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The Size of Government*

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Abstract

We discuss and provide an overview of the size and role of the government, notably in terms of what the government "should" do, how the government could spend and intervene in the economy, how much governments spend and what they spend their money on. This is done from a historical perspective and also in a stylized way via assessing total expenditure, the composition of public expenditure for advanced, emerging and developing countries.

JEL Codes: B00, E62, H11, H50, H62
Key words: public spending; size of government; expenditure composition; public sector efficiency

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1. Introduction

The role of government and the money it spends to fulfill its role has been one of the key questions of economics and political philosophy for centuries. However, only over the past 150 years has the spending role of the state developed significantly and, thus, has started a vivid debate on the appropriate role and size of government. And only over recent decades, when governments had grown significantly in size have methodologies emerged to measure, assess and advise on the size, performance and efficiency of government and on the underlying policies.

Government expenditure takes mostly place via the budgets of different levels of government. The sum of this spending is typically referred to as the size of government. Public spending, which we use as a synonym, comprises spending on various tasks of government. These can be categorized according to an economic classification – consumption, investment, interest, subsidies and transfers – or a functional classification – education, defense etc. (for details see OECD, 2019c).

The size of government is derived from its spending role in an economy and this is linked to the question of what governments do and should do. In this chapter we link public spending with the role of government and describe how much governments spend and what they spend it on. We also reference non-budgetary expenditure and fiscal risks for government as these are also part of the "size" of government in a broader sense. Whether government performs its spending role well in terms of objectives, performance and efficiency is subject to analysis in later chapters of this volume.

The remainder of this chapter is organized as follows. Section 2 discusses what the government should do. Section 3 addresses the issues related to how should government intervene and spend. Section 4 reviews the size of government from a historical perspective. Section 5 illustrates in a stylized way the composition of public expenditure. Section 6 concludes.

2. What Should Government Do?

In the distant past, when individuals made a living by hunting and fishing or by subsistence agriculture, there was no or little need for a government in today's sense of the word. Consequently, there was no sense in asking what a government should do. Individuals and families were largely on their own and were free to pursue their individual interests and to satisfy their needs, in the best way they could. Their (very low) standards of living depended on their personal

ability to collect food and to protect themselves against natural elements and other dangers. At that time, the actions of individuals were not likely to generate significant externalities that could affect, positively or negatively, other individuals,

With the passing of time individuals started to see the advantages that could come from aggregation and from operating in groups, first small groups and progressively larger ones. They also started to make distinctions between activities and needs that could best be satisfied through their independent actions and needs that could be better satisfied though the collective action of the group. As the groups became larger and more stable (in terms of location and membership), and less homogeneous in the abilities and the attitudes of the individuals that composed them, a process of selection started to develop. The individuals in the groups, or the communities, started to be differentiated in different categories, and specialize in their jobs, to better satisfy the perceived, collective needs. Productivity increased as specialization spread as Adam Smith (1776) so eloquently described.

The satisfaction of particular community needs fell to different groups of individuals who were assumed to have greater abilities to deal with those needs. *Castes* or *classes* started developing (see Brown, 2005). Some individuals assumed the task of providing protection against dangers coming from the outside. Some, (sorcerers, priests and others) were assigned the task of communicating with the gods or the divinities. Others took on the more mundane tasks of providing food and dealing with other daily needs of the community. Interaction and exchanges increasingly took place in markets, using some form of money as a medium of exchange (see, for instance, Brown, 2005, Mishkin, 2004).

The larger communities saw also the necessity, or the convenience, of having some individuals or some small groups assume the responsibility of making rules for the behavior of the individuals in the community. These were embryonic forms of governments, and the assignments of the responsibilities described above were rarely made democratically. Much political science literature has shown that governments generally came into being out of the domination by one group over the rest of the community (see Loria, 1886 and Mosca, 1896). There are probably no examples in history of governments, which were born as democratic and in which all individuals had equal political power and equal individual freedom.

In recent centuries, especially in the 19th century, several, then more advanced, countries started showing traits that could be called democratic. Some individuals were given the

constitutional right to vote and, through their vote, to influence government policies. With time, that right was progressively extended to larger groups, including individuals who had no property, and to some who had been effectively *serfs* or even *slaves* in the past, and to women (see Tanzi 2020a).This process of increasing democratization was happening at a time when markets were becoming larger in the number of participants and in the territories covered; and they were becoming freer from government meddling, than they had been during the earlier, *mercantilist* times, described by Adam Smith and by others. Democratic countries with market economies required some rules to guide the behavior of the citizens and to protect some of their rights, while restricting abuses by fellow citizens and the arbitrary power of governments.

This led to the important question of what should be the *economic* role of governments in countries that were democratic and that depended on free markets, for the provision of goods and services, needed by citizens, and for the generation of incomes, to those who provided the factors of production. What should be the scope and limit of the governments' intervention in these societies? Although the latter question had been raised occasionally, over earlier centuries, by some philosophers and early economists, it had been raised in broader and more political contexts. In the 19th Century that became a more important and more specific question, at a time when governments were becoming more democratic, and markets freer.

In that century, two contrasting schools of thought competed in the *market for ideas,* and they gave very different answers to the above question. The two schools were *laissez faire* and *socialism*. Notably Mill (1848) and several other economists argued that laissez-faire should be the general practice, and anything else would be unwelcome, while the socialist view would postulate a stronger government presence in the economy and in society (see Engels, 1880, and the overview of Musgrave, 1985). Both of these schools became intellectually and politically important and attracted followers and influence among the common citizens and the intellectuals of the day. Generally, those who owned wealth tended to favor laissez faire, while many workers were attracted by the socialist ideas. This fact started to influence some policies, as for example it did the Bismarck pension reforms in Germany in the late 19th Century, when socialism had become very influential in Germany and in other countries (see Ashley, 1904).

The laissez faire school, which was more unified intellectually than the socialist school, had had its beginning with the work of Adam Smith, 1776, and later had come to be influenced by the Darwinian's evolutionary theory. It maintained that the role of the government should be limited

and should not interfere with the natural evolution of societies. A free market economy would deliver more progress and, over the long run, it would promote growing standards of living for the whole populations.

The Laissez-faire school stressed the need to protect property rights and the right of citizens to engage in legitimate economic activities, without the need for government authorization. It paid little attention to the distribution of income or to some, obvious, failures that existed in the market, including monopolies. It stressed the importance of individual liberty and the contribution that personal initiative made to economic activities. A basic assumption was that, in a free society, with a free market, anyone willing to work would be able to find a job and to earn a living income. In such a society, property owners inevitably had more political and economic power than workers. Property rights tended to receive more government protection than the rights of workers to be well paid, and to work in safer jobs. Social and distributional objectives were not seen as a core role of government.

The socialist schools, of which there were several branches, some much more radical than others, were concerned with the masses, with the distribution of income, and with the status of the workers. They were critical of property rights, and much less interested in *individual* liberty. They advocated a larger economic role of the state and pushed for high public spending. Some versions of socialism (especially the Marxist version) advocated the expropriation of property and the creation of governments which, through central planning, would direct production and the distribution of income toward the satisfaction of the "basic needs" of the masses.

Both sides often held extreme views. Socialists saw the market role in much less favorable eyes and, many of them, considered property as a "theft". Just how extreme laissez faire had, at times, become can be seen by the reaction of the leading Italian economist at that time, Francesco Ferrara. In the decade of 1850s he wrote that, by imposing an import duty, the US Federal government had committed "a sin as grave as that of slavery" (sic). Similar extreme views were expressed by other leading economists, such as F. Bastiat, Gustave de Molinari and J. B. Say in France. In Germany a socialist economist, Lassalle, was jailed for advocating in a lecture a progressive income tax, which would be "a single progressive income tax in state and community, instead of all existing taxes, especially the labor-crushing indirect tax" (see notably Spahr, 1886).

In the second half of the 19th and during the 20th Century, the problems that totally free markets faced in the real world were being addressed by some economists. Monopolies, which were

common and were generating enormous incomes for some individuals, had started to be regulated (Wicksell, 1896, see Musgrave and Peacock, 1958). Some rights of workers (to organize, to strike, and to have their working hours limited) were recognized and limits were imposed on the age when children could work. Safety standards in work places were strengthened. Pension and other insurance schemes started to be created for workers and school attendance of children became mandatory. During the Great Depression a new important government role, that to fight economic recessions, would be theorized by Keynes and it would become a government responsibility during the second half of the 20th Century.

In the decades after World War II, the pure laissez faire ideology of earlier years was in retreat. There was increasing skepticism, even on the part of many orthodox economists, about the assumed efficiency of the market without corrections. In addition, there was less tolerance for the income distribution that the free market generated. Progressive income taxes became more popular. In the years after World War II, there was an intense search by economists for *market failures,* beyond the supplementary role for which public goods had been known. There was a search for ways to make the income distribution more equitable. Monopolistic competition came to be seen as influencing many markets (Robinson, 1933, Chamberlin, 1948, Musgrave, 1985).

In the late 19th century, the size of government was very small, given in part to the prevailing view of its limited role (see Section 4). This changed, first, over two World Wars and subsequently with the ascent of the welfare state so that especially the post 1960 period witnessed fast increases in public spending and in tax levels in advanced countries. It also saw a growing use of regulations, to deal with externalities that were assumed to have negative consequences for individuals, or for the environment. Definitely, the economic role of the state had changed. It had become larger in countries that were still considered market economies (Tanzi and Schuknecht, 2000).

Government intervened to deal with: (a) pure public goods and quasi-public goods; (b) with various market failures; (c) with negative externalities; (d) with business cycles; (e) with income maintenance for individuals and families unable to earn a living; and, (f) finally, it intervened to make the income distributions closer to what voting societies expected them to be. Tax levels and tax revenues' ratios over GDP went dramatically up, and tax systems became more progressive and, especially in some countries, more complex. New government programs were created, some aimed at dealing with *universal* risks (illnesses, disability, unemployment, old age, and illiteracy) others, *means tested,* focused towards economic problems of particular individuals and families.

The composition of public expenditure that in the aggregate, makes up the size of government is discussed in depth in section 5.

The growing economic role of the state, which Keynesian economists had propagated, was inevitably controversial. Conservative and libertarian economists, from the Chicago School, the Austrian School and the new School of Public Choice, were highly critical of the new government role. They believed that it created inefficiencies, reduced economic growth, and reduced the freedom and the incentives of individuals who would come to depend on a "nanny state". These critics believed that a state that reduced incentives for individuals and made them more dependent on the government had reduced the vitality of economies and economic growth.

For instance, Keynesian economists tend to argue that the size of government reflects social preferences in more government and more redistribution to correct market failures (including Wagner's law of governments producing superior goods). Other political economists have emphasized the role of institutions in shaping the size of government and pointed to political market failure in leading to governments being bigger and less efficient than they should be. The size of government is affected by voting rules (Husted and Kenny, 1997), interest group competition (Becker and Mulligan, 2003), party preferences (Braeuninger, 2005), political centralization (Fiva, 2006), the prevailing income distribution (Meltzer, 1983) and the degree of openness and globalization (Shelton, 2007; Rodrik, 1998; Potrafke, 2009; Dreher et al., 2007).

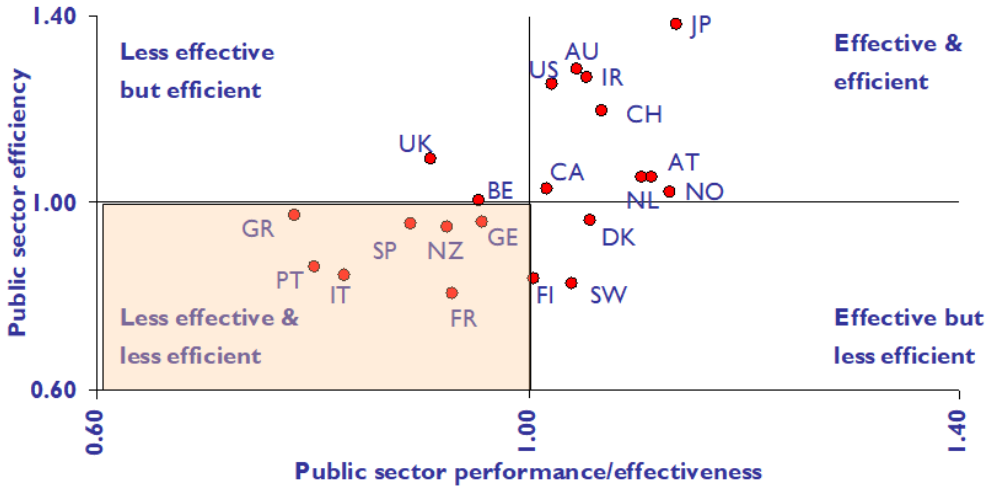
Many studies have assessed the impact that a larger economic role of the state was having on macro-economic performance and other objectives (for surveys see Chapters 2, 3 and 23 in this Volume). As is often the case in these attempts, the a priori, political biases of those who made the attempts often predicted the results. Conservative economists tended to find higher negative results from the higher government role, while social democrat economists tended to minimize the negative impact of that role. The bottom line is that it is difficult to conclude definitely that countries that spend more, such as various European countries, have performed less well than the countries that spend less, such as the Anglo-Saxon countries, taken as a group. For instance, Afonso and Jalles (2006) report that the detrimental effect of government size on economic activity is stronger the lower institutional quality and the positive effect of institutional quality on output increases with smaller government sizes. Often the way in which the money is spent and the way in which the taxes were collected is more important than the size of the spending and of the taxing (see Tanzi, 2020a and 2020b).

Naturally, the macroeconomic performance of the economies, though important, is just one measure of the impact of the role of government on economic welfare. In recent decades the importance of that measure has been challenged by observers who have pointed out that much of the economic growth, in several countries, including the USA, has benefitted a small share of the population, while the large majority has seen little improvement in its standard of living. Therefore, there may have been *growth* but by other measures, there may have been little genuine development or improvement of well-being (Hessami, 2010). For example the recent, inequality- adjusted Human Development Index, prepared by the United Nations, lists high and low spending countries among the top performers (Davies, 2009).

It may, therefore, be possible and legitimate to focus on the impact that a larger government role has not only on economic growth but also on various socio-economic indicators considered important (Parts 2 - 4 of this Volume, also Tanzi and Schuknecht, 1997; Afonso, Schuknecht and Tanzi, 2005, Schuknecht 2020). Another important dimension of this theme is the interaction between the role and efficiency of the public sector and its susceptibility (or resilience) to crisis and (external) credibility for investors (Part 4).

As an illustration, Chart 1 depicts several cases of performance and efficiency in a European Union country sample, where both performance and efficiency of government spending can go hand in hand.

Chart 1 – Illustrative evidence on public sector performance and efficiency, 2000 (Considering general government spending)



Source: adapted from Afonso et al. (2005).
Notes: good performance (two right-hand side quadrants), include lower efficiency/higher spending (Finland, Sweden, and Denmark) and higher efficiency/lower spending (Austria, Japan, Ireland, US).

3. How Should Government Intervene and Spend?

It is very difficult or perhaps even impossible to provide a simple and universally- appropriate list of ways in which governments should intervene in the economy, and of how much they should tax, spend and regulate. Different governments may aim at promoting different objectives, and there is no universally unquestioned way to select a list that may be optimal for all societies. That list may give prominence to economic growth, without much concern for how the growth is distributed among the citizens. It could give prominence to the promotion of important socio-economic indicators, giving more weight to the importance of some of them. It could promote protection against risks and it could choose the promotion of more equal income distribution, and others.

In the past, economic growth received much attention. In today's democratic countries the decision on the preferred objective must be made in the democratic political process. They must also respect basic, fundamental, human rights, to protect minorities from possible excesses promoted by the majority including protecting property rights, as stressed by the school of public choice. In fact, this has been a basic condition for many constitutions.

Whatever is the main objective chosen, it is important that the government's intervention not be arbitrary and that it respects some basic rules, and be promoted efficiently in the use of scarce resources. It should not become a major drag on the economy, as it has in some countries in the past and present. The intervention should promote indicators that contribute to the economic and social welfare of the citizens. Too much emphasis on single variables, be these the growth of GDP, or changes in the Gini coefficient, is generally not desirable. Economists who suggest a single objective or a short list of objectives generally ignore the diversity of countries' situations. They, thus, risk stating criteria that often are not necessarily desirable or important.

Advanced countries have a different capacity to intervene, and different needs for their governments to do so, than developing countries. This difference has been recognized for a long time (see Newbery and Stern, 1986 and Tanzi, 1991, and the public finance literature related to developing countries). Countries with more even income distributions may have different reasons and justification for the government to intervene than countries that feature more inequality. Countries with more efficient markets, in which the incomes received are considered as genuinely incomes earned and not considered rents, have more trust in the market and thus less justifications for governments to intervene, than countries with less efficient markets.[1]

Governments with public employees who respect Weberian criteria of behavior have more ability to intervene successfully than those with less efficient, politically chosen, and less honest employees. When governments are less corrupt and more efficient, there is, in principle, more scope for government activity while inefficient, rent-seeking governments should be smaller (Dzhumasher, 2013). Additionally, countries that give more weight to the objectives of the collectivity (such as a more even income distribution or better dealing with universal risks), have more reasons for governments to intervene than countries where individual freedom is given more weight.

The first, main reason for government interventions is the provision of classic public goods. Of these, so-called pure public goods (defense, judiciary, and security) are a government intervention on which most economists have agreed. However, the real world problem with this intervention is that, while there is agreement that governments must intervene and must provide public goods, there is no guidance on how much of those goods should be provided. The theory does not provide a clear guidance on what is the optimal amount of defense spending; or how much

[1] For the link between governments spending and inequality see Afonso et al, 2010b.

should be spent for providing protection to individuals and property, or for justice, or infrastructures. The political debates in countries are focused not on whether the government should provide these public goods but on how much of them it should provide. In this, the theory is not helpful.

The debates are sharper in the provision of so-called quasi-public goods (education, health, and some others) for which the justification on allocation grounds, combines with that on equity grounds. When a government (or private providers financed by government) is not providing good public schools, or good health services *for everyone*, it is creating different income opportunities for different categories of citizens, and it is perpetuating income differences, across different categories of citizens. In this case, what has been called the "birth lottery" ends up determining the future life incomes of many citizens. Countries where citizens care about avoiding large, permanent, income differences among them are more likely to want publicly financed good schools and good health services *for everyone,* to create more equal opportunities. This objective requires higher taxes and public spending.

In this context, increasing tax rates will generate deadweight burden, and the heavier the tax rates, the less it may yield relatively. The loss of utility for the individual taxpayer increases with the square of the tax (Dupuit, 1844, pp. 281). Additionally, Afonso and Gaspar (2007) illustrate numerically that financing through distortional taxation causes excess burden (deadweight loss) magnifying the costs of inefficiency.

The above arguments have implications for the level of public spending, the composition of expenditure and for the structure of the tax systems needed to finance the spending. Public programs that aim at dealing with universal risks of all citizens, or that aim at creating more equal opportunities for more citizens are inevitably more expansive, and must be financed by broader-based taxes requiring lower marginal tax rates than means-tested programs. The alternative of having means-tested programs, accessible by only selected groups, and accompanying them with "tax expenditure", as the US and some other countries have done, reduces the level of taxes and spending but leads to other difficulties (Tanzi, 2020a).

Finally, an issue that has been highlighted by the 2020 coronavirus epidemics is that the traditional literature on the desirable economic role of the state has dealt with that role in equilibrium situations, and with changes at the margin of the equilibrium created by the political market (Tanzi, 2020c). In other words it has not dealt with shocks to the system when the role of

the state may become especially important. We know that during major wars, the government role changes and becomes particularly important. Price controls, rationing, appropriation of resources, very high marginal tax rates, and other policies that are not market friendly are used. Many years ago, Peacock and Wiseman, in a classic 1961 book, also argued that wars had even changed permanently the economic role of the state.

Shocks to the economic systems of countries may come from major wars, natural catastrophes, depressions, revolutions, pandemics and others calamities. Limited government intervention, may become less optimal in a world that is subjected to occasional, existential shocks. Such shocks often reveal major gaps in the role of the state. Still, it remains an open question whether additional resources for government would actually be spent on making countries more resilient against major shocks. The Coronavirus epidemics is a case in point: countries with very large public sectors and countries with smaller public sectors all struggle to address the issue.

With these considerations in mind, it comes to no surprise that there is no conclusive result on how big government should be and what its optimal size is. In some earlier work, two of the authors of this paper had suggested that when the promotion of several, un-weighted, socio-economic indicators is the objective of the policy, a level of public spending of around 30-35 percent of GDP may set the desirable limit (Tanzi and Schuknecht, 2000). And some earlier work by all three authors had focused on the quantitative connection that may exist between the level of public spending and some important socio-economic indicators (Afonso, Schuknecht and Tanzi, 2005, 2010a). They found that if these indicators reflect the desirable objectives, lower levels of public spending are possible.

As to the literature on the presumably "optimal" size of government, lower estimates of government spending are below 20% for certain advanced countries (Vedder and Gallaway, 1998). Many estimates are in the 30% to lower 40% range, though optima differ very much across countries (Tanzi and Schuknecht, 2000; Pecvin, 2004; Facchini and Melki, 2013; Fort and Magazzoni, 2010; Afonso and Schuknecht, 2019 and Schuknecht, 2020). Actual public expenditure, is mostly significantly higher, suggesting the potential for considerable expenditure savings in many countries, even when considering the need for some spare capacities in the provision of certain public goods such as health or defense for big shocks and emergencies. It could be added that some countries including Sweden, Canada and others in the 1990s reduced

dramatically public spending while suffering no visible consequences (Schuknecht and Tanzi, 2005).

4. The Size of Government from a Historical Perspective

4.1. Public spending since the late 19th century

Over the past 150 years, the size of government developed in line with the evolving thinking about its role and its capacity to raise taxes. See Tanzi, 2018. Moreover, in recent decades it reflected increasingly the growing role of social spending and the creation of welfare state.

In the late 19th century, at the time when laissez-faire was still the dominant economic philosophy, government only absorbed a very limited share of economic resources in the countries that are today's advanced economies. About 1870 when data on public finances started to be available in more countries, public expenditure averaged only 11.1% of GDP (Table 1).[2] Switzerland and Australia featured as "big" governments, exceeding 15% of GDP, while Sweden and the United States reported spending well below 1/10th of GDP. This picture had not changed much before the beginning of World War I, only that the later warring countries Austria, Germany and France joined the group of relatively "high" public spending. Public revenue in peace times was broadly in line with public expenditure, following a (mostly) unwritten rule of balanced budgets outside wars.

[Table 1]

With World War I, public expenditure and revenue increased considerably and the protagonists of World War I reported the highest expenditure ratios: Germany, France, Italy and the United Kingdom governments spent more than ¼ of GDP on the back of continuously high receipts after the war (Peacock and Wiseman, 1961). Just before World War II, public expenditure ratios had increased somewhat further to an average of 23.4% in today's advanced countries, partly in the wake of the Great Depression and partly already reflecting war preparations (Tanzi and Schuknecht, 2000). In the 90 years since 1870, the public expenditure ratio had hence roughly doubled from 1/9th to almost ¼ of GDP.

[2] We always refer to figures for general government, except in a few instances of historical data. General government includes central, regional and local government and public social security as its most important components.

4.2. Public expenditure since about 1960

In the next 60 years, public expenditure ratios doubled yet again and, yet again, there were some distinct waves. After World War II, war-related expenditure declined while some other spending increased so that the overall spending ratio increased modestly to 27.9% of GDP by 1960. This reflected the buildup of basic safety nets over previous decades as well as growing public services such as education and infrastructure. Some European countries reported the largest public sectors, with Austria and France reporting around 35% of GDP. Spain, Japan and Switzerland still featured total public expenditure below 20% of GDP. Revenue and expenditure had been mostly well aligned since World War II, so that on the back of strong growth and some inflation public debt had come down significantly across the industrialized world.

The period from 1960 to 1980 saw an unprecedented increase in public expenditure by 15 percentage points of GDP on average in just 20 years. This was the heydays of Keynesian economics when governments actively developed public services and welfare states to today's universal systems in many countries. While public expenditure averaged 43% in the reported country sample, it exceeded 50% of GDP in the small European countries of Austria, Belgium, the Netherlands, Denmark and Sweden. Another group of countries' governments, including most non-Europeans, were still "only" absorbing 1/3 of national resources, though this was also much above the level of 1960.

The biggest difference to earlier peacetime episodes was perhaps the growing mis-alignment of expenditure and revenue. By 1980 and growing afterward, fiscal deficits had become significant and chronic. Public debts grew together with the rising real interest rates and the fiscal deficits. , The strong increase in sovereign debt from the 1970s, continued throughout the coming decades in most countries.

In the1980s and 1990s, skepticism about "big" government and a more market-friendly intellectual environment (referred to above) resulted in a major slowdown in public expenditure dynamics. By the year 2000, average expenditure ratios were not very different from 1980. A significant number of countries had undertaken expenditure reforms in the 1990s so that expenditure ratios had declined significantly by more than 5% of GDP in Belgium, Ireland, the Netherlands, Sweden, and the United Kingdom. By contrast, Finland, France, Italy, Portugal, Spain and Japan experienced further increases in the public spending ratio by over 5% of GDP.

The 2000s were quite a roller-coaster but, on the whole, Keynesian and pro-government thinking had a major revival. Buoyant spending in the boom years of the early 2000s were succeeded by an explosion of public expenditure ratios following the financial crisis. A number of European countries undertook major expenditure savings and reforms.

The year 2017 saw total public expenditure ratios only moderately above the level of 2000 (43.9 vs 42.7% of GDP). However, this understates the "true" increase in the role of government. Discounting the decline in interest spending, primary expenditure (total minus debt service) increased by 3% of GDP. In 2017, Belgium, Denmark, Finland and France reported the highest public expenditure ratios above 50% of GDP. Most non-European countries reported public expenditure below 40% of GDP and spending in Ireland and Singapore were even below 30% of GDP. In several, notably large countries, including the US, France, Japan, Italy and Spain, deficits were still significant, leaving public debt much above pre-financial crisis levels.

In this environment, the COVID-19 or Coronavirus crisis struck in early 2020. First projections by the European Commission for most advanced countries suggested a further major increase in expenditure ratios in 2020 that was expected to partially reverse with the recovery projected for 2021. Expenditure ratios were expected to increase by an average of over 7% of GDP in 2020 (Annex Table 1). Top ratios would reach about 60% of GDP.

Rather than focusing on the details, it is more important to take note of the pattern: just as during the global financial crisis, expenditure ratios were expected to increase massively and very rapidly before declining again. In the global financial crisis, expenditure ratios increased between 4% of GDP in less affected countries and up to 11% of GDP in the most affected ones (Schuknecht, 2020).

4.3. Expenditure across country groups

It also interesting to look at public expenditure across country groups from a global perspective (Table 2).[3] Advanced countries had the highest expenditure ratios in the late 2010s. General government spending amounted to 42% of GDP in 2018 (Table 2a). Amongst emerging market economies in Europe and Asia, public expenditure ratios were typically close to those prevailing in the advanced countries with smaller government sectors. Most Eastern European

[3] See also OECD (2019a) for a discussion of budgeting and budget procedures and OECD (2019c) for an overview of spending categories and data.

countries feature public expenditure between 30 and 40 percent of GDP, and Russia and China fall into the same range (Table 2b).

[Table 2a, b]

The average for emerging and developing countries stood at 31.3% of GDP in 2018 and in a few countries, public expenditure was even below 20% of GDP (Table 2a and Annex Table 2). Setting these numbers in perspective with the history for advanced economies shows that the size of government in developing and emerging countries in the late 2010s was close to levels prevailing in advanced economies in the early 1960s. Europe reported the highest public expenditure ratio, near 44.3% of GDP in 2018. In much of Southern and Northern Europe, this ratio was closer to 50%.

Public expenditure in Latin and North America stood at 36.6% and Asia/Oceania at 30.5%. It is interesting to note that amongst the large emerging economies outside Europe, Brail reports the highest expenditure ratio at 41.6%, which is near the industrial country average. China at 37.6%, India at 27.7% and Indonesia at 22.2% show much smaller public sectors.

In Africa, spending ratios averaged 27.3%, ranging from over 40% of GDP in South Africa to well below 20% in Ethiopia and Nigeria. These differences reflect differences in development stages (poorer countries spend and tax less) and in the assigned role of government (Asia and America seeing less of a role for government than much of Europe). They also reflect the ability of governments to raise tax revenue (see Tanzi, 2018).

Naturally, it is not straightforward to accurately identify the effects of public sector spending on outcomes such as economic growth, and distinguish the effect of government spending from other determinants. Moreover, comparing expenditure ratios across countries implicitly assumes that production costs for public services are proportionate to GDP per capita.

4.4. Expenditure obligations outside the budget

Over the past three decades, it has become increasingly evident that budgetary expenditure do not provide a complete picture of government expenditure obligations. Due to the fact that population aging, expenditure on old-age benefits, and notably health, pensions and long-term care, are likely to create dynamic needs in the future. The increase in social expenditure in the coming

three decades could well be several percent of GDP even under optimistic assumptions (OECD 2017 and 2019; EU Commission, 2018).

Moreover, financial crisis (and, most recently, the Coronavirus crisis) periodically cause sustained major expenditure increases. In the Global Financial Crisis, countries like Ireland or Greece spent more than 30% of GDP on bank recapitalization (IMF, 2015). Other transmission channels from the financial sector to public finances can also lead to significant costs (Schuknecht, 2019).

5. The Composition of Public Expenditure

5.1. Public expenditure composition from an economic perspective

Total public expenditure can be decomposed in two ways. From the economic perspective, public expenditure consists of public consumption or real expenditure (broadly, spending on goods and services, wages and salaries), investment (mostly infrastructure and buildings), the service of public debt (interest payments), transfers (mostly social benefits) and subsidies (to enterprises or consumers). International organizations such as the OECD and the IMF publish the relevant statistics and describe the underlying policies in many publications (see Bibliography for a selection).

In the advanced countries, public consumption and transfers/social benefits are the most important expenditure components, accounting together for roughly 80% of spending (Table 3a). Wages and salaries for civil servants account for over 20%. Public investment is another 5-10% of the total.[4] Subsidies and interest expenditure are rather small components in most advanced countries.[5]

[Table 3]

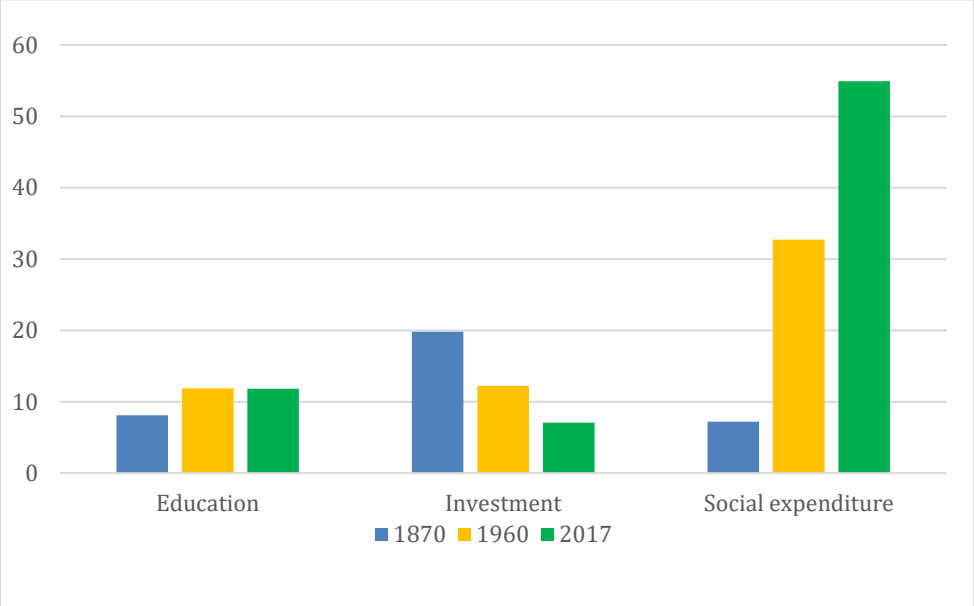
The expenditure composition, however, changed significantly over the past 150 years. For advanced countries, public investment as a share of total public expenditure has almost continuously declined since the late 19th century from about 20% to well below 10% of total spending in the 2010s (Chart 2). In recent decades, it also declined as a ratio of GDP. By contrast,

[4] See IMF (2019) for a discussion of public investment and its management. Public investment, some argue, is always productive by definition. However, there are also studies finding the opposite with high spending correlating with much corruption (Tanzi and Davoodi, 1998).

[5] There is a considerable literature on subsidies and their role in the economy. See e.g. Beers and de Moor (2001).

social expenditure, which was very low 150 years ago, had increased to over half of total spending in the 2010s. Social expenditure had grown from less than 1% of GDP to almost ¼ of GDP in 2016.[6]

Chart 2 – The Rising Share of Social Expenditure
(% of Total Public Expenditure)



Sources: Schuknecht, 2020.

When looking across country groups, spending on public consumption, compensation of employees, investment and even subsidies is relatively similar between advanced and emerging/developing countries, even though individual country differences may, of course, be huge. Africa features somewhat higher subsidies, Asia reports above average public investment spending. Differences are significant for debt service and Africa and to a lesser extent Latin America use a larger share of public expenditure to service their public debt. Advanced countries have been benefitting from near zero interest rates in the 2010s so that interest spending averaged little over 1% of GDP in 2018.

The biggest difference across country groups is on transfers, which comprises mainly social benefits. Advanced country spending at 21.4% of GDP is twice as high as developing and emerging

[6] This risks of crowding out other, more productive spending and undermining fiscal sustainability. Schuknecht and Zemanek (2020) call this the risk of social dominance in public expenditure.

country spending of 9.9% of GDP on this category. Europe is the biggest spender, Africa reports the lowest figures of 8.5% of GDP on average. Asia and the Americas report spending of 12.6% and 13.2%, respectively. In fact, the difference in the size of welfare states explains most of the differences in total spending across regions and continents.

5.2. Public expenditure from a functional perspective

When looking at public expenditure from a functional perspective, there are a number of categories worth looking at in some more detail. It is interesting to note that the classic public goods – education, health, defense and public order and safety – "only" absorb a relatively modest share of public resources in all country groups (Table 3b).[7] Governments in advanced countries spend about 4% of GDP or 12% of their total outlays on education. The average for emerging and developing countries is somewhat lower at 3.4% of GDP, which is also slightly above 10% of total outlays. However, again, there is considerably more variation across individual countries (Annex Table). All regions outside Europe spend between 3 ½ and 4% of GDP. For Africa, this is the highest share of total spending, at about 15% which is in part due to the greater number of children in school age. [8]

Public health spending is highest in advanced countries and notably in Europe at over 6% of GDP. The equivalent figure is less than ½ of that (2.3% of GDP) for developing and emerging economies and only 1.5% of GDP in Africa. Generally, countries where citizens live longer, have higher public health spending.

Spending on external and internal security – defense and public order and safety – is quite similar across country groups. The combined spending is 3% of GDP, or about 7-10 percent of total spending. Environmental spending is a relatively new category absorbing less than 1% of GDP in all groups. Advanced countries spend relatively much more than developing and emerging economies. Asia/Oceania and Europe spend the most but still, on average less than 1% of GDP. However, this is not surprising given that environmental protection is promoted mainly through regulation and taxation.

Taking these categories (excluding health) together, they amount to 10-15% of GDP or about 30-35% of total public expenditure. This is not much, given the importance of these

[7] See OECD (2017a, 2017b, 2018a and 2019b) for a discussion of education, pension and health expenditure.
[8] For government spending efficiency assessments on education and health see, notably, Afonso and St. Aubyn (2006, 2011).

objectives. It illustrates that most public spending is on other things and, notably, on social expenditure.

5.3. Social Expenditure

Given its growing importance, social expenditure deserves some further discussion. Social expenditure, as defined by the OECD, includes socially related transfers and subsidies and certain other government expenditure for social purposes. The main categories are pensions, health, long-term care, family and child benefits and unemployment. Education is mostly not included (except below primary education).

In 1960, the first year for which detailed, comparable cross-country data from the OECD became available, advanced countries spent on average almost 10% of GDP on social expenditure (Table 4). The range was enormous, from 3.5% in Japan to 15.4% in Germany. By 1980, social expenditure had grown to 16.6% of GDP as the period after World War Two witnessed the birth and expansion of many social programs. Subsequently, the ratio grew another 2% of GDP per decade to 24.1% on average by 2016.

[Table 4]

As regards individual countries, in 2016, France spent almost one third of GDP on social matters (31.5%) followed closely by Italy and several smaller European countries. A number of other advanced countries as well as all of emerging Eastern Europe reported spending below 20% of GDP (Schuknecht, 2020). In Korea, this figure was only 10.4% as the welfare state was still less developed. For emerging and developing countries outside Europe, comparable figures are not available but social benefits and transfers were typically lower.

The main components of social expenditure are public pensions, public health and, increasingly, long term care. These are all related to aging of the populations. Pension spending increased from an average of 4.5% in 1960 to 9.4% of GDP in 2014-15 in the country group of Table 4. The health-spending share almost tripled from 2.4% to 7% of GDP in this group. Long term care spending was virtually inexistent in 1960 and reached several percent of GDP in a number of countries in the 2010s (OECD, 2017a and 2017b, and 2019b).

The main driver of social expenditure used to be the expansion of programs to universal coverage and to technical progress in health. In recent years, demographics have become the most

important driver. It will contribute to further strong increases in the social expenditure ratio in the coming decades, if policies and benefits are not adjusted (see above).

5.4. The Financing of Public Expenditure

Government expenditure needs to be financed either from revenue, from debt or through external grants or sales of public assets. Most expenditure is financed by domestic revenue, but the figures also show, that most countries and country groups run deficits and finance part of their spending from other sources (fees, fines at al.). In 2018, the unweighted average revenue for advanced countries of 42.2% showed a broadly balanced budget when looking at the unweighted average. However, this figure masked the fact that most large advanced countries (including the United States, Japan, and several large European countries) reported significant deficits. Emerging and development countries featured revenue of 28% and thus notable average deficits. For Africa, the revenue shortfall amounted to over 5% of GDP.

It is also worthwhile throwing a quick glance at the revenue composition (Table 3c). Advanced countries manage to finance over one third of their spending or 15.2% of GDP with direct taxes on labour income and on profits. Indirect taxes are much more important in developing and emerging countries where they finance almost a third of all spending (9.8% of GDP). This figure is about 40% in Africa. Social security contributions are quite important in advanced countries and contribute 9% of GDP to total revenue. This figure is 10.8% in Europe but only 4.4% in the Americas, 2.7% in Europe and as low as 0.5% of GDP in Africa.

6. Conclusions

Economists today would probably all agree that governments should provide certain core public goods via public expenditure: defense and internal security, public infrastructure, public education, and basic social safety nets. When looking at the size of the state that finances these goods and services, however, there are remarkable differences over time and across countries.

150 years ago, when the role of government started to develop in the direction of modern states, governments of today's advanced economies spent barely more than one tenth of national income. By 1960, 60 years ago, the picture had changed completely and governments spent almost 30% of GDP as public goods and services and social security systems expanded. By the 2010s, advanced countries spent typically between 30 and 55% of GDP, with social expenditure absorbing

an ever-greater share of total spending. Spending on security, infrastructure and education absorbed little more than 10% of GDP.

While a number of advanced countries spend not much more than 30% of GDP, there are also bigger governments whose social and economic performance seems to be high. Hence, there is no "optimal" size of government even though most if not all governments could probably become more efficient and, thus, spend less. Moreover, financial (or health) crises can result to large, sudden increases in expenditure ratios. Countries with low spending (and low public debt), by definition are likely to have more buffers to accommodate such crises without doubt about the sustainability of public finances.

By contrast, emerging and developing countries typically feature much smaller states than advanced countries and there are few exceptions to this. Some countries are fast growing and with small states (such as Vietnam or Indonesia) so that spending of 20-30% of GDP seems sufficient for them, – similar to Western countries around 1960. Some countries, by contrast feature governments that are very "poor" with low revenue and inefficient services contributing to little growth and development. An expenditure ratio of 10-15% of GDP is not enough to finance a well-functioning modern state.

Looking forward, the challenges across country groups, therefore, look very different. Advanced countries need good and efficient, not necessarily bigger government, and sometimes government may perhaps, already be too big. Moreover, they must make sure that the size of government remains financeable. Core services need to be of high quality and well-financed and social expenditure or financial crisis costs must not undermine fiscal sustainability.

Emerging economies may not need to spend more but they also need to have governments adapting to the needs of themselves being more and more advanced economies. Increasing demands for welfare benefits and population aging are likely to raise their size of government. Developing countries often still struggle with providing well-functioning services, basic safety nets, and a strong tax administration. However, more and more governments are demonstrating that progress is feasible also in that country group.

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Table 1 - Total Expenditure by General Government (% of GDP)

	About 1870	About 1913	About 1920	About 1937	1960	1980	2000	2017
Euro area								
Austria	10.5	17.0	14.7	20.6	35.7	50.0	51.0	49.1
Belgium 1/	..	13.8	22.1	21.8	30.3	54.9	49.1	52.2
Finland	..	..	..	..	..	40.0	48.0	53.7
France	12.6	17.0	27.6	29.0	34.6	46.3	51.4	56.5
Germany	10.0	14.8	25.0	34.1	32.9	46.9	44.7	43.9
Greece	..	..	..	..	..	..	46.4	48.0
Ireland 2/	..	..	18.8	25.5	28.0	48.9	30.9	26.1
Italy	13.7	17.1	30.1	31.1	30.1	40.6	46.6	48.9
Netherlands 1/	9.1	9.0	13.5	19.0	33.7	55.2	41.8	42.6
Portugal	..	..	..	..	..	32.3	42.6	45.9
Spain 1/	..	11.0	8.3	13.2	18.8	32.2	39.2	41.0
Other EU								
Denmark	..	..	..	..	..	52.7	52.7	51.9
Sweden	5.7	10.4	10.9	16.5	31.0	60.1	53.4	49.1
UK	9.4	12.7	26.2	30.0	32.2	47.6	35.4	41.1
Other advanced economies								
Australia	18.3	16.5	19.3	14.8	22.2	33.6	36.4	36.4
Canada	..	..	16.7	25.0	28.6	41.6	41.4	41.1
Japan	8.8	8.3	14.8	25.4	17.5	32.0	38.0	39.2
Korea	..	..	..	..	..	23.0	24.7	32.4
New Zealand	..	..	24.6	25.3	26.9	38.1	37.5	38.7
Singapore	..	..	..	..	..	..	19.6	..
Switzerland	16.5	14.0	17.0	24.1	17.2	32.8	33.8	34.7
US	7.3	7.5	12.1	19.7	27.0	34.9	33.7	37.8
Average 3/	11.1	13.0	18.9	23.4	27.9	43.2	42.7	43.9

Sources: Schuknecht (2020), based on OECD, Ameco, WEO, Tanzi and Schuknecht (2000). Year indicated or nearest year available.
1/ Central government until 1937.
2/ When taking GNP instead of GDP for Ireland, the ratios for 2000 and 2017 are 35.5% and 32.9% respectively.
3/ Unweighted, excluding SGP (Singapore) and KOR (South Korea).

Table 2 – Total expenditure (% of GDP)

a. Country Groups		**b.** Eastern Europe, Russia and China	
	2017/18		2017
Advanced	42.0	Czech Republic	38.9
Emerging & Developing	32.5	Estonia	39.2
G20	38.1	Latvia	33.5
		Lithuania	29.7
Africa	28.2	Hungary	46.5
Latin and North America	36.6	Poland	41.2
Asia/Oceania	30.6	Slovakia	40.4
Europe	44.3		
		Russia	34.8
		China	32.3

Sources: OECD, IMF, Schuknecht (2020).

Table 3 – Public Expenditure Composition, General Government, 2018 or latest available year (% of GDP)

a. Economic classification

Country groups	Total spending	Public consumption	Compensation of employees	Government investment	Net interest payments	Transfers
OECD	41.5	16.6	9.9	3.3	1.2	19.7
Advanced	42.0	16.7	9.9	3.3	1.1	21.4
Emerging & Developing	31.3	16.9	8.1	3.1	2.2	9.9
Africa	27.3	NA	7.6	2.8	3.0	8.5
Latin and North America	36.6	16.8	9.5	2.6	2.5	13.2
Asia/Oceania	30.6	13.8	6.9	4.2	1.0	12.6
Europe	44.3	17.7	10.6	3.2	1.2	23.0

Note: Group averages are simple averages of the countries included for each region.
Source: OECD, IMF, BCG, 2018 or latest available year. See Annex for detailed notes.

b. Functional classification

Country groups	Education	Health	Defense	Public order and safety	Environmental protection	Social Protection
OECD	5.0	6.6	1.4	1.6	0.7	15.6
Advanced	5.0	6.7	1.5	1.6	0.7	15.9
Emerging & Developing	3.4	2.3	1.2	1.6	0.2	6.0
Africa	3.6	1.5	1.2	1.5	0.2	2.9
Latin and North America	3.9	4.4	1.3	1.7	0.2	7.7
Asia/Oceania	3.7	3.8	1.6	1.4	0.6	7.0
Europe	4.9	6.4	1.3	1.6	0.7	17.8

Note: Group averages are simple averages of the countries included for each region.
Source: OECD, IMF, BCG, 2018 or latest available year. See Annex for detailed notes.

Table 4 – Social Expenditure (% of GDP)

	1960	1980	1990	1999	2007	2009	2016
Euro area							
Austria	15.0	22.0	23.2	25.8	25.1	27.5	27.8
Belgium	11.4	23.1	24.4	24.6	24.9	28.6	29.0
Finland	8.2	17.7	23.3	23.8	22.9	26.9	30.8
France	12.0	20.2	24.3	28.6	28.0	30.5	31.5
Germany	15.4	21.8	21.4	25.5	24.1	26.7	25.3
Greece	3.3	9.9	15.7	18.0	20.6	23.7	27.0
Ireland 1	7.1	15.7	16.8	13.7	15.8	22.2	16.1
Italy	10.7	17.4	20.7	22.8	24.7	27.7	28.9
Netherlands	9.6	23.3	24.0	19.1	19.9	21.6	22.0
Portugal	..	9.5	12.2	17.2	21.8	24.6	24.1
Spain	..	15.0	19.2	19.8	20.8	25.4	24.6
Other EU							
Denmark	..	20.3	22.0	24.5	25.0	28.3	28.7
Sweden	12.6	24.8	27.2	28.0	25.5	27.7	27.1
UK	9.7	15.6	15.2	17.7	19.5	23.0	21.5
Other advanced economies							
Australia	5.9	10.3	13.1	17.3	15.9	17.0	19.1
Canada	8.1	13.3	17.5	16.0	16.2	18.0	17.2
Japan	3.5	10.2	11.1	16.0	18.5	21.9	23.1
Korea	..	..	2.7	5.8	7.1	8.5	10.4
New Zealand	11.4	16.7	20.5	18.7	18.1	20.4	19.7
Singapore							
Switzerland	4.2	12.8	12.1	17.0	16.8	18.6	19.7
US	7.0	12.8	13.2	14.2	15.9	18.6	19.3
Average 2/	9.1	16.6	18.9	20.4	21.0	23.9	24.1

Source: Schuknecht, 2020 based on OECD, Social Expenditure.
1/ When taking GNP instead of GDP for Ireland, the ratios for 2000 & 2017 are 15.8% and 19.6%.
2/ Unweighted, excl. KOR and SGP.

Table 5 – Total Revenue and Revenue Composition, General Government, 2018 or latest available year (% of GDP)

Country groups	Total revenue	Direct taxes	Indirect taxes	Social contributions
OECD	41.0	13.9	11.7	8.8
Advanced	42.2	15.2	11.7	9.0
Emerging & Developing	28.0	7.2	9.8	3.0
Africa	21.9	7.4	8.7	0.5
Latin and North America	32.3	8.0	8.9	4.4
Asia/Oceania	28.9	8.9	9.0	2.7
Europe	44.3	14.2	12.8	10.8

Note: Group averages are simple averages of the countries included for each region.
Source: Total revenue averages are based on data from the OECD (2018), except for Argentina, Australia, China, Colombia, Indonesia, Japan, Korea, Mexico, New Zealand, Russia, Switzerland, United States (OECD, 2017), Brazil, Chile (2016), Cote d'Ivoire, Ethiopia, Kenya, Saudi Arabia, Singapore, South Africa, Thailand, Vietnam (IMF, 2018), Egypt (IMF, 2015). Averages for taxes and social contributions are based on data from the IMF (2018), with the exception of Egypt, where data is from 2015; Mexico, India, 2017; New Zealand, 2019; data for Vietnam and India are from BCG, 2013 and 2017 respectively.

Annex

Table 1 – Total Expenditure by General Government (% of GDP)

Country	2019	2020	2021
Austria	48.2	56.4	50.9
Belgium	52.2	59.6	54.2
Denmark	49.6	59.2	53.5
Finland	53.3	59.8	56.8
France	55.6	62.7	57.1
Germany	45.4	54.2	48.3
Greece	46.3	55.2	49.0
Ireland	24.8	29.6	26.6
Italy	48.7	59.1	52.2
Netherlands	41.9	47.7	45.6
Portugal	42.7	49.3	44.5
Spain	41.9	49.7	45.6
Sweden	49.3	55.1	52.0
Other			
Switzerland	35.4	39.8	36.4
United Kingdom	41.0	48.6	43.4
Japan	39.1	42.8	42.7
United States	38.3	49.2	39.0
Average	44.3	51.6	46.9
European Union	46.7	54.7	49.6

Source: AMECO, Spring 2020. Unweighted average; EU weighted average.

Table 2 – Public Expenditure, General Government, by Countries and Country Groups, 2018 or latest available year (% of GDP)

Countries	Total spending	Public consumption	Intermediate consumption	Compensation of employees	Government investment	Net interest payments	Transfers	Subsidies
Cote d'Ivoire	23.32	NA	NA	7.10	2.37	1.83	8.07	2.44
Egypt	32.76	NA	NA	8.22	2.15	7.33	13.36	6.15
Ethiopia	14.19	NA	NA	1.27	3.74	0.50	7.00	0.00
Kenya	28.24	NA	NA	8.81	2.17	3.70	6.38	0.72
Morocco	37.59	NA	NA	5.29	NA	1.14	13.56	5.95
Nigeria[1]	12.50	NA	NA	NA	3.30	NA	1.24	NA
South Africa	42.28	22.62	NA	14.63	3.20	3.71	10.16	0.67
Argentina[1]	41.8	NA	NA	11.70	2.00	3.77	9.27	1.40
Brazil	41.60	20.87	3.47	8.44	1.88	4.55	19.51	0.29
Canada	41.32	NA	7.29	12.46	3.86	1.67	NA	0.93
Chile	23.8	16.64	NA	8.81	2.31	0.91	12.47	1.09
Colombia	43.68	15.52	5.54	7.28	3.39	1.12	11.91	0.11
Mexico	26.34	NA	3.25	8.44	1.69	2.14	11.11	0.37
United States	37.95	14.08	6.17	9.50	3.17	3.37	14.93	0.31
Australia	36.71	17.08	7.88	9.05	3.61	1.14	14.38	1.21
China	37.10	NA	NA	6.37	5.64	0.55	NA	NA
India	27.70	NA	NA	1.44	NA	3.11	NA	NA
Indonesia	22.17	9.69	3.94	5.32	3.70	1.36	3.81	1.13
Korea	32.44	13.39	4.33	6.83	5.07	-0.46	14.01	0.31
Japan	38.74	12.75	3.66	5.41	3.87	0.26	24.09	0.55
New Zealand	38.81	16.19	6.26	8.78	4.09	0.67	16.90	0.33
Saudi Arabia	40.18	NA	NA	16.45	NA	0.51	10.66	0.54
Singapore[1]	13.88	NA	NA	3.78	NA	NA	NA	NA
Thailand	21.16	NA	NA	6.01	3.60	1.01	4.50	0.82
Vietnam	27.49	NA	NA	NA	NA	1.51	NA	NA
Austria	48.49	17.79	6.08	10.39	2.98	1.33	27.35	1.51
Belgium	52.38	17.20	4.08	12.25	2.45	1.94	31.54	3.31
Denmark	51.41	NA	8.80	15.28	3.31	0.15	NA	1.73
Finland	53.14	NA	10.71	12.31	4.07	0.03	NA	1.18
France	56.13	NA	4.98	12.52	3.48	1.61	NA	2.68
Germany	43.87	13.69	4.78	7.57	2.26	0.66	28.49	0.85
Greece	46.74	NA	4.38	11.76	2.34	3.14	NA	0.84
Ireland	25.74	NA	3.41	6.98	2.07	1.59	NA	0.53
Italy	48.58	NA	5.58	9.78	2.14	3.53	NA	1.49
Netherlands	42.16	14.95	5.82	8.23	3.15	0.70	23.98	1.15
Norway	48.69	23.30	6.74	14.73	5.43	-2.37	21.26	2.06
Poland	41.55	NA	5.56	10.11	4.67	1.27	NA	0.43
Russia	37.63	15.94	5.78	10.25	3.95	0.89	15.23	0.62
Spain	41.34	17.32	5.02	10.51	2.14	2.27	21.25	1.00
Sweden	49.88	24.28	7.99	12.67	4.75	-0.05	23.94	1.62
Switzerland	34.15	13.53	4.92	7.60	3.01	0.17	17.85	3.09
Turkey	34.45	NA	5.50	8.03	NA	3.03	NA	NA
United Kingdom	40.84	18.56	7.96	8.96	2.61	2.11	19.42	0.86

Source: Data on total expenditure are from OECD (2018), except for Argentina, Australia, Colombia, China, Indonesia, Japan, Korea, Mexico, New Zealand, Russia, Switzerland, United States (OECD, 2017), Brazil, Chile (OECD, 2016), Cote d'Ivoire, Kenya, Nigeria, Saudi Arabia, South Africa, Singapore, Thailand (IMF, 2018), Egypt (IMF, 2015), Morocco (IMF, 2011), Ethiopia (BCG, 2018), Vietnam (BCG, 2013).
Data on government investment are from OECD (2018), except for Argentina, Australia, China, Chile, Colombia, India, Japan, Korea, Mexico, New Zealand, Russia, South Africa, Switzerland, United States (OECD, 2017), Côte d'Ivoire, Thailand (IMF, 2018), Egypt (IMF, 2012), Ethiopia and Nigeria (BCG, 2013), Kenya (BCG, 2012),
Data on net interest payments are from OECD (2018), except for Australia, Colombia, India, Japan, Korea, Mexico, New Zealand, South Africa, Switzerland, United States (OECD, 2017), Argentina, Chile, Cote d'Ivoire, Kenya, Russia, Thailand, Turkey, Saudi Arabia, Vietnam (IMF, 2018), China (IMF, 2017), Egypt (IMF, 2015), Ethiopia (BCG, 2018), India (BCG, 2017).
Data on transfers are from IMF (2018), except for Mexico (2017), Egypt (2015), Morocco (2011). Data is from BCG for Ethiopia (2018) and Nigeria (2013).
Data on subsidies are from OECD (2018), except for Argentina, Australia, Colombia, India, Japan, Korea, Mexico, New Zealand, Russia, Switzerland, United States (OECD, 2017), Chile, Côte d'Ivoire, Kenya, Thailand, Saudi Arabia, South Africa (IMF, 2018), Egypt (IMF, 2015), Ethiopia (BCG, 2018).
1 Data for Argentina, Nigeria and Singapore is for Central Government only.

Table 3 (cont.)

Countries	Education	Health	Defense	Social Protection[2]	Environmental protection	Public order and safety
Cote d'Ivoire	4.87	1.31	1.48	0.18	0.31	0.91
Egypt	3.93	1.64	1.97	9.50	0.10	1.97
Ethiopia	2.10	0.58	0.57	0.74	0.06	0.30
Kenya	4.63	0.69	1.64	1.11	0.13	1.68
Morocco	NA	NA	NA	NA	NA	NA
Nigeria	0.53	0.26	0.38	0.38	NA	0.45
South Africa	5.67	4.36	0.92	5.55	0.31	3.55
Argentina[1]	1.32	1.66	0.39	1.15	0.13	1.01
Brazil[1]	2.35	2.12	0.73	14.63	0.07	1.13
Canada	NA	NA	NA	NA	NA	NA
Chile	5.22	3.98	0.98	6.23	0.20	2.03
Colombia	4.84	4.88	1.33	8.96	0.55	2.20
Mexico	NA	NA	NA	NA	NA	NA
United States	6.00	9.33	3.16	7.64	0.00	2.01
Australia	5.78	7.23	2.25	9.68	0.91	1.97
China	3.73	2.98	1.29	7.22	0.73	1.53
India	0.49	0.28	1.56	NA	NA	NA
Indonesia	2.76	1.40	0.72	1.28	0.21	1.07
Korea	5.18	4.27	2.45	6.61	0.77	1.34
Japan	3.32	7.64	0.92	16.15	1.16	1.22
New Zealand	5.83	6.84	1.04	10.77	0.92	1.98
Saudi Arabia	NA	NA	NA	NA	NA	NA
Singapore[1]	2.71	2.13	2.96	0.96	0.33	1.21
Thailand	3.07	1.24	1.24	3.00	0.05	1.17
Vietnam	NA	NA	NA	NA	NA	NA
Austria	4.85	8.18	0.59	20.53	0.37	1.36
Belgium	6.33	7.67	0.80	19.55	0.91	1.72
Denmark	6.49	8.38	1.17	22.38	0.41	0.94
Finland	5.68	7.07	1.26	24.86	0.20	1.14
France	5.42	8.03	1.79	24.34	0.95	1.64
Germany	4.11	7.10	1.05	19.35	0.63	1.53
Greece	3.87	5.25	2.49	19.42	1.34	2.11
Ireland	3.26	5.14	0.27	9.48	0.38	1.03
Italy	3.82	6.82	1.29	20.86	0.90	1.84
Netherlands	5.13	7.57	1.15	15.89	1.38	1.86
Norway	5.60	8.54	1.70	19.75	0.91	1.16
Poland	4.90	4.68	1.69	16.44	0.39	2.13
Russia	3.45	3.17	1.78	11.54	0.15	2.20
Spain	3.99	5.95	0.89	16.55	0.86	1.84
Sweden	6.77	6.91	1.18	20.20	0.31	1.31
Switzerland	5.64	2.18	0.83	13.54	0.62	1.70
Turkey	3.71	5.13	1.83	9.87	0.38	2.09
United Kingdom	4.60	7.43	1.94	15.20	0.72	1.81

Source: Data for OECD countries except New Zealand and Turkey is from OECD (2017). Data is from IMF for New Zealand (2019), Argentina, Brazil, Russia, Singapore, South Africa, Thailand and Turkey (2018), and Egypt (2015). Data is from BCG for Ethiopia and Kenya (2018), India (2017), Cote d'Ivoire (2014) and Nigeria (2013).

1 Data for Argentina, Brazil and Singapore are Central Government only. 2 Social protection expenditure includes spending related to sickness and disability, old age, family and children, unemployment, housing, social exclusion, and R&D on social protection.

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