakers, administrators, judges and policemen (Tanzi and Schuknecht, 2000; van Rijckeghem and Weder, 2002). In as much as higher spending aims to achieve this purpose, it should improve the institutional environment of an economy. However, if higher spending means more bureaucratic red tape, more rent seeking opportunities (which in turn breed corruption) and a large informal economy, that does not benefit from

---

<sup>8</sup> See economists and political philosophers from David Hume and Adam Smith to the Austrian School of Economics, public choice and institutional economics with proponents such as Hayek, Buchanan or Douglas North.

protective institutions, then a reduction in public expenditure could well imply an improved institutional environment.<sup>9</sup>

We look at four indicators to measure institutional quality. The first three on corruption, red tape and quality of the judiciary are surveys based and published in the World Competitiveness Report since about 1990. The fourth one is a composite indicator, measuring the quality of the legal structure and the security of property rights. It is available as a sub-indicator of the Fraser Institute's Economic Freedom measure since the mid-1970s.

As regards the overall level of these indicators, industrialized countries on average report very high levels (Table 8a and b). This suggests that the institutional infrastructure operates well. While red tape and corruption seem to have worsened, the legal structure and security of property rights have improved in the past 10-15 years. Southern European countries and Japan fare relatively poorly. Scandinavian countries report significant improvements in these indicators while the picture for Anglo-Saxon countries and other continental European countries is more mixed.

---

<sup>9</sup> While we limit ourselves to analyzing aggregates, a more detailed analysis of spending composition would be warranted in this context.

**Table 8: Institutional indicators and expenditure**

## a. Corruption, red tape, quality of judiciary

	Corruption 1990	Change 2001	Change 1990s	Red tape 1990	Change 2001	Change 1990s	Quality of the judiciary 1990	Change 2001	Change 1990s
Australia	6.6	8.2	1.6	4.1	4.9	0.8	7.8	8.5	0.7
Austria	5.2	6.9	1.7	4.9	4.1	-0.7	7.3	9.0	1.7
Belgium	5.5	5.2	-0.3	3.8	2.8	-1.0	6.2	5.7	-0.5
Canada	7.5	7.8	0.3	4.6	4.6	0.0	8.4	8.5	0.1
Denmark	9.2	9.0	-0.1	4.7	5.0	0.3	8.4	8.6	0.2
Finland	7.8	9.5	1.7	5.5	6.4	0.9	8.4	8.7	0.3
France	6.0	4.2	-1.8	4.1	1.8	-2.3	6.2	5.9	-0.4
Germany	7.6	6.9	-0.7	4.8	3.9	-0.9	8.2	8.2	0.1
Greece	2.8	3.0	0.2	1.9	2.3	0.4	5.0	6.2	1.2
Ireland	7.0	5.5	-1.4	5.3	5.6	0.3	8.1	7.6	-0.5
Italy	2.6	3.5	1.0	2.8	2.0	-0.8	3.2	3.6	0.4
Japan	5.5	4.3	-1.2	5.3	2.6	-2.7	7.8	6.3	-1.5
Luxembourg	5.5	7.4	1.9	3.8	4.1	0.3	6.2	7.5	1.3
Netherlands	8.1	8.0	-0.2	5.4	4.7	-0.7	8.1	8.3	0.1
New Zealand	8.4	8.8	0.3	6.3	4.3	-1.9	7.9	8.3	0.4
Norway	7.4	8.1	0.7	4.0	3.0	-1.0	8.2	8.3	0.1
Portugal	4.5	3.9	-0.6	3.3	2.2	-1.1	8.0	2.7	-5.3
Spain	3.8	5.6	1.8	3.2	4.0	0.8	2.9	4.4	1.5
Sweden	7.6	8.6	1.0	4.6	5.6	1.0	7.1	8.5	1.5
Switzerland	7.9	7.2	-0.7	6.1	5.4	-0.7	8.7	8.0	-0.7
United Kingdom	8.0	6.8	-1.2	6.0	3.1	-2.8	7.5	7.4	-0.1
United States	6.5	6.6	0.0	5.3	3.7	-1.6	7.6	7.1	-0.5
Average	6.4	6.6	0.2	4.5	3.9	-0.6	7.1	7.1	0.0
Euro zone	5.5	5.8	0.3	4.1	3.7	-0.4	6.5	6.5	0.0
Ambitious reformers, early	7.3	6.9	-0.4	5.2	4.4	-0.8	7.6	7.5	-0.1
Ambitious reformers, late	6.5	7.7	1.2	4.5	4.6	0.2	7.1	7.9	0.9
Timid reformers, early	6.7	7.5	0.8	4.6	4.1	-0.6	7.2	7.8	0.6
Timid reformers, late	6.6	6.2	-0.4	4.6	3.6	-1.0	7.0	6.9	-0.2
Non reformers	4.3	3.7	-0.5	3.5	2.4	-1.1	6.9	5.0	-1.9

Source: World Competitiveness Report and AMECO



**Table 8: Institutional indicators and expenditure continued**

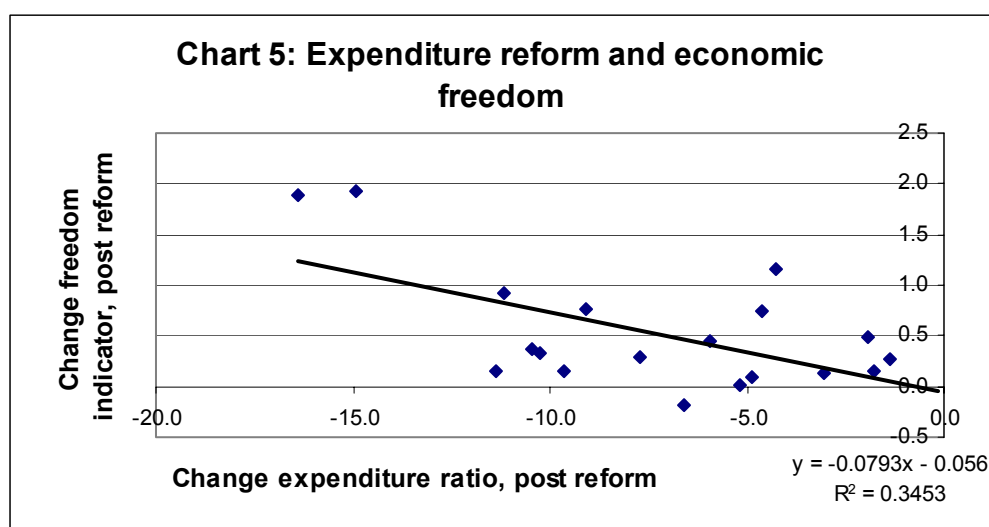
b. Economic freedom (Chapter 2, legal structure and security of property rights)

Countries	1980	1985	1990	1995	2000	Change post-reform
Australia	7.3	7.9	7.9	8.8	9.5	1.6
Austria	8.0	7.9	8.3	8.6	9.3	0.8
Belgium	7.8	7.9	8.3	7.3	8.3	0.4
Canada	7.2	7.9	8.3	8.9	9.3	0.3
Denmark	7.2	7.9	8.3	8.9	9.5	0.6
Finland	6.8	7.9	8.3	9.1	9.5	0.4
France	6.8	7.2	7.7	7.4	8.1	0.7
Germany	7.7	7.5	8.3	9.0	9.1	0.2
Greece	5.6	5.6	6.8	6.6	5.7	
Ireland	7.1	6.7	7.7	8.9	9.0	2.3
Italy	5.7	6.8	7.7	5.7	7.7	1.9
Japan	7.9	7.2	7.7	7.8	8.2	
Luxembourg	7.8	8.3	8.3	8.9	8.3	0.0
Netherlands	7.5	8.3	8.3	8.9	9.6	1.3
New Zealand	8.0	7.9	8.3	9.0	9.1	1.2
Norway	7.0	8.1	8.3	9.0	8.8	-0.1
Portugal	8.0	6.1	7.7	7.6	7.6	
Spain	6.3	6.4	7.2	7.4	7.5	0.2
Sweden	6.6	7.4	8.3	8.6	9.0	0.5
Switzerland	8.1	8.3	8.3	8.9	9.3	0.3
United Kingdom	7.0	6.7	7.7	8.9	9.3	2.6
United States	8.3	8.3	8.3	8.6	9.2	0.6
Average	7.3	7.5	8.0	8.3	8.7	0.8
Euro zone	7.1	7.2	7.9	7.9	8.3	0.8
Ambitious reformers, early	7.6	7.7	8.2	8.5	9.0	1.3
Ambitious reformers, late	7.0	7.6	8.1	8.6	8.9	0.3
Timid reformers, early	7.4	7.6	8.0	8.9	9.0	1.4
Timid reformers, late	7.3	7.7	8.1	8.1	8.8	0.7
Non reformers	6.8	5.8	7.2	7.1	6.7	

Source: Gwartney et. al, Fraser Institute

On the whole, there is no clear correlation for the industrialized countries between the size of government and institutional quality measured by correlation indicators. But there is a modest to strong correlation between changes in public spending since the onset of reform and changes in institutional quality which implies that a reduction in public spending raises institutional quality. The correlation (coefficient of -0.58) between, for

example, changes in public expenditure ratios and property rights/economic freedom is illustrated by Chart 5.



## V. Conclusion

Overall, we find that ambitious expenditure reform is correlated with more improvement in fiscal, economic, human development and institutional indicators. Benefits, in some instances, have taken a while to materialize and early and persistent reformers have, hence, already reaped more of these benefits. There seem to be some costs of expenditure reform in terms of income distribution within countries but these costs are small and are mitigated in absolute terms by faster growth and by the possibilities of better targeting of public spending. Moreover, there is significant divergence across countries that suggest that country circumstances and reform design matter.

## **Bibliography:**

- Adema, Willem (2001) Net Social Expenditure, 2<sup>nd</sup> edition, OECD Labour Market and Social Policy Occasional Paper No. 52, Paris: OECD.
- Afonso, Antonio, Ludger Schuknecht and Vito Tanzi (2004/5 forthcoming) Public Sector Efficiency: an International Comparison, European Central Bank Working Paper 242 and forthcoming in Public Choice.
- Afonso, Antio, Werner Ebert, Michael Thoene and Ludger Schuknecht (2004) The Quality of Public Finances and Economic Growth, Frankfurt: Mimeo.
- Alesina, A and R. Perotti (1995) Fiscal expansions and adjustments in OECD countries, Economic Policy, No. 21
- Arjona, Roman, Maxime Ladaïque and Mark Pearson (2001) Growth, Inequality and Social Protection, OECD Labour Market and Social Policy Occasional Papers No 51, Paris: OECD.
- Briotti, Maria Gabriella (2004) Fiscal adjustment between 1991 and 2002: Stylised facts and policy implications, European Central Bank Occasional Paper Series
- European Commission (2004) Public Finance Report, Brussels.
- Gwartney, J.; Lawson, R.; Park, W.; Wagh, S.; Edwards, C. and de Rugy, V. (2002). *Economic Freedom of the World: 2002 Annual Report. Vancouver, the Fraser Institute.*
- International Institute for Management Development (2001). *The World Competitiveness Yearbook 2001.*
- OECD (1995) Income Distribution in OECD Countries, Paris.
- OECD (2001d). *Social Expenditure Database and National Accounts, Paris.*
- OECD Income distribution data sources...
- Tanzi, Vito (2004a) Globalisation, Social Protection and Public Finance, paper prepared for the United Nations Development Program.
- Tanzi, Vito (2004b) The Economic Role of the State in the XXI Century, paper prepared for presentation at a seminar at Politeia, London.
- Tanzi, Vito (2004c) Unorthodox Views on Orthodox Structural Reform, mimeo.
- Tanzi, V. and Schuknecht, L. (2000). *Public Spending in the 20<sup>th</sup> Century: A Global Perspective*, Cambridge: Cambridge University Press.
- Tanzi, Vito and Ludger Schuknecht (1997) Reconsidering the Fiscal Role of Government: The International Perspective, The American Economic Review Volume 87, No. 2
- Tanzi, Vito and Ludger Schuknecht (2003) Public Finances and Economic Growth in European Countries, in Oestereichische Nationalbank (ed.) Fostering Economic Growth in Europe, Vienna.
- United Nations Development Programme (2003) Human Development Report 2003, New York: Oxford University Press.
- Van Rijckegehém, Caroline and Beatrice Weder (2002) Bureaucratic Corruption and the Rate of Temptation: Do Wages in the Civil Service Affect Corruption and by How Much? In G. Abed and S. Gupta (eds) Governance, Corruption and Economic Performance, IMF: Washington DC, 59-88.

## Annex Table – Variables and series

Variable	Sources
All fiscal variables (except functional expenditure)	European Commission, Ameco
Output, employment and income variables	European Commission, Ameco (trend growth and employment ratio); OECD (per-capita GDP, PPP US\$)
Income distribution	OECD (share of population below 50 percent of median income, Gini coefficient, income share of poorest quintile of households)
Corruption	World Economic Forum: The World Competitiveness Report 1990, item "10.22 Corruption (for 1990) World Economic Forum, The World Competitiveness Yearbook 2001, item 2.3.16 Bribing and corruption (for 2001).
Red tape	World Economic Forum: The World Competitiveness Report 1990, item "6.21 Regulatory environment (for 1990) World Economic Forum, The World Competitiveness Yearbook 2001, "Bureaucracy" (for 2001).
Efficient judiciary	World Economic Forum: The World Competitiveness Report 1990, item "10.04 Confidence in administration o justice" (for 1990) World Economic Forum, The World Competitiveness Yearbook 2001, "Justice" (for 2001).
Economic freedom	Gwartney et. al, Fraser Institute (various issues) Freedom in the World, Vancouver.
Public education	OECD, Social expenditure database and national accounts
Public health	OECD, Social Expenditure database and national accounts
Public pension	OECD, Social Expenditure database.