Political Economy of the Size of
the Government

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Abstract *Economic growth may show as countries reach a more advanced stage of economic development that also sees an increase in demand for government, but without a connection. The welfare state paradigm was on the rise since Second World War and indicates numerous signs that the tide of big governments is receding for efficiency and effectiveness. The efficient size of the government will always be a matter of dispute, but very few would be prepared to advocate unlimited government. It is just as incumbent on the advocates of big government. At some point, further expansion of government no longer leads to output expansion, as growth reducing aspects government grow larger, and the growth enhancing feathers of government diminishes. Literature on theories of government growth including monopoly and leviathan has been analyzed. The political determinants of government size, relationship between the size of government and economic growth and with evidences from the developed countries are analyzed. Paradigm shift with regards to public policy from welfare state to optimal size of government argument is discussed. Finally, a search for the right size of the cabinet for the Government of Bangladesh is proposed.*

1.   Introduction

The relationship between the size of government and economic development is more complex than many classical liberals would like to believe. There is a robust negative correlation between government size and economic growth, although

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establishing the direction of causality is a more complex issue (Andreas Bergh and Magnus Henrekson, 2010). Economic growth may slow as countries reach a more advanced stage of economic development that also sees an increase in demand for governments, but without a causal connection. Growth in governments can also give rise to a drive in search for greater efficiencies on the part of reform-oriented politicians, making government growth more sustainable and increasing the efficient size of governments. The expected negative relationship between government and economic growth will be weakened to the extent that governments successfully adopt market-oriented policies designed to ease the revenue and other constraints on their expansion. As we shall see, the Henry tax review process and recommendations can be interpreted in this light. These efficiency gains have led some social democrats to claim that growth in government has been a 'free lunch.'

The size of government as a share of the economy has been on a rising trend since the Glorious Revolution of 1688–89, which established Britain as a modern constitutional democracy (Greg Clark 2007). International conflicts such as the Napoleonic Wars and World Wars I and II had a ratchet effect, with the government's share of the economy remaining above its pre-War level in the wake of these conflicts. An important exception to this overall trend was the nineteenth century, during which the government's share of national income declined from its Napoleonic Wars peak to levels of more than a century before. The period after 1815 was an era of relative international peace and increased globalization. The world economy was in some ways more integrated in the late nineteenth century than at any time since, given the general absence of border controls and the considerable international mobility of labor and capital. However, we will see that globalization has mixed implications for the size of government.

The brief trend to smaller governments in the nineteenth century was reversed from around 1900 onwards, aided by the two world wars, the Great Depression, and the rise of the social welfare state in the post-World War II period. The growth of government spending in the twentieth century was documented by Tanzi and Schuknecht, who noted that countries with relatively smaller governments have economically outperformed their bigger government counterparts, without underperforming on a broad range of social, environmental and other indicators. This implies that many governments throughout the developed world likely surpassed their efficient or optimal size from around 1960 onwards (Vito Tanzi and Ludger Schuknecht 2000).

Growth in the size and scope of governments have been a common feature of most developed economies since the beginning of the twentieth century. The recent

global financial crisis has provided renewed impetus to the size and role of governments, consistent with the historical experience with war and economic crises. While being small relative to many comparable countries, the size and scope of the government in Australia has increased over time on a number of metrics: the tax share of GDP, legislative outputs, the size of the federal executive, and the number and scope of federal government departments and agencies. Explanations for the growth in government can be broadly divided into demand- and supply-side models, as well as exogenous explanations that reference factors such as technology, demography, specific historical events, and ideology. The various hypotheses that have been advanced to explain government growth are often unable to yield predictions about the optimal or equilibrium size of government. By the same token, theories of government size struggle to explain long-run trends in government growth.

Empirical testing of the various theories is complicated by the potential for observational equivalence among the various hypotheses, which need not be mutually exclusive. As Durevall and Henrekson suggest, the search for a 'grand explanation' of growth in government may be 'futile' (Dick Durevall and Magnus Henrekson). However, many of the historical drivers of growth in government such as demographic factors are themselves bounded and growth in government is constrained by factors such as the efficiency costs of taxation. Governments like those in the United States, the United Kingdom, the European Union, and Japan are increasingly pushing the limits of these fiscal and other constraints, although it remains to be seen whether this leads to acute fiscal crisis, fiscal reform, and smaller government or secular stagnation based on muddling through under big government. While many governments have almost certainly exceeded their optimal or efficient size, the long-run equilibrium size of government in developed countries such as Australia, if indeed there is one, remains unclear.

The absolute size of government is less important than the constitutional, legal and other constraints under which governments function. Growth in governments is of concern largely because it is symptomatic of a relaxation of the constraints that have traditionally bound it. The relaxation of some of these constraints is welcome, for example, the expansion in the potential tax base associated with the growth of formal and more extensive markets and reduced household production. As markets and other voluntary interactions become more extensive and complex, the demands on government increase, but government effectiveness decreases as knowledge in society also becomes more specialized and dispersed. This argues against the increased centralization power and decision-making that often accompany growth in governments.

To be effective advocates of limited government, classical liberals need to acknowledge and better understand the forces driving the long-run growth in governments. While classical liberals view government as being less efficient than markets in most contexts, governments may grow in part because they are successful in finding greater efficiencies in their activities. This in turn can be expected to undermine the negative correlation between government size and economic growth and weaken critiques of big government sizes based mainly on efficiency arguments. Classical liberals have traditionally argued for policies that would improve the efficiency of specific government tax and spending programs, but such policies need to be located in a broader framework of advocacy for the rules and institutions that support limited government.

1.1   The Rise and fall of the Welfare State Paradigm

As understood by Thomas Kuhn (1962/1970) in his study of scientific revolutions, paradigms are frameworks of concepts and assumptions that organize and explain experience. Over time, anomalies accumulate that become too difficult for the reigning paradigm to resolve; eventually it breaks down and is replaced by a new paradigm. J. M. Keynes is a central figure in the emergence of the welfare-state paradigm, which he elaborated by rejecting the two extremes of state socialism and laissez faire and defining a middle ground between them. This new paradigm sanctioned 'the enlargement of the role of government' for the purpose of correcting deficient demand (Keynes, 1936:380-1). The problem with the new paradigm was that it consisted of the middle ground between two extreme options in an extreme case: the Great Depression. After the Western economies recovered, growing liberalization of international trade and (later) of capital flows challenged the role and competence of government's economic management. Eventually, the welfare state reached its limit in the 1990s, when fiscal deficits and public debt grew to proportions that destroyed government's ability to intervene effectively: additional government spending raises interest rates, which negates any stimulus it provides to demand.

The welfare state was seen as a political and social panacea by the post-war generation (the 'baby-boomers') who were the first beneficiaries of the full range of its services in health, education and social security, as well as by an older generation that benefited in particular from the old-age pension. Even as it was being stretched far beyond its original purpose and problem-solving capabilities, it became closely identified with democracy itself. But then it started to undermine welfare by weakening the values and protective power of the central institutions of civil society: the family, the churches, and the voluntary

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associations. This problem has led Sandel (1996:3) to identify the two principal causes of what he calls Democracy's Discontent:

Sandel (1996:351) ends his book by observing that 'the hope of our time rests … with those who can summon the conviction and restraint to make sense of our condition and repair civic life on which democracy depends'.

Yet despite his valuable insights, Sandel fails to see the connection between large, intrusive government and the loss of autonomy and the erosion of community. As taxes rise and the government gets bigger, it tends to crowd out the institutions of civil society by pre-empting their roles and undermining individual self-reliance.

Government has a role to play in assisting those in genuine need. But should as many as a fifth of New Zealanders of working age, and nearly a third of New Zealand's children, be dependent on state welfare (Cox, 1998:27).

1.2   Paradigm Shift

There are numerous signs that the tide of big governments is receding. Interest is growing in the high compliance costs of government. The appearance of Osborne and Gaebler's book Reinventing Government (1992) suggests that governments are trying to increase the efficiency of public spending. In his 1996 Paradigm Shift. There are numerous signs that the tide of big government is receding. Interest is growing in the high compliance costs of government. The appearance of Osborne and Gaebler's book Reinventing Government (1992) suggests that governments are trying to increase the efficiency of public spending. In his 1996 State of the Union Address, US President Bill Clinton announced that the 'era of big government is over'. In the late 1990s, there is talk, and even some action, in the United King-dom, the United States, Australia and New Zealand on replacing welfare handouts with 'workfare'.

The principal reason for this disillusionment with big government is that, if it grows beyond a certain point, the public sector reduces welfare rather than increases it. In his overall analysis of the link between taxes and growth.

The new paradigm therefore centers around the question: what is the optimal size of government? Martin Feldstein (1996:26) has recently argued that 'the central public finance question facing any country is the appropriate level of spending and therefore of taxes'. A considerable literature has emerged that attempts to answer that question. Clark (1945), inspired by Keynes, suggested that where the objective is to minimize inflation and stabilize the exchange rate, the optimal effective tax rate is likely to be around 25 per cent of national income (equivalent

to about 21 per cent of GDP in New Zealand). More recently, Peden (1991:168-9) has found that over the period 1929-86 US government expenditure up to 17 per cent of GNP improved the productivity performance of the economy, but expenditures above that level reduced 'the growth of productivity'.

In its 1997 World Development Report, the World Bank (1997:168-71) emphasises the value of an 'effective state' that facilitates rather than impedes higher levels of economic performance. Its cross-country study examining the impact of 14 independent variables on the growth in GDP per head concludes that the size of government (measured by government consumption's share of GDP) has an important and consistently negative impact on the standard of living (though it did not search for an optimal level of tax or expenditure relative to GDP). Tanzi and Schuknecht (1997) compare the economic performance (growth rates, gross fixed capital formation, inflation, unemployment, and debt) and social performance (life expectancy, infant mortality, education and income distribution) of 17 small, medium and large OECD countries. They conclude that 'there is no evidence' that countries with big governments out-perform the countries with medium and small governments. When government expenditure rises much above 30 per cent of GDP, there are diminishing returns to the social gain from public spending (Tanzi & Schuknecht, 1997:167).

Finally, a recent OECD report has concluded that up to one-third of the growth deceleration in the OECD (from around 5 per cent in 1965-73 to around 2 per cent in 1989-95) would be explained by higher taxes. In some European countries, tax burdens increased much more dramatically than the OECD average, which would imply correspondingly larger effects on their growth rates. (Leibfritz, Thornton & Bibbee, 1997:49).

1.3   Objective and structure of the paper

The main aim of this paper is to summarise some recent research findings on the rising paradigm on the optimal size of government that is replacing the welfarist paradigm. In order to achieve this objective this paper is divided into six sections. *Section one* makes a literature survey on the size of government in terms of the growth of expenditure and size of the cabinet and bureaucracy. *Section two* conducts a search for explanations as to why the government expenditure affects the economic growth. *Section three* provides information from the results of empirical study conducted by Gwartney *et al* (1998) on the impact of government expenditure and economic growth of USA and OECD countries. *Section four* details on the empirical study conducted by Patrick J. Caragata (1998) on the impact of government expenditure on economic growth of NewZealand and

discusses on the suggested optimum size of government for the optimum GDP growth. *Section five* presents rationale as to why to optimize the size of government and cabinet for the GDP growth with particular reference to Bangladesh when government is looking for to see Bangladesh a middle income country 2021. *Section six* documents the summary of the paper and recommendation for Bangladesh.

2.   Theories of government growth

The brief review of the stylized facts suggests that any theory of government growth faces a heavy explanatory burden. A complete theory would need to answer the following questions: Why did government growth take off throughout the Western world around the 1900s? Why did governments continue to grow 110 years later? Is there an optimal (that is, economic growth, efficiency or welfare-maximizing) size of government? Is there an equilibrium size of government (that is, a stable size of government on which countries will tend to converge)? If there is an optimal or equilibrium size of government, why aren't we there yet? Or are we?

It is generally assumed that the efficient size of government that maximizes economic growth or welfare is some positive share of GDP. Governments have a role to play in the provision of public goods, lowering transaction costs and solving collective action problems that might otherwise stand in the way of the private sector capturing potential gains from trade. However, modern governments typically take on functions that go well beyond these basic functions by reallocating resources, redistributing income and wealth, and promoting some private activities while suppressing others. Technically, the government share of GDP could exceed 100% if government transfers are re-taxed and re-transferred multiple times, although the efficiency costs of such repeated fiscal churning would be considerable. The efficient size of government will always be a matter for dispute, but very few would be prepared to advocate unlimited government. It is just as incumbent on the advocates of big (or bigger) government to identify the limits to government growth as it is for classical liberals. Otherwise, there is a risk of overshooting what even big government advocates might view as appropriate. It is thus useful to think in terms of the economically efficient (or optimal) size of government and what a long-run equilibrium size of government might look like, even if we cannot identify these conditions very precisely. The optimal size of government is distinct from the concept of optimal taxation, which seeks to identify the tax structure that will minimize the economic cost of raising revenue taking the overall revenue-raising task as given. As Brennan and Buchanan note,

most conventional analysis of taxation presumes that governments require 'some exogenously determined amount of revenue per period, with the analysis having as its purpose the identification of that taxing arrangement that will generate such revenue most effectively' (Geoffrey Brennan and James M. Buchanan 1980). The optimal size of government is usually discussed in terms of the revenue share of GDP, which approximates the economy-wide average tax rate. Yet a given average tax share of GDP could be consistent with a wide range of tax structures with very different implications for overall economic efficiency.

It would make sense to address the issues of optimal government size and optimal taxation jointly, but in practice, they are mostly treated separately in public policy debates. For example, the Henry tax review did not address the size of government, taking the expenditure side of the budget and its likely future growth as given. As Brennan and Buchanan note, 'the policy stance that emerges from the conventional treatment, and that is now taken for granted in virtually all professional discussion of tax policy, leads inexorably to broader tax bases and correspondingly larger potential tax revenues(Geoffrey Brennan and James M. Buchanan 1980). An important contribution that classical liberals can make to public policy debates is to tie the issue of optimal taxation more closely to the issue of the optimal size of government, stressing that the latter issue is the conceptually prior and more important one.

Expansion in the size of government may drive a search for greater efficiency in revenue collection but also market-oriented reform more generally, easing the revenue and other resource constraints on the size of government. A more efficient tax structure could conceivably increase the optimal size of government by lowering the economic cost of the overall revenue take. There is evidence to suggest that more efficient tax systems are associated with larger governments, with causality running from tax structure to government size, although it could also be that larger governments adopt more efficient tax systems because these efficiency gains are increasing in the amount of revenue raised (Gary Becker and Casey Mulligan 2003). For example, the change in Australia's tax mix with the introduction of a goods and services tax (GST) in 2000 may have induced an increase in government spending by easing the government's revenue constraint. The resources and terms of trade boom since 2003 has had a similar effect in the absence of a change in tax regime, although proposals for a new resources rent tax can also be seen as an attempt to further ease the government's revenue constraint.

As Becker and Mulligan note, analysis of the economic gains from tax reform often takes government spending as given and ignores the increased welfare costs arising from the induced expansion in the size of government that may follow

from a more efficient tax system. Once the economic costs of induced government spending are taken into account, the supposed efficiency of even lump-sum taxes is called into question.

2.1   The Armey Curve

Borrowing a graphical technique popularized by Arthur Laffer, Representative Richard Armey, an economist by training, developed what he termed as the Armey Curve (Ken Henry (2009). In a state of anarchy, output per capita is low. Similarly, where all input and output decisions are made by government, output per capita is likewise low. Where there is a mix of private and government decisions on the allocation of resources, however, output often is larger. The output-enhancing features of government dominate when government is very small, and expansions in governmental size are associated with expansions in output.

At some point, however, further expansion of government no longer leads to output expansion, as the growth-reducing aspects of government grow larger, and the growth enhancing features of government diminish. Further expansion of government contributes to economic stagnation and decline. Why is this so? In a world without government, there is no rule of law, and no protection of property rights. Bullies and strong people can steal the assets of weaker persons with impunity. There is little incentive to save and invest because the threat of expropriation is real and constant. Moreover, without some collective action, there is no protection from bigger bullies, namely foreign nations, or pirates on the high seas. Collective action also facilitates the creation of roads that improve transportation and lower trading costs. Government can also create a reliable medium of exchange, further developing the gains from trade. Thus, the establishment and early growth of government is associated with rising levels of income and positive rates of economic growth.

As governments grow, the law of diminishing returns begins operating. While the construction of roads initially assists output expansion, the construction of secondary roads and upgrading primary roads start to have less added positive impact per dollar spent. Moreover, the taxes and/or borrowing levied to finance government impose increasing burdens. Low tax rates become higher. New taxes, such as income taxes, are added to low consumption levies, with increasingly adverse effects on human economic behavior. Tariffs are raised, thwarting trade. New government spending no longer enhances economic growth. When government is small, political actions at income redistribution via tax policy or through payments to the poor are modest in magnitude. As transfer payments and

progressive taxation grow with increasingly large government, the negative effects of governmental spending magnify. In small amounts, welfare payments help the poor and do not dramatically influence behavior. As the payments grow larger and more comprehensive, they lead to pronounced work disincentive effects. Thus, it is to be expected that as government absorbs an increasingly large percent of national output, incremental spending will actually have an adverse effect on output. The Armey Curve does not suggest that "all government is bad." To the contrary, some government serves the public good. But like most good things, too much of it is harmful. Just as drinking one glass of wine daily may be good for the drinker's health but drinking 10 glasses is bad, so government in moderation is good for the economy while in excess it is bad. Milton Friedman, comparing the United States and Hong Kong, put it well recently:

> *Government has an essential role to play in a free and open society. Its average contribution is positive; but I believe that the marginal contribution of going from 15% of the national income to 50% has been negative*. (Commonwealth of Australia, Australia to 2050: Future Challenges, Canberra: January 2010).

Professor Friedman is suggesting that the threshold where government's role in economic growth is probably somewhere between 15 and 50 percent of the national income or output.

2.2   Buchanan's taxonomy

Buchanan suggests a division of theories of government growth into two broad perspectives: '*government by the people*' (sometimes referred to as *citizen-over-state*) and '*government against the people*' (or *state-over-citizen*) (James Buchanan 1977). The classical theory of democracy is consistent with the former perspective, which views government as demand-driven, and to that extent, welfare-enhancing. The second perspective suggests that government is supply-driven, serves its own interests, and to that extent is welfare-reducing, at least in aggregate. Public choice theory is often associated with the latter perspective, but rational choice models of collective decision-making straddle both perspectives. Other theories of government growth do not fit neatly into Buchanan's taxonomy. These include *deterministic* or *path dependency* theories, as well as what we will call *zeitgeist* theories. The following sub-sections review some of these theories and their explanatory limitations.

2.3   Citizen-over-state

One of the most enduring theories of government growth in the citizen-over-state tradition is 'Wagner's law of increasing state activity,' named after the German

socialist economist Adolf Wagner. Wagner wrote in the late 1800s and early 1900s and effectively anticipated the growth in government that followed over the next century. Wagner's law has no definitive formulation, but the basic thesis argues that the demand for government increases with economic development (as proxied by real GDP per capita) and related factors such as industrialization and urbanization (Alan Peacock and Alex Scott 2000). The more complex and impersonal society becomes, the greater the demand for collective provision of some goods and services.

In empirical studies, Wagner's law is often interpreted as a national income elasticity of growth in government greater than one, thereby accounting for growth in the government share of national income over time as real GDP per capita increases. Despite extensive empirical testing, Wagner's law remains underspecified theoretically. Lindert has characterized 'the notion that income growth will raise taxes and government spending, including social spending [as] the most durable black box in the whole rise-of-the-state literature (Peter Lindert 1996). Tests of Wagner's law have focused on the relationship between government spending or taxation and national income in both cross-sectional and time series settings (see for example, Ram 1987; Easterly and Rebelo 1993; Oxley 1994). Potential endogeneity between government spending, revenue, and economic growth has been a significant complication for empirical work. Durevall and Henrekson's recent review of the literature finds that 35% of studies obtain unqualified support for Wagner's law, 35% fail to find support, while 30% find support conditioning on other variables or specific categories of government spending (Dick Durevall and Magnus Henrekson 2010).

Empirical tests of Wagner's law in the Australian context have been inconclusive (Brian Dollery and Sukvinder Singh 2000). My own research shows there is a long-run equilibrium relationship between growth in the Australian legislative output (reviewed in the previous section) and the level of real GDP per capita that is consistent with Wagner's law (Stephen Kirchner 2010). While the results from empirical studies are mixed, there is enough evidence for Wagner's law to be taken seriously as a plausible explanation for long-run growth in government. However, we will see that Wagner's law is observationally equivalent with a number of other theories of government growth, making it difficult to distinguish between competing hypotheses.

Also within the citizen-over-state tradition are a number of rational choice and median voter models that view growth in government as driven by voter demands for increased public provision or redistribution. The literature focuses mainly on redistribution, since this has been the main contributor to the growth in the size of

government. Growth in government would be difficult to explain empirically if it were mainly concerned with the provision of public goods, which have become an increasingly small share of government spending in most developed economies (Sam Peltzman1980). Anthony Downs's *An Economic Theory of Democracy* (1957) was an early contribution to this tradition (Anthony Downs 1957). Downs maintained that government could conceivably be undersupplied relative to voter demands, a proposition more plausible in the late 1950s than it is today (Anthony Downs 1960). Later contributions in the rational choice-median voter tradition examined interactions between growth in government and median and average incomes, income inequality, and the extension of the electoral franchise (Allan H. Meltzer and Scott F. Richard 1981). These models maintain that growth in government is the outcome of collective decision-making processes that aggregate individual preferences. Whether these collective choices are welfare-enhancing depends on how efficiently the decision-making process aggregates these preferences. Extensions of Coasean transaction cost economics to the domain of politics suggest that the political process can lead to efficient outcomes (Gary S. Becker1983). Brennan notes that 'there are ... circumstances ... in which electoral competition operates somewhat like an "invisible hand," both aggregating the interests of the "suppliers" of public policies to give citizen-voters what they want (Geoffrey Brennan 2002). This perspective suggests that growth in government may be more conductive to economic and other forms of efficiency than classical liberals would like to concede. However, it should be noted that most of these rational choice/median voter models depend on restrictive assumptions for their results. As the discussion of *zeitgeist* theories will argue, there are also questions over the extent to which rational choice models provide a good model of political choice.

2.4   State-over-citizen

The state-over-citizen tradition is perhaps best exemplified by Franz Oppenheimer's 1908 *The State*, a work of political sociology roughly contemporary with that of Wagner (Franz Oppenheimer 1975). Oppenheimer had an influence on American libertarianism via the writings of Albert Jay Nock (Albert Jay Nock 1989). Oppenheimer saw the evolution of the state as the product of coercion and predation, distinguishing between the economic and political means of sustaining a living, or more colorfully, between 'work and robbery (Franz Oppenheimer 1975). While this is a compelling perspective on the initial rise of the state, it is less informative on the long-run drivers of growth in government in modern constitutional democracies. Mancur Olson maintained that

as groups become larger, the disconnect between the interests of the individual and the collective would increase, with small but powerful distributional coalitions coming to dominate the majority interest, undermining economic growth (Mancur Olson 1971). Olson made an important contribution to the rejection of the traditional view in the political science discipline that interest groups were a benign influence in a democracy. Olson used his model mainly to explain differences in economic performance between countries rather than the generalized growth of government observed in developed economies. For example, Olson thought that the destruction of incumbent interest groups in Germany, France and Japan during World War II explained their economic outperformance in the early post-War period compared to the United States, the United Kingdom and Australia. While this was superficially plausible at the time of writing in the 1960s to early 1980s, subsequent developments have not been kind to Olson's interpretation: Germany, France and Japan have chronically under performed the Anglo-American economies in recent decades. Later in his career, Olson came to embrace institutional explanations for cross-country differences in economic performance (Mancur Olson 1996).

While the state necessarily expands at the expense of the economy and civil society, the economy and civil society also impose limits on the expansion of the state. Olson noted that unlike roving bandits, 'stationary bandits' or autocratic rulers needed to limit their predatory activities to leave enough worth stealing in their domain. The most obvious way in which the economy provides a check on the expansion of the state are the efficiency costs of taxation (or deadweight losses). Brennan and Buchanan model government as a revenue-maximizing Leviathan subject to constitutional constraints such as federal systems of government, although as they note, a federal system of government can also form a revenue-raising cartel (Geoffrey Brennan and James M. Buchanan 2002). Tanzi and Schuckneckt's review of the growth in public expenditure during the twentieth century suggests developed country governments exceeded their efficient size during the 1960s at around 20% of GDP (Vito Tanzi and Ludger Schuknecht, 2000). This is also suggested by attempts to estimate econometrically the point at which the government share of the economy begins to subtract from rather than add to economic growth. Studies along these lines for the United States and New Zealand find that the economic growth-maximizing size of government is likely to be somewhere in the range of 19% to 23% of GDP.31 If these estimates are accurate, then most developed country governments have exceeded their optimal size. If governments were concerned mainly with revenue-maximization, they would choose the tax structure that maximizes the size of the economy and

thus the tax base. Smaller government as a share of the economy could yield bigger government in an absolute sense through increased revenue, although as noted previously, the induced expansion in the size of government from greater tax efficiency may have ambiguous implications for overall economic efficiency and well-being.

The model of government as a revenue maximizer offers insight into the growth of the state during the twentieth century. The shift in production out of the household sector and into organized markets due to changes in production technology, the growth in the division of labor, specialization, and trade has served to expand the potential tax base available to government and eased the governments' revenue constraint. In particular, the growing opportunity cost of household production has seen a dramatic increase in female labour force participation, expanding the tax base as well as government spending on social services such as child care previously supplied by households or in informal markets. In Australia, the female labor force participation rate has increased from 44% in February 1978 to nearly 60% at the end of 2010, driving overall labour force participation to record levels (Australian Bureau of Statistics 2011). Kau and Rubin estimate the elasticity of the US tax to GDP ratio to female labor force participation at around 4 for the period from 1920 to 1970, sufficient to account for almost all of the expansion in the size of the US government over this period (James Kau and Paul Rubin 1981). Female labor force participation can explain 15% of the increase in the government spending share of GDP in OECD countries between 1960 and 1999 (Tiago Cavalcanti and José Tavares 2011). However, this explanation is observationally equivalent with Wagner's law. The increased opportunity cost of self-employment and household production is a feature of economic development that is captured by the relationship between growth in government and growth in real GDP per capita.

The increased labor market flexibility sought by classical liberals through their advocacy of labor market reform may have also served to expand the tax base and eased the government's revenue constraint. The government as revenue-maximizer model helps explain the move to flatter and more efficient tax structures in many developed economies and other market-oriented reforms. These reforms make growth in government more sustainable by lowering the efficiency costs of taxation and expanding the tax base through increased economic growth, easing the government's revenue constraint. The market-oriented reforms in Australia and New Zealand in the 1980s and 1990s and Sweden in the early 1990s are examples of reform programs that have served to increase the sustainability of their welfare states. As Bergh and Henrekson note,

countries with a larger government share of GDP, most notably in Scandinavia, have seen greater increases in measured economic freedom and globalisation between 1970 and 2000. These market-oriented reforms have enhanced economic growth despite the government share of their economies remaining large (Andreas Bergh and Magnus Henrekson, 2011).

Contrary to Becker and Mulligan, Peter Lindert maintains that improvements in tax and spending programs have made growth in government spending in the larger welfare states something of a 'free lunch (Peter H. Lindert 2004). Similarly, David Alexander maintains that Australia combines relatively small government with a redistributive state in a way that makes both more sustainable (David Alexander 2010). The fact that social democratic parties in Australia, New Zealand and elsewhere have presided over microeconomic reform programs becomes readily explicable in this context. As noted in the introduction, Ken Henry sees the need to raise more revenue in absolute terms as an important motivation for his tax review, which was aimed at increasing the efficiency of the tax system. The potential welfare costs of the projected expansion in government activities anticipated by Henry are either assumed away or ignored.

The role of government growth in driving the search for greater economic efficiencies could be expected to weaken the observed negative correlation between government size and economic growth and attempts to test the direction of causality for this relationship. To the extent that governments successfully endogenise their optimal size through their choice of tax and other policies, we would not expect to observe a negative relationship between government size and economic growth, despite the potential for such a relationship. It is unlikely that governments do this consciously or with any degree of precision, but may through trial and error move in the direction of a more efficient policy mix. Note that there is some observational equivalence with Wagner's law, because the efficiency of the tax system generally increases with economic development, as countries move away from trade taxes to taxes on income and consumption and as agriculture's share of total output declines (agricultural output was historically harder to tax before the development of formal or extensive markets).

The government as revenue maximizer model yields some insights into the growth of government as well as pointing to a long-run equilibrium size of government. Governments that push too hard against their economies risk collapse, as the former Soviet Union found. China's market-oriented reforms since 1978 have sustained and legitimized a government and economy that might otherwise have also collapsed. European Union governments are currently facing severe fiscal constraints likely to lead to sovereign debt defaults under the guise

of debt 'restructuring.' Historical experience is that governments will test the limits of their expansion, with some over-stepping the mark, while others successfully reform in ways that make the growth of government more sustainable.

2.5 Deterministic and path dependency theories

Deterministic theories of government growth do not fit neatly into Buchanan's for-the-people/against-the-people taxonomy. In this perspective, growth in government is attributable to exogenous factors such as technology, productivity, globalization, geography, demography, or urbanization. The historical and economic determinism of Karl Marx maintained that the evolution of the state was a function of the underlying forces of production, and that the state ultimately 'withers away' once it has served its historical purpose. While the governments inspired by Marxism have for the most part withered, they have done so for reasons other than what Marx suggested and have certainly not been replaced with a stateless society. Taking his cue from Marx, Schumpeter foresaw an evolutionary process by which liberal capitalism would inevitably give way to democratic socialism, in part because the successes of capitalism would give rise to an intellectual class hostile to it (Joseph Schumpeter 1954). Olson's theories, already discussed, had a similarly deterministic 'logic.'

Demographic factors, particularly age dependency ratios, have a role in explaining growth in government. The prospective fiscal imbalance and expansion in the size of government identified in the Australian government's *Intergenerational Reports* are largely driven by population ageing and its effects on government health and other expenditures. The IGR projections assume that the increased demand for ageing-related expenditures will continue to be met through public rather than private provision, effectively foreclosing debate on the projected growth in the size of government. Given that growth in real GDP per capita is usually associated with a decline in fertility and an increase in longevity, it is difficult to distinguish the role of demography from Wagner's law. Some see Wagner's law as driven by demography, (Cameron Shelton 2007) but demographic factors can equally be viewed as being subsumed by the overall Wagner's law hypothesis. In Australia's case, with the major exception of the post-War baby boom hump, the share of the population aged 0–16 has generally been declining since Federation, while the share of the population aged 65+ has generally been increasing. The net effect has been for the overall age dependency ratio to decline, but the baby boom hump will see the old age dependency ratio rise in future with implications for growth in the size of government already

noted. While the old age dependency ratio is positively correlated with the tax to GDP ratio, this would be true for a wide range of other indicators associated with the level of economic development. Technology can be a liberating force, but advances in technology have also facilitated the growth of government. A plausible explanation for government growth since 1900 are the improvements in communications and transport that have extended the reach of government as well as markets (Tyler Cowen 2009). It is difficult to imagine the totalitarian regimes of the twentieth century being quite so total in the absence of modern technology. However, because of the strong correlation between improvements in technology and economic development, this hypothesis is also observationally equivalent with Wagner's law, although it may also provide an explanation for why Wagner's law seems to kick in around 1900, coinciding with major technological advances. Technology may also be difficult to divorce from growth in female labour force participation and its role in easing a government's revenue constraint, since labour saving appliances in the home have been important in freeing up labor formerly tied to household production.

A related argument in relation to technical progress is 'Baumol's disease,' the idea that the relative price of government services increases over time because of lagging productivity growth in the public sector, which increases the government share of nominal GDP through changes in prices rather than quantities (William Baumol and William Bowen 1966). The ratio of the private and public consumption deflators (measures of price change for private and public consumption expenditure) can be used as a proxy for Baumol's disease. In Australia's case, Baumol's disease seems to have been prevalent from the late 1950s until the mid-1970s (around the time Baumol advanced the idea) but has shown no clear trend since, although it is notable that this ratio declines during the market reform period from the early 1980s to late 1990s (Kirchner S and Carling R, 2009). The private consumption deflator also includes a range of prices in sectors such as health and education subject to cost inflation due to inefficient government regulation, so this ratio may understate the extent of Baumol's disease.

Another deterministic hypothesis is that growth in government is either contained or promoted by globalization. Increasing globalization in the nineteenth century expanded the possibilities for jurisdictional arbitrage and international competition, helping contain government growth until this process temporarily collapsed with the two world wars and the Great Depression. This leaves unexplained the continued growth in government in the late twentieth and early twenty-first centuries, despite a recovery in globalization during this period.

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Indeed, Rodrik finds that small open economies typically have bigger governments, presumably to help insulate their citizens against the adverse consequences of external economic shocks (Dana Rodrik 1998). Globalization does not have straightforward implications for government size or growth.

The 'ratchet hypothesis' seems to fit the stylized facts reviewed in the first section in maintaining that governments expand on the back of wars and crises, but fail to fully reverse this expansion in the aftermath of these events. Peacock and Wiseman advanced this hypothesis in the early 1960s with respect to the United Kingdom (Alan Peacock and Jack Wiseman 1961) and Higgs applies the same idea in his review of the growth of government in the United States (Robert Higgs 1987). The recent global financial crisis may prove to be another of these historical episodes. Yet there have been many cases where war and crises have undermined rather than expanded government.

The expansion in government in the United Kingdom and United States in response to World War II also saw the demise of totalitarian regimes in Germany and Japan. From the perspective of those who started it, World War II was a much less successful strategy for expanding the size and reach of government. Moreover, growth in the size of government has been at least, if not more, pronounced in countries that were non-combatants in World War II (Sam Peltzman, 1980). With the exception of Marx's historical materialism, the various deterministic theories of government growth are notable for generally failing to yield firm conclusions about long-run equilibrium outcomes. Demographic factors such as the female labour force participation rate and age dependency ratios are ultimately bounded, so they cannot explain growth in government without limit, just as the efficiency costs of taxation would also lead us to expect growth in government to be limited at some point.

2.6   Zeitgeist explanations

Ideas and ideology may be important in driving long-run growth in the size of government. Survey evidence and opinion polls can measure trends in attitudes to government (Herbert McClosky and John Zaller 1984). However, this only pushes the question one step back: what drives these changes in opinion and ideas? There is an obvious endogeneity problem with *zeitgeist* explanations. Do ideas drive growth in big government or do collectivist ideas emerge as a rationalisation of growth in the state? Bilateral causality is also possible. The liberalism of the nineteenth century gave way to an upsurge in socialist ideas that dominated the next century until the classical liberal revival of the late twentieth century, but it is hard to say whether these developments in ideas were causal or merely

symptomatic of other trends, including trends in the size of government. *Zeitgeist* explanations are thus to some extent also deterministic theories in the absence of some explanation of what drives the development and propagation of ideas.

Marx would argue that ideas are mere expressions of underlying economic forces. Schumpeter perhaps comes closest to fully indigenizing a model of growing intellectual hostility to capitalism, which might in turn help explain growth in government (Joseph Schumpeter, 1954). Ideology is an important factor in Higgs's crisis-driven model of government growth, but he is compelled to treat ideology as exogenously determined in the absence of a better model (Robert Higgs, 1987). Colin Clark published an article in *Economic Journal* in 1945 arguing that a tax share of national income above 25% was inflationary and therefore unsustainable. In his capacity as editor of the journal, John Maynard Keynes wrote to Clark:

> *In Great Britain after the war I should guess that your figure of 25 per cent as the maximum tolerable proportion of taxation may be exceedingly near to the truth. I should not be at all surprised if we did not find a further confirmation in our post-war experience of your empirical law* (Colin Clark 1964).

It is remarkable that during the rest of the twentieth century, governments continued to expand to shares of GDP that were inconceivable even to Keynes, the most famous exponent of government intervention among modern economists. The Clark-Keynes correspondence provides anecdotal support for the view that ideas lag rather than lead growth in government. Hayek argued that the growth of socialist ideas in the post-War period was partly attributable to a relative lack of intellectual engagement by classical liberals with the wider public that deals in ideas (Friedrich A. Hayek 2007). Hayek maintained that support for socialism was an intellectual error that could be corrected; he probably did more than any other single figure in the post-War classical liberal revival to expose this error.

Yet if socialism is no more than an intellectual error, it is still a remarkably persistent and widespread one. This sits uncomfortably with the assumptions that the classical liberals would prefer to make about individual rationality. Bryan Caplan relocates the traditional Downsian rational ignorance problem in relation to political knowledge to the realm of ideas in general to explain the prevalence of various anti-market biases (Bryan Caplan 2007). If Caplan is correct, then public attitudes sympathetic to a larger role for government may be hard to shift because people are 'rationally irrational,' although this irrationality can be

ameliorated through education, as Hayek would have also argued. *Zeitgeist* explanations provide little guidance on future trends in the growth or size of government. Prior to the global financial crisis, collectivist ideas were seen to be on the back foot. Yet the crisis has shown that many of these ideas quickly resurfaced in opportunistic critiques of capitalism and markets, while governments reverted to interventionist policy solutions such as fiscal stimulus previously shown to be failures. The move from the late nineteenth to the early twentieth century shows that a dominant climate of opinion in favour of limited government can very quickly give way to collectivist doctrines.

The growth in government in the twentieth century was paralleled by a decline in the prevalence of classical liberal ideas, yet the post-War revival of classical liberalism and its political expression in the Thatcher and Reagan governments of the 1980s has not arrested the continued growth in government, suggesting that these ideas have not been nearly as influential as might have been hoped. There are no guarantees about the outcome of the battle of ideas. It would be a mistake for classical liberals to assume that their ideas have an inexorable logic that, given enough time, will overcome competing ideologies. Hayek's stress on the need for greater engagement by classical liberals with the broader public that deals in ideas remains as relevant as ever.

2.7   Bureaucracy Theory

Goods and services provided by the government do not arise out of thin air, but rather they must be created by a government agency. The supply of government output, then, may be a function not only of citizen demand (as the previous theories suggest), but also of the demand of government bureaucrats. Niskanen's (1971) theory of bureaucracy postulates that government bureaucrats maximize the size of their agencies' budgets in accordance with their own preferences and are able to do so because of the unique monopoly position of the bureaucrat. Because the bureaucrat provides output in response to his or her own personal preferences (e.g., the desire for salary, prestige, power), it is possible that the size of the bureaucrat's budget will be greater than the budget required to meet the demands of the citizenry. An important point is that bureaucracy theory does not deny the citizen demand models of government discussed in the previous section, but rather it suggests that bureaucrats can generate budgets that are in excess of what citizen demand warrants. The ability of a bureaucrat to acquire a budget that is greater than the efficient level is dependent on several institutional assumptions (Niskanen, 1971, 2001). *First,* unlike private sector production, the public sector does not produce a specific number of units, but rather supplies a level of activity.

As a result, this creates a monitoring problem for oversight agencies: It is difficult, if not impossible, for monitors to accurately judge the efficiency of production when no tangible or countable unit of output is available. *Second,* the monopoly nature of most bureaus shields them from competitive pressures necessary for efficiency and also denies funding agencies (Congress, the executive branch) comparable information on which to judge the efficiency of the bureau. Third, only the bureau knows its true cost schedule because bureau funding is provided by agents external to the bureau. This provides an opportunity for bureaucrats to overstate their costs in order to receive a larger budget. *Finally,* the bureaucrat can make take-it-or-leave-it budget proposals to the funding agency.

Niskanen (1971) shows that the bureaucrat will maximize a budget subject to the constraint that the budget must cover the costs of producing the good or service. The implication of the model is that the bureau's budget (and output) is expanded beyond the point where the marginal public benefits of the good or service equals the bureau's marginal costs of providing the good or service (Stephen Kirchner 2010). Although the model presents clear reasoning on how a bureau can expand output and costs beyond the efficient level, in reality many bureaus cannot expand output beyond the level demanded by the citizenry. Examples of this at the local level include school districts and garbage collection: School districts cannot educate more students than those who are already attending school, and garbage collectors cannot haul more garbage than is available for disposal. Even in these cases, however, a bureau may expand its budget beyond the efficient level—not by providing output beyond the efficient amount but by providing the services at a higher cost than necessary.

There has been ample literature that has compared the costs of public and private organizations that provide similar services. The activities or firms studied include, but are not limited to, hospitals (Clarkson, 1972), refuse collection (Bennett and Johnson, 1979, and Kemper and Quigley, 1976), water utilities (Morgan, 1977) and fire protection (Ahlbrandt, 1973). Mueller (2003, Chap. 16) provides a summary of 70 studies that examined the cost of public versus private sector provision of identical services. In all but five studies cited, the cost of public provision is significantly greater than private provision, thus lending support for the bureaucracy theory of government. However, the cost difference between private and public organizations may simply be a result of a lack of competitive pressure rather than direct attempts by bureaucrats to maximize their budget. In addition, Mueller (2003) suggests that many of the assumptions necessary for the bureaucracy theory to hold may be too strong and actually weaken the ability of the bureaucrat to manipulate price and output. For example, the ability of a bureau

to present a take-it-or-leave-it budget proposal may be lessened if the funding agency or an oversight agency is aware of the advantage such a position affords the bureau. Thus, the funding agency may request that the bureau present several cost and output scenarios; if the bureau must present a cost schedule, it becomes more likely that the bureau will announce its true costs (Sam Peltzman1980). Also, several agencies exist, such as the U.S. General Accounting Office, that are set-up for the sole purpose of detecting excessive costs and inefficiencies in government bureaus. The possibility of an audit and the negative attention such an action brings creates an incentive for bureaucrats to limit their pricing power and, at least somewhat, promote an efficient organization. Although the constraints on bureaucracy seem reasonable, they are somewhat limited given the number of local, state, and federal agencies that exist relative to the number of funding and oversight agencies. However, although the literature has presented strong evidence that bureaucracy may partly explain government size, much less work has been done on explaining how bureaucracy theory may explain government growth. One explanation put forth by Mueller (2003) is that the ability of a bureau to misrepresent its cost and/or output schedule is likely to be directly correlated with the bureau's size. Thus, larger bureaus can better manipulate their budgets relative to smaller bureaus, and any manipulation of the bureau's budget will increase the size of the bureau, which in turn increases the bureau's ability to manipulate the budget. Despite the limits of bureaucracy theory, it remains a plausible explanation for the scope of government seen today. The common inefficiencies of large organizations, be they private or public, are not unknown by the general public, who often work in such organizations. In addition, it is not uncommon for the media to report waste or fraud that has occurred at large private and public organizations. The bureaucracy theory fits arguably well with the real-world experiences of many people.

2.8 Monopoly Government and Leviathan

The idea that representative governments behave as monopolists was first suggested by Breton (1974). The party in control of the legislature has an objective function that includes the probability of reelection, personal pecuniary gain, and the pursuit of personal ideals. While providing basic public goods, such as police and fire protection (in the case of a local government), the monopoly government can obtain its objectives by bundling narrowly defined issues that benefit individual members of the government along with the more popular public-good services provided. This idea stems from the neoclassical view of the monopolist, where a private monopolist can increase his profit by bundling other

products that he does not monopolize with his monopolist product. Consumers will then buy the monopolist's package as long as their consumer surplus on the bundled products exceeds the cost of the individual packages.

In the case of governments, this bundling of services results in higher levels of government output. Tullock (1959) provides a comprehensive analysis of how the bundling of goods and vote trading among legislators can increase the size of government. The example shown in (Allan Barnard, 1987) the point made by Tullock (1959): A five member legislature is considering the three projects, each of which is inefficient because the net costs outweigh the net benefits (Gary S. Becker1983). As a result, if each project was voted on separately (and each legislator voted according to the preferences of his constituency), then none of the projects would be implemented because each would lose by a 4- to-1 margin. But, bundling the three projects will garner "yes" votes from legislators representing districts A, B, and C, thus allowing the legislation to pass 3-to-2, thereby increasing the size of government expenditures. The monopolist view of government has been extended further by Brennan and Buchanan (1977, 1980). In their model of a "leviathan" government, the monopoly government's sole objective is to maximize revenue. The citizenry is assumed to have lost all control over their government, and political competition is seen as an ineffective constraint on the growth of government (Geoffrey Brennan 2002). Their leviathan view of government is opposite of the government assumed in the citizen-overstate theories—the latter being a benevolent provider of goods, a reducer of externalities, and a re-distributor of income. According to Brennan and Buchanan (1977), only constitutional constraints on the government's authority to tax and issue debt can limit a leviathan government (Franz Oppenheimer 1975).

Empirical evidence for the monopoly view of government has provided mixed results. The studies are often conducted at the local rather than national level due to data availability. Many tests for monopoly government have a similar goal as those for the bureaucracy theory, namely that the cost of public services is greater than the costs of identical services provided by the private sector. Additional research has hypothesized that a constraint on a monopoly government is competition from neighboring governments (Martin and Wagner, 1978). This research on the monopoly power of government has shown that restrictions on incorporation raise the costs of existing local governments. Tests for leviathan government begin with the premise that such a system should be less likely to occur when government is relatively smaller and there exists strong intergovernmental competition. As with the studies of monopoly, much of the literature on leviathan has focused on local governments (Oates, 1972, Nelson,

1987, and Zax, 1989). The mixed results obtained in these studies are due, at least in part, to the variety of methods authors use to proxy for government size. On the national level, Oates (1985) finds that countries having a federalist constitution (many levels of government) had a negative, but insignificant, effect on government growth. Much more empirical testing must be done before the leviathan view of government is broadly accepted as one plausible explanation for government growth.

3.   Political Determinants of Government Size

The size and scope of government is a recurring theme both in public and scientific discourse. Most of these debates center around the proper division of labour between the market on one side and the state on the other. Politicians, journalists, interest group leaders and also scientists often disagree with respect to how much the state should be involved in or interfere with economic matters. One opinion states that the state should restrict itself to its classic and basic tasks of domestic and foreign security because its interference with the economy would only lead to the distortion of market forces and thus to economic inefficiencies. On the other hand, proponents of a strong state argue that such an involvement is necessary to counteract the malfunctions and externalities a completely free market would create.

No matter which position is taken, one basic, although rather implicit, assumption of both normative prescriptions is that the level of government size can be, and indeed is, to a large extent purposely changed by government. The main focus of this thesis will be to explore the validity of this assumption. Generally, left parties like social-democratic and labour parties are associated with a preference for more interventionist policies and a greater scepticism towards market-mechanisms than Christian-democratic or even conservative or liberal parties. Thus, if this assumption is correct, party ideology should be one of the major driving forces of government size. This hypothesis will be statistically tested on pooled time-series cross-section (TSCS) data for 16 industrialized democratic countries over a period of 30 years. The study is based on the existing literature that examines the relationship between partisan governments and government size, but at the same time it aims at improving on previous research on theoretical as well as methodological grounds.

Most importantly, it takes into account two factors which potentially mediate the effects of government ideology on government size. Both have their origin in structural features of the political system. The first factor are veto players whose

agreement is necessary for policy change (Tsebelis, 1995, 2002). The number of veto players is at least partly determined by the characteristics of political institutions. Depending on election system, regime type, and other institutions of the political system, the number of veto players varies across countries. This has consequences for the relationship between partisan government and government size. It is reasoned that veto players blur partisan effects on policy output since incumbent parties have to make compromises with other actors in the political system (Schmidt, 2001).

The second constraining factor are interest organizations. Depending on the structure of the interest group system and its relations to state institutions, interest associations can have substantial influence on policy outputs. How this influence is transmitted can range from simple pressure on politicians and bureaucrats to fully-fledged "policy concentration" (Lehmbruch, 1984: 62). The latter describes the cooperative formulation and implementation of policies by the state and powerful interest associations on the system-level. In such a situation, the incumbent government does not only have to engage in compromises with veto players but also with organizationally strong business confederations and trade unions. The paper argues that this is a further hindrance to government in directly realizing its preferences regarding government size.

Theoretically, the analysis takes the perspective of the leading government party, for which both veto players and corporatist interest groups are context factors. It is hypothesized that the impact of its ideological stance is most pronounced in political systems where it does not face such political constraints on its discretion. Methodologically, the relationship between party ideology and government size is seen as being conditional on the number of veto players and the degree of corporatism in the interest group system. In regression analysis, conditional effects are appropriately modelled by interaction terms. Although this seems straightforward, the exploration of these interacting effects has been largely neglected in previous research on government size.

Especially the constraining effect of political institutions has often been acknowledged, but modelled as an independent term in the analysis with a hypothesized negative effect. While this negative relationship has often found empirical support, it is mainly due to the enduring growth of government size for the time periods usually examined. As the public sector is more and more cut back in the eighties and nineties, a negative impact actually means that institutional constraints furthered this retrenchment. But counter-majoritarian institutions are supposed to hinder policy change in any direction. Thus, from a theoretical

perspective a hypothesis about an independent effect of veto players is inappropriate. Since corporatist organizations are assumed to have a similar mediating impact on the effect of government ideology, modelling these factors through interaction terms results in a closer theory-model fit.

Another methodological improvement regards the use of an ideology indicator that varies not only across countries, but also over time. Previous studies usually used simple classifications dividing parties into broad party families like left, right, and liberal parties, and weighted them by the number of cabinet or parliamentary seats held. The variation in these indicators solely results from differences in the composition of cabinet or parliament. Ideology is implicitly assumed to be constant within party families as well as over time. This is a rather unrealistic assumption which gets more implausible the longer the time period and the larger the country sample under study. Furthermore, these classifications are usually based on subjective judgements which are likely to evaluate party ideology with regard to actual policy output rather than party preferences (Budge & Bara, 2001: 12). In contrast, the ideology indicator used here is objectively derived from election programs of parties. Although this also has some shortcomings as discussed below, it is still preferable to traditional measures.

The remainder of this section is organized as to examine the concept of government size in general, clarifies what is meant by the term in the context of this study, and discusses some measurement problems. The extent of economic activity of government is the main focus of the analysis and it is argued that among widely available indicators, public consumption expenditure and public employment most closely reflect this kind of pursuit. The chapter closes with a description and illustration of the dynamics of these indicators in general and with respect to single countries. Although some general trends are visible, it becomes obvious that large parts in the dynamics of government size are dependent on country specific differences in economic and political factors.

This section reviews the literature that previously proposed such factors and tested their impact empirically. It concentrates mainly on papers that made some arguments related to the major hypotheses in this analysis. Special attention is given to studies that examined the impact of partisan politics, institutional constraints, and interest groups on government size. Theoretical and methodological issues are discussed as well as some results of the analyses. Although the literature review focuses on the political factors of main interest here, it is also used to detect other factors commonly associated with the size of government. The identification of these alternative or complementary

explanations is helpful for a correct specification of the statistical model which is developed in the latter part of the paper.

The theories to be examined in the analysis are discussed in more detail in this section. To a large extent, the section also focuses on the theories directly related to the main research question. In the first section, the "parties do matter" thesis is more closely reviewed and its shortcomings discussed. It is concluded that partisan theory (Hibbs, 1977, 1992) is most plausible in Westminster style democracies, that is where governments enjoy a very high institutional power for action and the interest group system is organizationally dispersed. The theory on veto players (Tsebelis, 1995, 2002) is endorsed as a promising approach to account for institutional constraints in a consistent way across countries. To account for the impact of interest groups, the concept of corporatism (Schmitter & Lehmbruch, 1979; Lehmbruch & Schmitter, 1982) is discussed and which of its features should result in hindrances to government discretion is made clear. At the end of the chapter, socio-demographic and economic theories recognized as influential on government size in previous research are briefly described.

3.1   Measuring Government Size

The most commonly used indicators of government size are expenditure measures derived from national accounts. Several components of total government expenditure do not directly reflect economic activity by the state or do not relate to the theoretical argument made in this paper. Thus, the choice of the financial indicator was governed by a trade-off between most closely reflecting the definition of government size as given in the last section and the association to the theoretical argument about partisan politics.

The major parts of overall government spending can be classified into capital formation, subsidies, social transfers, military expenditure, interest payments, and civilian consumption expenditure (Cusack & Fuchs, 2002: 11). On the whole, it seemed that a focus on civilian consumption expenditure is most appropriate. Social transfers and interest payments do not claim any economic resources; they are just redistributions (Gemmel, 1993: 2). This is also true for subsidies, but they can be seen as a device of governments to influence economic activity indirectly. Nevertheless, like in the case of capital expenditure, it is not clear how governments with different ideological positions relate to this component. Anyway, the underestimation of economic activity due to the neglect of capital spending and subsidies is small, since these components constitute only minor parts of overall outlays (see Cusack & Fuchs, 2002: 11-14). Military spending is also excluded on theoretical grounds, since it has been argued that the

international security environment rather than ideological factors is its main driving force (Blais et. al., 1996).

Overall, ideology is most likely to show its effect on civilian consumption expenditure, which measures the direct economic involvement of government as a producer and purchaser of non-military goods and services. Besides traditional state functions like public safety and administration, it mainly includes spending on education, health care, child care, and other welfare provisions by the state, which is seen as a major domain of left parties. Thus, using civilian consumption expenditure in the analysis allows for a more powerful test of the partisan hypothesis. Furthermore, it avoids a problem associated with total government expenditure in percent of gross domestic product (GDP) as a measure of government size, which is not a "real" ratio measure and overstates the size of the public sector (Warlitzer, 1999: 5). Only government consumption expenditure is included in the calculation of society's total economic output.

A further advantage of using consumption expenditure is that it is most directly comparable to a non-monetary indicator of government size, namely government employment. A major part of consumption expenditure consists of wages and salaries to public employees and public employment is another measure of the direct economic involvement of government. The use of two indicators for public sector size in the analysis and the comparison of the results allows for judging the certainty for which the findings can be prescribed to the underlying concept.

Both measures are originally drawn from National Accounts as published by the Organization for Economic Development and Cooperation (OECD), which are often referred to as the most comprehensive and internationally comparable source on government and economic statistics (e.g. Saunders, 1988: 272). Nevertheless, there are some classification and measurement problems that have to be addressed. Both indicators under-represent the actual involvement of government in economic matters. Although the definition of "general government" in national accounts, on which both measures are based, encompasses central, state, as well as local governments, it disregards all activities of public enterprises. Even if an enterprise is completely owned by the state, its activities will not be reflected in general government accounts if it engages in market-oriented activities (Cusack, 1991: 4). Furthermore, any qualitative devices of government to intervene in the economy, as described in the last section, are not or only to a little extent mirrored in these indicators. Since regulation is a major instrument of economic government policies, this is another deficiency of the indicators with regard to the definition of government size.

3.2 The Dynamics of Government Size

This section gives a brief survey of the developments in government consumption expenditure and employment for the period and countries under investigation. It is setting the stage for the discussion of proposed explanations for these dynamics in the literature review of the next chapter. During the eighties, the growth of both indicators slowed down considerably. After some increase in the early years of the decade, average consumption expenditure even returned to about its 1980 level at the end of the eighties, but only to increase again sharply in the first few years of the nineties. Whether the renewed decrease of government consumption at the very end of the period is just a short term fluctuation or signifying a consolidation cannot be inferred from the data [See Barro (1989), Barth and Bradley (1987), Grier and Tullock (1987),Grossman (1988), Kormendi and Meguire (1985), Landau (1983, 1986), Peden (1991), Peden and Bradley (1989), and Scully (1992, 1994)]. Government employment did not show such a dynamic behaviour during this decade. Although its growth lost some pace during the eighties, signs of a potential reversal of the upward trend are only visible in the early nineties. Generally, its growth shows a steadier picture as compared to government consumption. The latter might be more susceptible to economic cycles. It looks like economic downturns were accompanied by strong increases in consumption expenditure. After the first oil-price shock in 1973, at the end of the seventies, and towards the end of the eighties, government consumption grew more rapidly and all these periods were marked by recessions. Thus it seems that public employment is far less influenced by short and medium term economic fluctuations than government consumption expenditure. Partly, this might simply have a technical reason. The denominator of public consumption is GDP, which automatically increases the overall measure when economic output decreases during times of recession. On the other hand, especially during the seventies, countercyclical policies of governments were not uncommon. Governments might have tried to boost the economy by stepping up state contracts.

Overall, it confirms the story about a retrenchment of the state during the eighties and nineties. Increased unemployment, high public debt, and growing globalization of markets, among other factors, indeed seem to have led to a slowdown of the growth of the public sector, both as measured in expenditure and employment data. Despite its short but strong increase in the early nineties, consumption expenditure grew on average only by about six and a half percent from 1980 to 1994. In absolute terms this is roughly a percentage point increase from 16 to 17 % of GDP. Similarly, government employment increased on

average only by 6 % since 1980 from 11.68 % to 12.34 % of working age population at the end of the period.

To sum up, government consumption expenditure and employment increased enormously during the 30 years under study, the former by on average 58 % and the latter by 75 %, whereby the bulk of this growth took place during the sixties and seventies. In 1994, on average 12.34 % of the population between 14 and 65 was employed by the government and 16.96 % of the total economic output of a state is directly produced or ordered by it. This section explores what factors favoured and hindered such a dramatic growth of public economic activity. A main argument is that cross-national differences in political and economic conditions led to very different outcomes. Looking at the average growth of government has the advantage of showing some general developments over time, but more interesting in this context is how different countries faired with respect to public sector size.

3.3   Political Institutions

Whereas constraining effects of political institutions and veto players are increasingly recognized as influencing factors in studies on related topics like welfare state expansion, budget deficits, economic growth, inflation, and taxation, the empirical evidence in the study of government size is rather scarce. The role of profit and loss is central to this process. In the market sector, profit provides decision-makers with a strong incentive to keep cost low, discover better ways of doing things, and adopt improved technologies quickly. On the other hand, losses impose a penalty on those that have high cost or use resources unproductively. Thus, the dynamics are constantly channeling resources toward uses that are more highly valued. There is no similar mechanism that performs this function effectively in the public sector. Compared to the market sector, productive activities are acted upon less rapidly and counterproductive activities are eliminated more slowly in the government sector. As a result, the dynamic growth process is slower in the latter.

Roubini and Sachs (1989), Blais et. al. (1993, 1996), and de Haan and Sturm (1994, 1997) accounted for the constraints faced by parties in coalition and minority governments. Roubini and Sachs (1989) argued that the power dispersion in coalition and minority governments leads to increased logrolling among parties which would eventually result in a higher share of public spending in overall economic activity. Whereas they also found empirical evidence for this hypothesis in their analysis, De Haan and Sturm (1994, 1997) could not confirm such an effect on government spending. Both studies used the measure of political

cohesion developed by Roubini and Sachs (1989) which takes account of different types of governments, ranging from minority governments to oversized coalitions.

Blais et. al. (1993) examined a more refined argument, arguing that minority governments should generally lead to higher government spending for the reasons outlaid above, but that this should also lead to partisan effects being less pronounced. They assessed these hypotheses empirically by including a dummy for minority governments not only as an independent variable, but also in interaction with their government ideology indicator. Whereas they found both hypotheses confirmed in their first study (Blais et. al., 1993), the effects vanished in a following re-analysis using different data and a different model specification (Blais et. al., 1996). Although an interesting methodological approach, the focus solely on minority governments is insufficient, since minority governments are only one possible source of government hindrances. A measure reflecting the degree of political cohesion like Roubini and Sachs' (1989) is clearly preferable to a simple dummy, but their measurement scale is still contestable and omits other constraining factors outside the lower house.

The studies of Huber and her colleagues (Huber et. al., 1993; Huber & Stephens, 2000) and Schmidt (1996, 2002) stressed the importance of the general configuration of political institutions. Their basic argument is that different institutional settings allow for a different number of veto points (Immergut, 1992) accessible for political actors in opposition to the policy proposed by the incumbent party. All studies employed an additive index incremented for bicameralism, the possibility of referenda and federalism. In addition, Huber's index took account of the regime type (incremented for presidentialism) and the election system (incremented for majoritarian, (See Barro, 1990). Schmidt (1996, 2002) identified European Union-membership, an autonomous central bank and a high difficulty of amending the constitution as factors of further constraints.

A problem of these measures is that they presume determinism between institutions and their alleged outcome which is not accurate in many instances. Obvious examples are majoritarian election systems. The simplified hypothesis is that they produce single party majority governments, in contrast to proportional representational election systems, which are supposed to produce minority or coalition governments. This might often be the case, but there is no causal necessity. In addition, it is doubtful whether the different institutions are conceptually equivalent to allow for a combination into one additive index. The proposed causal chains are based on different and partly contradictory

assumptions and their relative importance cannot be distinguished (Ganghof, 2002: 8).

Another criticism concerns the expected relationship between institutional constraints and government size. All authors expected, and indeed found, a negative impact on public sector size. In instances where government size decreased, a negative effect of institutional hindrances means that the decrease is stronger the larger the number of veto points. But in close accordance with theory, institutional constraints should make changes proposed by governments more difficult in either direction. Such "no-change" expectations can be more appropriately modelled by interaction terms between ideology variables and institutional constraints.

Overall, the previous literature dealt with political institutions and veto players in two ways. The political cohesion literature accounted for actual veto players in the lower house, disregarding other institutional features with a potential for vetoes. The institutionalist literature controlled for all institutional settings with a potential for producing veto players without regard to whether this was actually the case. An exception is the study by Cusack and Fuchs (2002), which considered party ideology in all relevant legislative chambers when examining the constraining effects on government. But their analysis was based on the rather questionable assumption that the "willingness to join a coalition means the acceptance of the dominant ideology among the parties member to the coalition" (Cusack & Fuchs, 2002: 21). In short, they treated coalition governments as single actors.

The veto players theory proposed by Tsebelis (1995, 2002) is an attempt to a unifying approach. It offers a consistent theoretical account of what constitutes veto players in different institutional settings and deduces counting rules for their operationalization in empirical analyses. In short, veto players must not only have the power to veto, but also the incentives to do so. Veto players theory is not confined to different types of government like the political cohesion approach or to a certain veto point (like bicameralism in the study of Cusack and Fuchs, 2002), but principally applicable to all possible institutional sources of veto power. On the other hand, these institutional sources for veto power constitute only veto players when the corresponding actors differ in their preferences to those held by the leading government party. Hence, instead of counting all institutional settings as veto points like the institutionalist studies, only the actual veto players constituted by these institutional settings are taken into account.

3.4   Interest Group Systems

Although veto players theory is an improvement with regard to the treatment of political institutions, there is still a blind spot in an institutionalist concept of the political process. Potentially influential actors outside formal political institutions are completely neglected. Particularly, interest associations might be of relevance here. Usually, their influence is seen as related to the degree of corporatism present in a country. Corporatism is a widely used concept and as broad are the meanings ascribed to it. Centralized or coordinated wage bargaining, interest group participation in public policy making, political-economic consensus ("social partnership"), and centralized and concentrated interest groups are just some key terms often equated, alone or in conjunction, with corporatism (Kenworthy, 2000). Before clarifying what is meant by corporatism in the context of this paper, the treatment of the concept in previous quantitative research on government size is first discussed. The literature on the impact of corporatism on macro-economic outcomes is vast, thus it is noteworthy that only few studies examined the more direct influence of corporatist arrangements on government size, the more so since the latter relationship is often assumed to be part of the causal chain linking corporatism to macro-economic outcomes.

Cusack et. al. (1989) and Iversen and Cusack (2000) include a measure of union strength in their models of government size. The latter use this indicator simply as a control variable, without further elaboration of the causal path linking the organizational strength of unions to government expenditure. Cusack et. al. (1989: 483) introduces the variable to "capture the strategic importance of one of the potentially central actors in political-economic decision making within modern industrial societies." In their view, organizational strength is a crucial factor for achieving successful outcomes for the represented group in redistributive struggles often carried out with regard to government policies. Both studies expect a positive effect of union strength on government size, and their analyses confirm this expectation.

Cusack et. al.'s (1989) measure of union strength is simply the share of union members in total employees. Whether this is a valid indicator for organizational strength is doubtful. It has been argued that it is the concentration among and the centralization within interest organizations as well as their institutional standing granted by government within the political-economic system, that defines power of interest groups in the first place. As Schmitter (1981: 312) concluded from his analysis: "What seems to count is not whether *everyone* is getting organized for the pursuit of specialized class and sectoral self-interest but *how* they are doing so" (italics in original). The measure used by Iversen and Cusack (2000) is

somewhat refined in this respect, weighting union density with the degree of union centralization.

Garrett and Lange (1991) and Garrett (1995, 1998) also argue that the organizational strength of unions is a crucial factor in explaining government size. But whereas the studies reviewed in the last paragraph expected an independent effect of union strength, Garrett and Lange (1991) reason that it is the combination of left governments and strong unions that yields the necessary power resources to pursue leftist policies effectively. Thus government size should increase in situations where a government is dominated by social-democratic or labor parties and supported by monopolistic and centralized trade unions.

A methodological shortcoming in these studies is that it is simply assumed that left governments and strong unions have a combined effect on government size over and above their individual effects. Instead of entering the partisan government indicator and the union strength variable separately into the regressions and using an interaction term to test for this conditional relationship, several indicators for both party ideology and union strength are combined into an additive index of "left-labor power" (Garrett, 1995: 637, 1998: 67). Garrett and Lange (1991) report a positive impact of the combined index of left government and union strength on government expenditure as well as on public employment. In contrast, Garrett (1995, 1998) finds only statistically significant positive effects of left-labor power in cases characterized by high financial and economic international integration. Whether the combination of left governments and strong unions or one of these factors alone drives the effects observed cannot be ascertained by the use of such a combined index.

Both approaches described in the previous paragraphs focus on properties of one particular type of interest group organization that is trade unions. Trade unions are usually identified with preferences for more state intervention in the economy, thus expecting a positive effect of organizationally strong unions on government size is reasonable. However, powerful unions are in most countries accompanied by similarly strong employer and business associations with often opposite interests as regards government activity. If corporatism is not equated with strong trade unions, but regarded as a certain type of interest group system, its impact on government size is not so clear cut. Conflicting powerful organized interests could, as with veto players, restrict change in government policies regardless to which end.

3.5   Partisan Politics and Political Constraints

Numerous theories have been proposed to explain the growth and the size of the public sector, and any attempt to give a complete discussion is bound to fail. Hence this chapter focuses on the theories that are the main focus of this paper and the following empirical analysis. It discusses in some detail how political parties are supposed to leave their marks on public sector size and how their ability to do so is limited by political actors endowed with veto power and corporatist interest groups.

3.5.1   Partisan Theory

The "parties do matter"-hypothesis states that the party composition of government is "a major determinant of variation in policy choices and policy outputs" (Schmidt, 1996: 155). It was developed by Hibbs (1977) to explain variation in macroeconomic outcomes. The basic idea is that parties are trying to get (re-)elected in order to implement policies which favor their core clientele (Hibbs, 1992). According to Hibbs (1977), lower social classes are the electorate of left parties. They often hold only human capital and occupy lower status jobs which are most affected by unemployment. The clientele of right parties, on the other hand, are upper income and occupational status groups which hold most of the financial capital. They are more concerned about inflation than unemployment.

Hence, under the proposition that there is a general trade-off between unemployment and inflation, left governments are associated with more expansionary policies resulting in low unemployment but higher inflation, whereas right governments are assumed to endorse policies to keep inflation low, even if the result is a higher unemployment rate. In short, parties act to a substantial degree "ideologically" by promoting policies that respond to the "objective interests and revealed preferences of their core constituencies" (Hibbs, 1992: 363).

Partisan theory not only applies to macroeconomic policy and outcomes. Following Hibbs' (1977) seminal article, his theory was applied to a wide variety of policy domains over the last 25 years. In its general form it holds that, ceteris paribus, changes in the left-right party composition of government are related to changes in public policy (Imbeau et. al., 2001: 2). With regard to government size, left parties are associated with more expansionary fiscal policies, larger welfare effort, and with an overall larger public sector than right parties (Schmidt,

1996).Whereas left parties are seen to resort to government intervention, parties on the right are assumed to rely more on market mechanisms.

Ideology can be defined as "a set of ideas which provides a guideline for political action" (Pennings, 2002: 111). In comparative politics, the term ideology usually refers to the classic left-right dimension and this paper follows the convention. The role of government versus that of the market is the basic criterion distinguishing the left from the right (Blais et. al., 1993: 43; Pennings, 2002: 111). If it is correct that governments can change existing policies generally only at the margin and, hence, any partisan effect is small compared to the influence of non-political factors, such an effect should still be most visible with regard to public sector size.

Partisan theory is based on several propositions (see Schmidt, 2002: 168). Firstly, it assumes that distinct social groups with specific interests and preferences are forming the electorate. Although one might doubt the existence of strong class cleavages in today's affluent democracies, it is nevertheless obvious that the gains of many government policies are distributed unequally among occupational groups. If one agrees that groups are broadly aware of these differential effects, it is reasonable to assume that lower social strata prefer more government activity than higher income groups since the former often profit at the expense of the latter from such intervention. For example, government spending in welfare related areas involves a direct or indirect redistribution of real income from the "rich" to the "poor", and the same is true for the macroeconomic fiscal policies as outlaid in the first paragraph.

The second proposition is that these preferences of social groups are successfully fed into the political process. If one is content with the assumption that such distinct groups exist, such a link is straightforward in representational democracies. In order to win elections or at least a substantial share of seats in the legislation, parties need at least the support of their core constituency. Of course, the preferences of social groups are not directly translated into preferences of the corresponding party and in many instances the policy supported by a party will not match the policy favored by its electorate. But on average over a large number of issues, such an assumption is plausible. Parties are "multi-goal organizations" (Schmidt, 2002: 168) with policy-pursuit but also office-seeking ambitions. It is in the party's own interest to advocate policies which are desired by its clientele if it wants to reach or stay in office.

In any case, the analysis does not crucially depend on the validity of these two assumptions. Government ideology is measured directly, and the precise

mechanism why parties differ in their ideological positions is of second order to the hypotheses to be tested. More controversial are the two assumptions concerning the questions whether parties in government can actually realize their preferred policies and whether these policies result in the outcomes favored.

Hibbs (1977) advanced partisan theory with the explicit goal of explaining macroeconomic outcomes like the rates of inflation and unemployment. But as Schmidt (2001: 22) points out, results of economic processes cannot be determined by government. Macroeconomic outcomes are not amenable to hierarchical steering. Although government surely has some impact on economic developments through its involvement and intervention in the economy, the effect is usually rather remote, hard to detect and hard to disentangle from other influencing factors. Direct impacts of government activity on economic results are an exception rather than the rule. One such example might be the conscious expansion of public employment by government to counteract unemployment. But even in this case, unintended consequences can reverse the result. Algan et. al. (2002) argued that public employment is "crowding out" private employment, leading to higher unemployment rates at least in the long run.

Whether government ideology directly influences macro-economic outcomes is questionable and possible effects are empirically difficult to identify. These problems are omitted in this paper by the focus on the intermediate link between government ideology and public policy, that is on the assumption that partisan governments can realize their preferred policies. Policies are more immediately and comprehensively controlled by governments than macro-economic outcomes, thereby keeping the causal chain to be investigated shorter.

But even policies are not under full control of the incumbent government. New governments in office do not start from scratch; they are confronted with elaborate policy legacies, resulting from decisions taken by numerous predecessors. Often highly institutionalized and intertwined, existing policies cannot be completely overthrown over night. The economic environment also plays a major role in the capability of governments to pursue their favorite policies. For example, low economic growth and high international economic vulnerability can be expected to decrease the scope for partisan policies (Schmidt, 2001: 26). Furthermore, whether a government party can accomplish its preferred policy depends on political factors. In coalition governments, policy proposals are the result of compromises among incumbent parties and whether a policy is enacted depends on constitutional veto possibilities for actors opposing it. Moreover, the formulation and implementation of policies might be enhanced or obstructed by powerful societal interest organizations.

Given the many restrictions on government discretion, the impact of party ideology on aggregate government size is likely to be modest. The more interesting is the identification of political-structural constellations that enhance or decrease government's capacity to implement partisan policies. The next sections explore how veto players and corporatist interest groups are supposed to mediate this relationship between government ideology and public sector size.

3.5.2 Veto Players Theory

Partisan theory was originally developed in the context of a majoritarian democracy with a two-party system (Schmidt, 2001: 27). The underlying picture was a single-party government with a powerless opposition and no constitutional veto players. In such a situation partisan influences should become apparent. In the case of non-majoritarian democracies, the causal chain between the ideological orientation of government and policy outputs might be less obvious (Schmidt, 2001). For example, in the case of coalition governments the leading government party has a lower potential for policy change in line with its partisan preferences because it has to engage in bargaining and to strike compromises with the other parties in the coalition (Blais et. al., 1993). In systems with two legislative chambers the same holds if the Upper House is controlled by the opposition (Tsebelis, 1999). In this case bargaining might not be the dominant interaction modus but the government will anticipate the position of the opposition and formulate its policy proposal accordingly in order to reach the approval of the second chamber.

Hence, policy outputs are often compromises between coalition partners or between the government and its "co-governing" opposition (Schmidt, 2001). In these situations, the effect of partisan ideology on public policy will be less visible. Without taking institutional structures and veto players into account, the smaller differences in policies are credited solely to apparently smaller ideological differences of governing parties (Schmidt, 2001). Political institutions and veto players are an important variable potentially conditioning the effect of partisan governments on policies.

In general, different institutional configurations yield a varying number of veto points which provide opportunities "for blocking or challenging government policy decisions" (Immergut, 1992: 32). Formal institutions like constitutions and laws ascribe roles and rights to political actors and, especially of interest for this study, they inhibit some actors with the power to veto policy proposals of the government. In some cases veto power is a direct cause of formal norms like in

the case of bicameralist systems, in other cases it is rather a remote and not deterministic consequence of institutional settings, e.g. majoritarian election systems often lead to single-party governments and election systems with proportional representation often result in coalition governments. In both situations it is more precise to regard the actual veto players than the institutional settings to describe the constraints imposed on partisan governments. Bicameralism is only a hindrance for partisan policy if the Upper House is controlled by the opposition and the election system tends to, but does not necessarily have to, lead to different government types.

Tsebelis (1995, 2002) offers a consistent theoretical framework for such an analysis through his veto players theory. He defines a veto player as "an individual or collective actor whose agreement … is required for a change in policy" (Tsebelis, 1995: 301). This leads to the question of how to identify these veto players in a certain political system. Tsebelis (2002: 79) distinguishes between two types of veto players, institutional and partisan veto players. The former are specified by the constitution of a state by demanding that certain individual or collective actors have to approve a change in policy. Besides parliament, this could for example be the president or a strong upper chamber, depending on the structure of the political system.

Partisan veto players are generated by the political game within certain institutional veto players. Some institutional veto players, such as parliament, consist of several individual or collective actors themselves. If differing majorities within the legislature are possible, this institutional veto player cannot be reduced further. But if parliament is controlled by one or a coalition of cohesive parties, the institutional veto player can be disaggregated into these partisan veto players.

Finally, the "absorption rule" (Tsebelis, 2002: 28) is applied. Any actor with veto power whose preference is the same as the preference of another veto player or whose preference lies between the preferences of other veto players is discarded, since he sets no further constraints on policy change. In graphical terms, and more precisely, his indifference curve is completely absorbed by the indifference curve of at least one other veto player.

The focus on actual veto players, which are identified by taking their preferences into account, allows for the identification of political institutions and their consequences on political decision making in a consistent way across countries (see Tsebelis, 2002: 1-6). The neat and meaningful distinction of political systems according to traditional classifications, like presidentialism vs. parliamentarism, uni- vs. bicameralism, or two- vs. multiparty systems, is lost when two or more of

these categories are considered simultaneously. Moreover, expectations about the interacting effects of combinations of different regimes, legislative institutions, and party systems on policies are hard to establish.

The steps in the identification of veto players suggested part of the theoretical argument already. In short, the propensity for significant policy change is seen as a function of the number of veto players, their cohesiveness, and preferences. The predictions are that, ceteris paribus, the larger the number of veto players, their internal cohesiveness, and the distance on policy positions between them, the more stable policy will be (Tsebelis, 2002: 2). Whereas these propositions are derived independent of the position of the status quo (Tsebelis, 2002: 23), the location of the status quo is itself another crucial factor in determining policy stability. The status quo can be conceived of as the cumulated result of policy decisions taken in the past. The closer the status quo is located to the constellation of veto players, the more stable policies will be (Tsebelis, 2002: 22-23). Indeed, if veto players' preferred policy positions are located around the status quo, change will be impossible, since any change would result in a less preferred policy for at least one of them.

Only the proposition about the number of veto players will be tested in this analysis. The status quo in a certain policy area is hard to identify empirically (see Tsebelis, 2002: 23). The same argument applies to the degree of cohesiveness of collective actors and multidimensional preference. Entering this terrain is beyond the scope of this paper. In cases where preferences are supposed to be uni-dimensional, using the range of ideology between the most extreme veto players would be theoretically more appropriate than using the number of veto player. But since public sector size is likely to be a multidimensional phenomenon, the number of veto players is a better approximation for constraints than their distance among a single dimension like the left-right scale.

Although ideology is likely and actually hypothesized to be a major determinant of public sector size, it is surely not the only policy dimension that is influential. Furthermore, a larger number of veto players is likely to increase transaction costs in reaching an agreement, also increasing the difficulties for policy change (Tsebelis, 2002: 29). Finally, as Ganghof (2002) points out, the proposition of veto players as pure policy seekers might be too simplifying. Vote- and office-seeking ambitions of parties can be further hindrances for reaching an agreement. These sources of constraints are reflected by the number of veto players but not by their ideological distance.

Some aspects of Tsebelis' approach to identify the number of veto players can be criticized. In parliamentary systems, he counts all parties forming the government as veto players. In cases of single-party-majority or minimum-winning-coalition governments, this seems straightforward. A single party government, holding a majority in parliament, does not face any resistance in putting through its policies. In minimum-winning-coalitions, all parties of the coalition have to agree to pass legislation in parliament. Not so clear is the case for minority governments or oversized coalitions. Minority governments simply do not have a majority in parliament, and in oversized coalitions not all parties of the coalition are needed to agree on policy since respective legislation can principally be passed in parliament with a subset of the coalition's vote.

Tsebelis (2002: 93) general argument is that "every government *as long as it is in power* is able to impose its will on parliament" (italics in original), because it can combine a vote on a bill with the question of confidence. With regard to oversized coalitions, an additional reasoning is that a government party consistently bypassed by its coalition partners will depart from government (Tsebelis, 2002: 95). Concerning minority governments, he argues that the parties forming the minority government are usually centrally located in the policy space and can, through their agenda setting power, choose among differing majorities in parliament to have their bills approved (Tsebelis, 2002: 97).

Although plausible, some of these arguments are open to discussion. Tsebelis' treatment of minority governments is simply not consistent with his basic theoretical counting rules. The parties in minority governments do not have a stable majority at their proposal, which is used as a criterion to identify partisan veto players within constitutional veto players. The same problem regards oversized governments. Since not all government parties' approval is needed to pass legislation in parliament, not all of those parties are necessary for a stable majority. In addition, whether parties repeatedly passed over in oversized coalitions really leave government and whether minority governments are really located in the center of the policy space remains an empirical question.

Despite these possible shortcomings, the advantages of veto players theory as outlined earlier warrant an empirical examination. As Tsebelis (2002: 32) notes, his theory states just necessary but not sufficient conditions for a significant change in policy. Situations with a small number of veto players do not imply that large changes in policy actually take place, they just allow for their possibility. In order to be able to investigate what substantive differences veto players make with regard to policy output, the number of veto players must be combined with some

indicator for the willingness of actors to change policy. Ideology of the leading government party serves as such a measure in this analysis. In accordance with veto players theory, the effect of ideology on public sector size should be smaller the larger the number of veto players.

3.6   Corporatism

The growing concern for institutional features of political systems in quantitative comparative studies results in a closer approximation of the political process. But such studies are still based on an ideal-typical view of democratic politics in which policies are formulated, decided and enacted solely in ways prescribed by the constitution and through actors who are constitutionally legitimated for that purpose. This stands in marked contrast to many empirical case studies which found substantial influence of interest organizations in the policy process (e.g. Schneider, 1986; Lauman & Knoke, 1989; Pappi, 1990). According to this view, policy outputs cannot be explained by a narrow focus on political actors and formal political institutions only. The analytic frame must be widened to encompass societal organizations as well, which often play a major role in the design and implementation of policies.

The extent to which such special interests influence policy formation varies and cannot be determined by a priori. Schmitter (1979a) argues that the degree of influence of interest groups varies with structural features of the interest group system. He differentiates between two ideal-typical "modes of interest intermediation" (Schmitter, 1979b: 64): the corporatist on the one side and the pluralist on the other (Schmitter, 1979a:13-16). Pluralist systems are composed of an unspecified number of multiple, overlapping, non-hierarchically ordered interest organizations with voluntary membership, who compete for influence in policy formation. Schmitter (1979a: 13) contrasts the pluralist conception with his view of corporatist systems, which consist of a limited number of monopolistic, hierarchically ordered interest organizations with compulsory membership and functionally differentiated interest categories. Additionally, these organizations are defined as recognized by the state and granted a representational monopoly in exchange for certain controls on leadership selection or interest articulation. Whereas the last point refers to the relations between the state and interest associations, it is clear that Schmitter's (1979a) definitions focus heavily on the structural characteristics of the interest group system and of the organizations therein.

Lehmbruch (1979), on the other hand, stresses the relations between interest group organizations and the state in his definition of corporatism. For him

(Lehmbruch, 1979: 150) corporatism is a "… pattern of policy formation in which large interest organizations cooperate with each other and with public authorities not only in the articulation (or even 'interest intermediation') of interests, but … in the 'authoritative allocation of values' and in the implementation of such policies" (brackets and quotation marks in original). It is not simply a mode of interest intermediation but a mode of policy formation (Lehmbruch, 1984). Interest associations in corporatist systems do not just pressure state institutions for the consideration of their interests, but participate actively in the formulation and share responsibility for the implementation of policies. In its strongest form this eventually results in policy concertation on the system-level.

To sum up, the concept of corporatism consists of two main dimensions (Schmitter, 1982; Lijpart & Crepaz, 1991; Lijpart, 1999): A vertical dimension describing organizational features of the interest group system and a horizontal dimension reflecting relations between the state and interest associations. It is apparent what dimension of corporatism is most relevant for the research question. Policy concertation involves bargaining between the government and societal actors, and the resulting policies are compromises between different interests.

However, empirically the two dimensions of corporatism can hardly be distinguished. According to Lijphart (Lijpart & Crepaz, 1991: 236; Lijpart, 1999: 171), they can even be regarded as a single phenomenon. Schmitter (1981: 296) speaks of "a strong element of historical causality, between the corporatization of interest intermediation and the emergence of "concerted" forms of policymaking" (quotation marks in original). Corporatist policy making on the macro-level usually involves peak employer associations, trade union confederations, and government. The interaction between these actors can be described as a form of "generalized political exchange" across policy sectors (Lehmbruch, 1984: 67). Unions and business associations get a say in general socio-economic policy making by the state in exchange for cooperation and support in areas over which the government has no or only little direct control, the classic example being wage setting. Only unified and centralized interest associations with considerable organizational resources and control over their membership can offer such assets. Without this ability of interest organizations, government has no incentives to share its policy making authority. Thus, centralized and concentrated interest associations seem to be a necessary condition at least for an enduring policy concertation, and might even be sufficient to assure a certain minimum degree of participation in government policy decisions.

What effect do these structural settings have on government size? Often it is argued that corporatist arrangements allow for a more coordinated and encompassing economic policy. Bernauer and Achini (2000: 246) point out that this enhanced steering capability of the economy does logically lead to neither a decrease nor an increase of government size. The hypothesis examined here is that corporatist interest groups have a similar effect in the policy making process as veto players. They should make changes in policies more difficult regardless in which direction.

Corporatist relations are likely to "result in much inflexibility and immobilism" due to higher transaction costs in terms of time and organization (Lehner, 1987: 65). Looking at properties of the major actors involved, further hindrances to policy change besides transaction costs can be identified. Regarding policy preferences of actors, unions usually favor more government intervention in the economy whereas business associations are in support of a free play for the market. Traxler et. al. (2001: 40) report that domain definitions of peak unions most often refer to socialist or social-democratic ideals.

Although open political or ideological allegiances are rare in domain specifications among business and employer organizations (Traxler et. al., 2001: 50), it would be surprising if they favored leftist policies restricting the discretion of their membership.

The policy stance of the government is assumed to be somewhere between these poles, since it has to appeal to a larger share of the population for re-election, while interest organizations represent specific groups with more narrowly defined interests. This does not mean that government cannot be closer in its ideological position to one or the other group. But regardless of the ideological orientation of government, the results of corporatist bargaining are compromises between all three actors. For example, even if a left government is supported by a trade union with similar policy preferences, the necessary agreement of the business association will inhibit large changes towards more leftist policies.

A crucial assumption in this line of reasoning is that both types of interest organizations have a similar position in corporatist settings. That is, neither of them can be sidestepped by government or only at considerable costs. The theory of social-democratic corporatism makes a different point. According to this approach, it is the cooperation or "quiescence" (Cameron, 1984) of organized labor which is crucial in reaching favorable macro-economic outcomes. Union support is more likely to be granted to left governments, since they are supposed to act as guarantors for the translation of labor self-regulation into economic gains

for workers in the medium term (Garrett & Lange, 1991: 798). In turn, these economic gains for workers are mainly realized by social-democratic governments through more state involvement in the economy. For example, Garrett (1998) argues that left governments counteract dislocations brought about by globalization with a larger public sector, when their backing by organizationally strong unions allows for the effectiveness of leftist policies.

Since indicators of union strength and tripartite corporatism do hardly distinguish both concepts empirically (Cameron, 1984: 168), social-democratic corporatism poses a strong alternative hypothesis regarding the interacting effect of corporatism and government ideology on government size. Tripartite corporatism can be reasonably hypothesized to decrease the impact of government ideology on government size, the opposing interests of organized labor and business making large deviations from the status quo very difficult regardless of the policy preferred by government. According to social-democratic corporatism theory, trade unions occupy a privileged position in the interest group system and are most likely to cooperate with governments of a similar ideological stance. From this perspective, corporatist settings should increase the impact of ideology on government size, mainly by allowing left governments to pursue their favored policies.

3.7 Economic and Socio-Demographic Theories

The size of government is a truly interdisciplinary research field. Political and administrative scientists, economists, and sociologists working in diverse research areas as international relations, comparative political economy, fiscal policy and welfare state research, to name but a few, contribute to the literature on the topic. A wide variety of theories followed from this activity. The sheer number of hypotheses proposed makes the consideration of all of them in a statistical analysis impractical, even where this is technically possible through a large number of observations. Thus, besides the major theories of concern described in the last section, only those theories which proved to be powerful predictors of government size in previous empirical research are taken into account. As identified in earlier section, these factors include international economic and financial integration of markets, unbalanced productivity growth between public and private sectors, economic development, old age population, and unemployment.

During the last decade, a major debate has evolved around the impact of globalization on government size. The discussion centers around two competing hypotheses, the efficiency hypothesis and the compensation hypothesis (see

Garrett & Mitchell, 2001: 149-153). The efficiency hypothesis states that government involvement and intervention in the economy is disadvantageous for the competition of national economies in international markets. According to this view, governments in an ever more integrated and competitive international economy "… have no choice but to bow to the demands of the market …" (Garrett & Mitchell, 2001: 151), regardless of their ideological stance. The supposed result is a decrease in public sector size. The compensation hypothesis argues that the incentives or government economic activity are rather increasing due to public pressures to counteract the economic insecurities brought about by globalization. Government compensation of market-generated inequality and insecurity should lead to an increase in government size. Both hypotheses are theoretically plausible and different studies found empirical support for one or the other. To solve this puzzle is not the aim of the paper. Since the common denominator of these studies is that globalization has an impact on government size, variables controlling for such an effect will be included in the analysis.

According to Baumol (1967), the unbalanced productivity growth between the private and public sector explains the growth of the latter. The "technological structure" (Baumol, 1967: 415) of activities in the public sector entails forces which lead almost unavoidably to increases in the real costs of supplying them. Productivity rises are likely to be small in the labor intensive public sector compared to progressive private manufacturing sectors (Holsey & Borcherding, 1997). But wages inhibit the tendency to converge across sectors, leading to an increase of the relative costs of production in the public sector. Since public services are hardly cut down more resources have to be invested into the public sector to secure their provision, leading to an automatic increase in government spending (Cusack & Garrett, 1992). Note that this applies not just to public expenditure but also to employment. Assuming smaller productivity increases in the public sector and a price inelastic or income elastic demand for public goods, more and more of the labor force will be transferred to the public sector in order to maintain its output level relative to the output of private sectors (Baumol, 1967).

Probably the first proponent of a coherent theory of government growth was Adolph Wagner more than a hundred years ago. There are two main interpretations of Wagner's law of expanding state activity (Lybeck, 1988). According to the first, public sector expansion is due to the restructuring of society during industrialization (Katsimi, 1998). Tasks traditionally located within the family were more and more transferred to the state which led to increased government activity in fields like welfare, health and education. Although this

development was probably largely completed by the beginning of the period under study, a remote consequence should be an expansion of existing welfare and health systems brought about by an ageing society. The second interpretation associates economic development with government growth. This hypothesis is based on the assumption that "goods and services traditionally produced by the government have a high income elasticity of demand" (De Haan & Sturm, 1994: 167). The more affluent countries are the more publicly produced goods are demanded by their citizens, which should also lead to a larger government.

Higher unemployment is also often associated with government growth (e.g. Blais et. al., 1993, 1996; Huber et. al., 1993; Schmidt, 1996). Although its effect is probably not as strong on consumption expenditure as on transfer spending, there are also higher costs involved for "administrating" the unemployed, active labor market policies, and the increased use of supplementary entitlement programs. Similarly, higher unemployment is often counteracted by government through an increase in public employment.

4.   Why do Government Expenditures affect Economic Growth

In theory the relationship between government expenditures and economic growth is ambiguous. Long ago, Thomas Hobbes (1651) described life without government as "nasty, brutish, and short" and argued that the law and order provided by government was a necessary component of civilized life (Rothbard 1973). Taking the Hobbesian view, certain functions of government such as the protection of individuals and their property and the operation of a court system to resolve disputes should enhance economic growth (Knack and Keefer 1995) and Keefer and Knack 1997). Viewed from another angle, secure property rights, enforcement of contracts and a stable monetary regime provide the foundation for the smooth operation of a market economy.

Governments can enhance growth through efficient provision of this infrastructure. In addition, there are a few goods—economists call them "public goods"—that markets may find troublesome to provide because their nature makes it difficult (or costly) to establish a close link between payment for and receipt of such goods. Roads and national defense fall into this category. Government provision of such goods might also promote economic growth. However, as government continues to grow and more and more resources are allocated by political rather than market forces, three major factors suggest that the beneficial effects on economic growth will wane and eventually become negative. First, the higher taxes and/or additional borrowing required to finance

government expenditures exert a negative effect on the economy. As government takes more and more of the earnings of workers, their incentive to invest, to take risks, and to undertake productivity-enhancing activities, decreases (Browning 1976). Like taxes, borrowing will crowd out private investment and it will also lead to higher future taxes. Thus, even if the productivity of government expenditures did not decline, the disincentive effects of taxation and borrowing, as resources are shifted from the private sector to the public sector, would exert a negative impact on economic growth. Second, as government grows relative to the market sector, diminishing returns will be confronted. Suppose that a government initially concentrates on those functions for which it is best suited (for example, activities such as protection of property rights, provision of an unbiased legal system, development of a stable monetary framework, and provision of national defense).

By performing these core functions well, the government provides the framework for the efficient operation of markets and thereby enhances economic growth. As it expands into other areas, such as the provision of infrastructure and education, the government might still improve performance and promote growth, even though the private sector has demonstrated its ability to effectively provide these things. If the expansion in government continues, however, expenditures are increasingly channeled into less and less productive activities. Eventually, as the government becomes larger and undertakes more activities for which it is ill suited, negative returns set in and economic growth is retarded. This is likely to result when governments become involved in the provision of private goods—goods for which the consumption benefits accrue to the individual consumers. Goods like food, housing, medical service, and child care fall into this category. There is no reason to expect that governments will either allocate or provide such goods more efficiently than the market sector. Finally, the political process is much less dynamic than the market process. While competition rewards alertness, it also imposes swift and sure punishment on those who make bad decisions and thereby reduce the value of resources. Adjustment to change is much slower in the public sector. By way of comparison with markets, the required time for the weeding out of errors (for example, bad investments) and adjustments to changing circumstances, new information, and improved technologies is more lengthy for governments This is a major shortcoming as it relates to economic growth. To a large degree, growth is a discovery process.

As entrepreneurs discover new and improved technologies, better methods of production, and opportunities that were previously overlooked, they are able to combine resources into goods and services that are more highly valued (Kirzner

1973, 1997; Schumpeter 1912). This is the central element of wealth creation and growth. Reliance on markets and the presence of economic freedom facilitate this process. Clearly, the expansion of government relative to the market sector slows this important source of economic growth.

In short, the government provision of both (a) an infrastructure for the operation of a market economy and (b) a limited set of public goods can provide a framework conducive for economic growth. However, as the size of government continues to grow, the (a) disincentive effects of higher taxes and borrowing, (b) diminishing returns, and (c) a slowing of the discovery and wealth-creation process will become more and more important. Eventually, these factors will dominate and the marginal government expenditures will exert a negative impact on growth.

4.1   Relationship between size of Government and Economic Growth

Gwartney et al (1998) illustrated the relationship between size of government and economic growth, *assuming that governments undertake activities based on their rate of return*. As the size of government, measured on the horizontal axis, expands from zero (complete anarchy), initially the growth rate of the economy—measured on the vertical axis—increases. Gwartney et al (1998) illustrated this situation in their study. As government continues to grow as a share of the economy, expenditures are channeled into less productive (and later counterproductive) activities, causing the rate of economic growth to diminish and eventually decline (See Barro 1990). The range of the curve beyond B illustrates this point. In the real world, governments may not undertake activities based on their rate of return and comparative advantage. Small government by itself is not an asset. When a small government fails to focus on and efficiently provide core functions such as protection of persons and property, a legal system that helps with the enforcement of contacts, and a stable monetary regime, there is no reason to believe that it will promote economic growth. This has been (and still is) the case in many less developed countries. Governments—including those that are small—can be expected to register slow or even negative rates of economic growth when these core functions are poorly performed. Unless proper adjustment is made for how well the core functions are performed, the empirical relationship between size of government and economic growth is likely to be a loose one, particularly when the analysis involves a diverse set of economies.

A fundamental model of economic growth developed by Robert Solow (1956) suggests that while some economies may be wealthier than others, in the long run they should all grow at the same rate. More recent work has suggested that not

only do economies actually have substantially different growth rates over lengthy time periods (Quah 1996; Gwartney and Lawson 1997), there are also good theoretical reasons for believing that countries can maintain the different rates (Lucas 1988; Romer 1990). This issue is important because if long-run growth rates across countries are all the same (or approximately the same), the long-term consequences of economic policies that impede growth are less severe. This study will examine the issue empirically by looking at how the size of government has affected economic growth.

4.2   Government Expenditures and Economic Growth in the United States

Gwartney et al (1998) illustrated this growth in government expenditures in the United States, and showed that the increase in government expenditures is primarily due to the growth of transfers and subsidies, rather than in the core areas of government. Their bars in exhibit 3A showed average government expenditures for all years in each decade, or in the case of the 1990s, partial decade. In the 1960s government expenditures at all levels of government averaged 29.9 percent of GDP, and increased to 32.8 percent of GDP in the 1970s, 34.7 percent of GDP in the 1980s, and 35.3 percent of GDP in the 1990s. The breakdown of components in Exhibit 3A shows that while net interest expenditures almost doubled as a percent of GDP, even in the 1990s interest expenditures amounted to only 2.2 percent of GDP. National defense expenditures declined substantially over the entire period, and there was a slight increase in non-defense purchases. While non-defense purchases were higher in the 1970s than the 1960s, they have been virtually unchanged during the last three decades. *As a share of GDP*, transfers and subsidies have more than doubled since the 1960s. They have risen from 6.4 percent of GDP in the 1960s to 13.5 percent of GDP during the 1990s. Thus, transfers and subsidies consumed an additional 7.1 percent of GDP in the 1990s than during the 1960s. The share of GDP devoted to total government expenditures rose by 5.4 percent over that same period (and 6.2 percent between 1960 and 1996). Thus, transfers and subsidies by themselves fully account for the growth of government as a share of GDP in the United States.

This expansion in the size of the transfer sector is likely to reduce economic growth. Transfers and subsidies that enlarge the size of government will require higher tax rates, which will reduce productive incentives. Compared to expenditures in core areas, additional government expenditures on transfers will exert little positive impact on growth. Transfers and subsidies also bring with them the problem of rent seeking. Rent-seeking (or subsidy seeking) occurs when people attempt to enhance their wealth by trying to direct than by engaging in

productive activity. Rent-seeking benefits the recipient of the rents, but it is government benefits to themselves rather a drain on the economy as a whole. The terminology is somewhat unfortunate because, in this context, "rent" does not mean a payment to a property owner, as it does in common language. Rather, it is referring to transfers received by the recipient that are paid for by others (Tullock 1967). When people try to obtain income by having the government transfer benefits to themselves rather than by providing goods and services to others, economic growth suffers. Gwartney et al (1998) exhibited gross investment as a percentage of GDP for the same time periods. While government expenditures increased as a share of GDP during every decade, gross investment fell. Of course, other factors may be at work here, but there are several reasons to expect that the growth of transfers and subsidies will retard investment. The increased availability of transfers and subsidies will increase the incentive of both businesses and organized interest groups to seek gains through government largess rather than increases in productivity. Since the direction of transfers is generally either from those with high income to those with lower levels of income, or from working people to retired people, they shift income away from people with high savings rates and toward those who save less of their income. The predictable effects are a reduction in total savings, higher real interest rates and a decline in the rate of investment, particularly investment financed by Americans. In addition, much of the growth in the transfer sector (and overall size of government) has been financed with government borrowing. This too is likely to place upward pressure on interest rates and reduce the level of investment.

Investment is the primary factor that increases labor productivity. Individuals working with more capital (better tools and machinery) will produce more output per hour. For example, investment in a backhoe will allow one person to do the work of several with shovels. Gwartney et al (1998) found that as investment has fallen over the four decades from the 1960s to the 1990s, the growth in output per hour has also fallen. In turn, the slowdown in productivity has reduced the growth rate of real GDP during each of the last three decades(see Gwartney et al, 1998). The story told by Gwartney et al (1998) is that as government has grown, it has crowded out investment which has resulted in declining productivity growth and a slowdown in the growth rate of real GDP. Larger government leads to less economic growth.

4.3   Evidence from the OECD Countries

Compared to most other countries around the world, the institutional arrangements and income levels of the 23 long-standing OECD members are

relatively similar. Politically, all OECD countries are stable democracies. Their legal structures generally reflect a commitment to the rule of law. Monetary arrangements have been stable enough to avoid hyperinflation during the post World War II era. In the area of international trade, OECD members have been at the forefront of those promoting more liberal trade policies within the framework of GATT and the World Trade Organization. The homogeneity among these countries adds to the significance of comparisons within this group. Despite their similarities, the size of government as a share of the economy has varied substantially among OECD countries (and across time periods). What impact has this variation had on economic growth? This section views relevant data from several perspectives in an effort to answer this question.

Gwartney et al (1998) presented data on the average year-to-year growth rate of GDP according to the size of government. As illustrated, total government expenditures summed to less than 25 percent of GDP in seven OECD countries in 1960. In total, there were 81 cases during 1960- 1996 where a nation had government expenditures less than 25 percent of GDP. Countries in this category averaged a GDP growth rate of 6.6 percent during these years. When the size of government was between 25 percent and 30 percent of GDP during a year, the average growth rate fell to 4.7 percent. The year-to-year growth declined to 3.8 percent when government expenditures consumed between 30 percent and 40 percent of GDP. Still larger government was associated with still lower rates of growth. During years when the size of government of an OECD country exceeded 60 percent, the average growth of real GDP plummeted to an anemic 1.6 percent. The data of Exhibit 4 clearly illustrate an inverse relationship between the year-to year growth of GDP and the size of government in OECD countries.

Gwartney et al (1998) considered the relationship between size of government and growth over a more lengthy time period. Size of government *at the beginning of a decade* is measured on the x-axis, while growth of real GDP *during the decade* is recorded on the y-axis. The exhibit contains four dots for each of the 23 OECD members—one for each of the four decades—for a total of 92 dots. Each dot represents a country's total government spending *at the beginning of the decade* and its accompanying growth of real GDP *during that decade*. As the plot illustrates, there is a clearly observable negative relationship between size of government and long-term growth of real GDP. The line drawn through the plotted points is the least squares regression line showing the relationship that best fits the data. The slope of the line (*minus* 0.100) indicates that a 10 percentage point increase in government expenditures as a share of GDP leads to approximately a one percentage point reduction in economic growth. The R-

squared of .42 indicates that government spending alone explains about 42 percent of the differences in economic growth among these nations during the period (Gwartney et al; 1998).

Gwartney et al (1998) also illustrated the trade-off between size of government and economic growth. Looking at the regression, government expenditures of 20 percent of GDP are associated with a decade-long average annual growth rate of approximately 5 percent, while government expenditures of about 45 percent are associated with only half as much economic growth. Among these countries, a 25 percent increase in the size of government as a share of GDP retarded the annual rate of economic growth by approximately 2.5 percent. This evidence indicates that big government imposes a heavy penalty in the form of a lower rate of economic growth.

Gwartney et al (1998) examined Several other things are worth noting about. First, although the theory suggested that if government expenditures are too low, economic growth can suffer, there is no evidence of that in their empirical study. There are six observations for nations with government expenditures as a percentage of GDP well below 20 percent. Of these six observations, five lie above the "best fit" line, and the remaining point is only slightly below. Thus, there is no evidence that the size of government for any of the OECD countries during the last four decades was less than the growth-maximizing level. To the contrary, evidence indicated that all of these countries were on the downward sloping portion (right of point B) of the "size of government-growth curve".

The OECD countries represented are developed economies with relatively high per capita incomes. With the possible exception of Japan, none are "growth miracles"—less developed economies that might have high rates of growth because their current level of income is relatively low. Japan did register very high growth rates for several decades. But even here there is a revealing story (Gwartney et al (1998). At the beginning of the 1960s, the total expenditures of the Japanese government were only 17.5 percent of GDP and they averaged only 22.0 percent of GDP during the decade. With that environment, the Japanese economy registered an average annual growth rate of 10.6 percent in the 1960s. During the 1960s the Japanese economy fits the small government, high growth mold. Over the next three decades, the Japanese government grew steadily; by 1996 government spending had soared to 36.9 percent of GDP. At the same time, Japan's growth rate moved in the opposite direction, falling to 5.4 percent in the 1970s, 4.8 percent in the 1980s and sagging to 2.2 percent in the 1990s. As in United States, the growth of government in Japan has been associated with a slowdown in the rate of economic growth.

Gwartney et al (1998) study entered into additional insights on the relationship between size of government and economic growth to be gleaned from comparisons between OECD members with *large* increases in government expenditures and those with *small* increases. The size of government as a share of GDP rose in all OECD countries between 1960 and 1996. However, there was substantial variation. On the top the study also showed data for those countries with the smallest growth in government expenditures as a percentage of GDP, while the bottom portion of the findings presented the figures for those with the largest increases in size of government. The bottom row of the findings indicated the average for all 23 OECD members. In five OECD countries (United States, Iceland, United Kingdom, Ireland, and NewZealand), government's share of GDP increased by less than 15 percentage points. As a share of GDP, the average size of government for this group rose from 28.9 percent in 1960 to 39.1 in 1996, an increase of 10.2 percentage points. In contrast, the *increase* in government expenditures accounted for more than 25 percent of GDP in six OECD countries (Spain, Portugal, Greece, Finland, Sweden, and Denmark). Interestingly, the size of government of these six countries (bottom half of Exhibit 6) averaged 21.8 percent of GDP in 1960, well below the OECD average of 27.0 percent. By 1996, however, the picture was dramatically different. In 1996 the government expenditures of the six had risen to 54.5 percent of GDP, well above the OECD average of 48.0 percent.

As the size of government rose during 1960-96, the growth rates of OECD members plummeted. Among the 23 long-standing members, only Ireland achieved a higher growth rate in 1990-96 than in 1960-65. If size of government negatively impacts growth, the performance of countries with the *largest expansion* in size of government should be relatively poor. Gwartney et al (1998) study sheds light on this issue. It shows the annual growth rates of real GDP for both the "slow" and "rapid" growth of government countries at both the beginning (1960-65) and end (1990-96) of the period. The differential growth rate between the earlier and latter periods is also presented. The growth rate of real GDP declined for both groups, but the reduction was substantially greater for the rapid growth of government group. The reduction in the average growth rate of real GDP was 5.2 percentage points for OECD members with the largest expansion in size of government, compared to an average decline of 1.6 percentage points for those with the least increase in size of government. The reduction in the growth rate of every nation in the "big growth of government" group exceeded the OECD average (bottom line of table). In contrast, each country in the top group—those with the least expansion in government—registered below average reduction in

growth. Moreover, every nation in the bottom group had a *larger reduction* in growth than any of the nations in the top group. In the physical sciences, researchers can go to the laboratory and design experiments to test the validity of their hypotheses. Economists do not have this luxury.

However, sometimes fortuitous events provide an almost ideal experiment. Such was the case with regard to the changes in the size of government for the nations of Gwartney et al (1998). Government expenditures as a share of the economy for each of the countries in the top part exceeded the OECD average (27.0 percent) in 1960. At the same time, their average growth rate (4.3 percent) during 1960-65 was less than the OECD average (5.5 percent) (Gwartney et al 1998). This situation was exactly the opposite *for this same set of countries* in the 1990s. By the 1990s, government expenditures as a share of the economy for those in the top group were below the OECD average, while their average growth rate (2.7 percent) exceeded the OECD average (1.9 percent). Meanwhile, just the reverse happened to the bottom group. Except for Sweden, their government expenditures were below the OECD average in 1960 and they achieved above average growth in the first half of the 1960s. By 1996, the size of government (except for Spain and Portugal which were just slightly below the OECD average) of the countries in the bottom group was above the OECD average. Correspondingly, their average growth rate (1.2 percent during 1990-96) fell below the OECD average. Because these figures are for the same countries (and country groupings with relatively similar political structures, incomes, and levels of development), the potential impact of differences in such things as culture, natural resources, and motivation of the people is minimized. It would have been difficult for a researcher seeking to isolate the impact of size of government on economic growth to have designed a more relevant experiment. This is what makes the pattern of the results presented in Gwartney et al (1998) study so compelling.

When the size of government was below the OECD average—the 1990s for the top group and 1960s for the bottom group—those nations enjoyed above average growth. In contrast, when the size of government exceeded the OECD average—the 1960s for the top group and 1990s for the bottom group—those nations suffered below average growth. Using the entire sample of OECD countries from Exhibit 1, the regression results of Exhibit 7 add precision to our findings. As in Gwartney et al (1998), there are four observations for each nation. The dependent variable in the first two regressions is the growth of real GDP in a nation during a decade, and the first independent variable is government expenditures as a share of GDP *at the beginning* of that decade. The second independent variable is the *change* in government expenditures as a share of GDP during the decade. The

regression shows that there is a strong negative relationship between the share of GDP going to government and the growth rate of GDP during the subsequent decade, with a t-statistic of 8.14 (indicating significance at the 99 percent level of confidence). There is a weaker relationship, although still statistically significant at better than the 90 percent level, between the *change* in government expenditures and GDP growth. The second regression adds investment as a percentage of GDP as an independent variable.

Investment would be expected to increase economic growth, and the positive sign on the investment coefficient shows that more investment is correlated with higher economic growth. The coefficient of the investment variable is significant at better than the 95 percent level of confidence. Even after adjusting for cross-country differences in investment rates, both the levels of the government expenditures and the changes in the sizes of governments during the decade remain highly significant. This provides additional support for the hypothesis that a larger public sector reduces economic growth.

The coefficients of the government expenditure variables indicate the impact of a one unit (a one percentage point) change in government expenditures on the growth rate of real GDP. The 0.11 coefficient for government expenditures at the beginning of the period in Gwartney et al (1998) study indicates that a one unit increase in the size of government as a share of GDP at the beginning of the period reduces the growth rate during the decade by 0.11 percentage points. At the same time, an increase in government expenditures *during the decade* reduces growth by an additional 0.046 percentage points. Even when investment is included as an independent variable in the model in Gwartney et al (1998) study, growth is reduced by approximately one-tenth of a percentage point when the size of government is one unit greater at the beginning of the period (and by approximately five hundredths of a percent for each percent point increase in size of government during the decade). This indicates that if government expenditures were 10 percentage points higher (for example, 35 percent rather than 25 percent) as a share of GDP at the beginning of the period, the long-term growth rate of real GDP would be a full percentage point lower (See Barro and Sala-i-Martin (1995). Correspondingly, a 10 percentage point *increase* in the size of government during the decade would reduce growth by five-tenths of a percentage point.

As discussed earlier, higher government expenditures crowd out investment. Evidence was presented that this has been the case in the United States, and the third regression of Gwartney et al (1998) study indicated that this has been true for other OECD countries. In this equation, investment as a share of GDP is the dependent variable, while size of government is the independent variable. There

is a strong negative correlation between the two. The 0.159 coefficient for the size of government variable indicates that a 10 percentage point increase in the government expenditures as a share of GDP reduces an economy's investment rate by approximately 1.6 percentage points. The t-statistic (5.14) is significant at more than the 99 percent level, illustrating that the estimated negative impact of the government expenditures on investment is highly reliable.

Similar to the United States, the evidence from OECD countries indicates that increases in the size of government retard both investment and economic growth. The persuasiveness of these findings is enhanced by the homogeneity of OECD members. All of these economies have the commonly recognized prerequisites for economic growth: mature financial markets, an educated work force, stable political institutions, secure property rights, and a stable monetary policy with low inflation. The consistent negative relationship between size of government (and its growth) and the growth of real GDP for these economies is particularly revealing. What do these estimates imply with regard to the United States? If the size of government as a share of GDP in the United States had remained at the 28.4 percent level of 1960, our estimates indicate that real GDP in 1996 would have been 20 percent greater. On average, government expenditures were 5 percent more than the 28.4 figure of 1960. The estimates of Exhibit 7 indicate that this retarded real GDP growth by five-tenths of a percent annually. This figure compounded over the 36-year period is equal to 20 percent. If it were not for the expansion in the size of government *as a share of the economy* between 1960 and 1996, real GDP in 1996 would have been $9.16 trillion rather than $7.64 trillion. This would have increased the income of Americans a whopping $5,860 *per person* (an income increase of $23,440 for the average family of four).

Even more striking, consider what would have happened if non-defense government expenditures had remained at their 1960 level as a share of GDP, while defense expenditures followed the downward path that actually occurred. In this case, the size of government would have fallen to 25.4 percent of GDP by the end of the 1960s and it would have been just slightly lower throughout the rest of the period. If this had occurred, the estimates of Exhibit 7 indicate that real GDP in 1996 would have been more than 40 percent greater percent compounded over a 36-year period is actually a little more than 40 percent. 20 See Appendix for a listing of the 60 countries included in the analysis of this section. Put another way, if government expenditures had been approximately one quarter (rather a little more than a third) of the economy during the last three decades, the per capita income of Americans in 1996 would have been $11,500 higher. For a family four,

this translates to an increase in income of $46,000. As these figures demonstrate, in the long run big government extracts a heavy toll on growth and prosperity.

4.4   More International Evidence

In order to add breadth, data were assembled on size of government and other factors thought to influence growth for 60 countries, including both less developed and high-income industrial economies. Because this is a more diverse group than OECD members, adjustment for differences in political economy characteristics is important. Because of the unavailability of some of the required variables for years prior to 1980, our analysis covers the 1980-95 period. Gwartney et al (1998) study summarizes the statistical results for this larger and more diverse data set. Results are presented for four different regression models. All countries for which the required data could be obtained are included in the analysis. The average annual growth rate of real GDP during 1980-95 is the dependent variable. The various independent variables included in the alternative models are indicated down the left side of the table.

The first four independent variables are measures of government expenditures and their changes. In addition to these sizes of government variables, alternative models also consider the impact of (a) security of property rights, (b) variability in the rate of inflation, (c) schooling (investment in human capital), and (d) investment in physical capital. These "control variables" are included in order to help us better isolate the independent effects of the size of government. The data on security of property rights come from the *International Country Risk Guide,* a private rating service that has tracked the political, financial and economic risks accompanying business and investment activities in various countries since 1982. The credibility of these ratings is enhanced by the fact that the business has survived by marketing them to investors and businesses over a lengthy time period. While the ratings cover several areas, three of them pertain specifically to the security of property rights and presence of rule of law. These three factors are (a) risk of expropriation, (b) risk of contact violation, and (c) presence of rule of law. We placed the ratings on a scale of one to ten; a higher rating is indicative of more secure property rights and stronger support for rule of law principles. The country ratings for Risk of Expropriation and Risk of Contact Violation were on a one-to-ten scale, while that for Rule of Law was on a one-to-six scale. After the Rule of Law variable was converted to a one-to-ten scale, the three components were averaged to derive the property rights rating. Because the data series begins in 1982, the initial rating is for 1982 (or earliest available year) rather than 1980.

Components for both the property rights rating in 1982 and the *change in the rating* during the 1982-1995 period are incorporated into the analysis.

High and variable rates of inflation may also retard economic growth. Higher inflation rates reduce the value of a nation's currency and encourage people to shift resources away from production and toward activities designed to protect themselves from inflation. Inflation also lowers the informational content of prices. Nations with high levels of inflation also tend to have high variability in their inflation rates, but there is a slightly stronger statistical relationship between the variability of the inflation rate (as measured by its standard deviation) and GDP growth than is true for the level of inflation. Thus, the standard deviation of the inflation rate was used to measure the impact of inflation on economic growth. Robert Lucas, Thomas Sargent, Robert Barro and others have highlighted the adverse side effects of variability of the rate of inflation. For a theoretical analysis of this subject and related issues, (see Miller, 1994). Both economic theory and prior research suggest that investment in both human and physical capital can be expected to enhance economic growth. We use data on increases between 1980 and 1995 in the mean years of schooling for persons age 25 and over as a measure of improvements in the level of human capital. The years of schooling data are from Barro and Lee (1993). The physical investment component is the average investment rate as a share of GDP during 1980-95. Of course, increases in both of these variables are expected to positively impact economic growth.

In addition to the size of government variables, equation developed by Gwartney et al (1998) study includes the initial property rights rating in 1982, the *change* in the rating between 1982 and 1995, and standard deviation of the inflation rate in the model. Both property right variables are highly significant and the inflation variable is also significant at the 90 percent level. With regard to the size of government variables, the coefficients for the *level* of government expenditures as a share of GDP, and the *changes* between 1980 and 1985 and between 1985 and 1990 were all negative and highly significant. The adjusted .48 R2 of Equation calculated by Gwartney et al (1998) study indicated that the variables incorporated into this model explain 48 percent of the variation in growth rates among this diverse set of countries.

What do the coefficients for the size of government variables indicate about the impact of government expenditures on the growth of economies? The coefficient for the *level* variable indicates that a 10 percentage point increase in size of government *at the beginning of the period* was associated with approximately a six-tenths of a percentage point reduction in annual growth during the entire 15-

year period. The coefficients for the *change* in size of government variables between 1980 and 1985 and between 1985 and 1990 indicate that a 10 percentage point increase during each of these periods reduced the annual growth of real GDP by 1.15 percentage points during the 1980-95 period. While the change in size of government between 1990 and 1995 is negative, it is insignificant. The larger coefficients (and greater significance) of the variables reflecting the changes in the size of government for the earlier five-year periods compared to the five years of the 1990s make sense. After all, the expansion in government between 1980 and 1985 (and 1985 and 1990) will influence growth for a decade or more of the 1980-95 period, whereas the government growth of the 1990s will exert an impact over only a short portion of 1980-95 period.

Equation adding the schooling variable to the Gwartney et al (1998) model found the changes in the years of schooling between 1980 and 1995 exert the expected positive impact and the variable is significant at the 95 percent level of confidence. With the exception of the inflation variable, all of the other variables remain significant. Equation deletes the schooling variable from the model and inserts the investment rate. The investment variable has the expected sign and it is significant at the 90 percent level of confidence. The size and significance of the other variables is very similar to that of Equation.

Finally, Equation incorporated by the Gwartney et al (1998) study both the schooling and investment variables into the model along with the property rights, inflation, and size of government measures. In this more comprehensive model, both the initial level of government expenditures and the change during both of the five-year periods of the 1980s continue to be significant at the 90 percent level or more. The property rights and schooling variables are also highly significant. While the inflation and investment variables have the expected signs, they are no longer significant. The R2 for Equation indicates that the variables of this model explain 54 percent of the variation in the ratings among this diverse set of countries. The results of Gwartney et al (1998) study illustrate that there is a strong positive correlation between the security of property rights and economic growth (See Knack and Keefer (1995) and Keefer and Knack (1997) for additional evidence on this point). This relationship highlights the importance of a legal structure that protects property rights, helps with the enforcement of contacts, and provides a fair mechanism—rule of law—for the settlement of disputes between parties. As we previously discussed, core functions of government in this area are vitally important for the smooth operation of a market economy. Many governments—particularly those of less developed nations— perform this function poorly. Economic stagnation and poverty are the highly

visible side effects. Gwartney et al (1998) study also indicates that improvements in human capital are an important source of growth. Increases in educational attainment consistently lead to increases in the growth rate of GDP. While the statistical links between growth and the price level stability and investment variables were weaker, their significance may well have been reduced because of their correlation with other variables in the model. The primary reason for including the "control variables" of the Gwartney et al (1998) study was to see whether size of government exerted a strong independent impact on the growth of real GDP. The results indicate that it does. Even after accounting for differences across countries in protection of property rights, inflation, education, and investment, the level of government expenditures at the beginning of the period and the growth of those expenditures during the first decade of the 15-year period exerted statistically significant effects on the growth of GDP during 1980-95. As in the case of the OECD nations, the magnitude of these coefficients indicates that the negative impact of size of government on growth is sizeable.

4.5   Evidence from OECD Nations with Shrinking Government

The growth of government has been so pervasive in the last half of the twentieth century that there have been only a few instances where nations have substantially reduced its size. This is particularly true for the high-income industrial economies. Gwartney et al (1998) study isolated the only three instances of a substantial decline in government expenditures as a share of the economy among OECD countries during the 1960-96 period. The first case is that of Ireland, which saw government expenditures as a share of GDP go from 28 percent in 1960 to 52.3 percent in 1986. This situation was reversed during the 1987-96 period. As a share of GDP, government expenditures declined from the 52.3 percent level of 1986 to 37.7 percent in 1996, a reduction of 14.6 percentage points. From 1960 to 1977 government expenditures increased from 28 percent to 43.7 percent, and Ireland's real GDP growth rate was 4.3 percent. It declined to 3.4 percent during 1977-86, as the government further expanded to 52.3 percent of GDP. During the recent decade of shrinking government, the annual growth rate in Ireland's real GDP rose to 5.4 percent.

As government expenditures shrank in Ireland, Ireland's economic growth increased. The experience of New Zealand is also revealing. Between 1974 and 1992, New Zealand's government expenditures as a share of GDP rose from 34.1 percent to 48.4 percent. Its average growth rate during this period was 1.2 percent. Recently New Zealand began moving in the opposite direction. The percentage of GDP devoted to government expenditures was reduced from 48.4 percent in 1992

to 42.3 percent in 1996, a reduction of 6.1 percentage points. Compared to the earlier period, New Zealand's real GDP growth has increased by more than two percentage points to 3.9 percent. The United Kingdom provides additional evidence. Government's share of GDP rose from 32.2 percent in 1960 to 47.2 percent in 1982. During this period, UK's GDP growth rate was 2.2 percent and there was widespread reference to the "British disease." Between 1982 and 1989, government's share of GDP declined by 6.5 percentage points to 40.7 percent. Responding, UK's rate of GDP growth increased from 2.2 percent to 3.7 percent. While shrinking government has been rare in the past few decades, evidence from places where government has shrunk is consistent with the hypothesis that larger government lowers economic growth. The evidence illustrates that if the size of government is reduced, higher rates of economic growth can be anticipated.

4.6   Size of Government in High-Growth Nations

The data in Gwartney et al (1998) study for OECD countries suggests that smaller government is correlated with faster rates of economic growth. While in theory government could be too small to provide the necessary environment for economic growth, the data in Exhibit 4 give no indication that any OECD government was excessively small at any time during 1960-96. Within the size of government range of this period, smaller government was consistently associated with more rapid economic growth. Gwartney et al (1998) study probes this issue further by looking at government expenditures as a share of GDP for the 10 nations with the fastest rates of economic growth during 1980-95. The average annual per capita GDP growth of these countries ranged from 7.4 percent for South Korea to 4.2 percent for Malaysia. There are no OECD members in this group of fastest-growing economies. The numbers in the table show total government expenditures as a share of GDP at five-year intervals during the 1975-95 period. The numbers in South Korea, the world's fastest-growing economy during this period, had government expenditures that were relatively stable at between 20 and 21 percent of GDP. Non-investment government expenditures in South Korea showed a steady decline from just over 15 percent of GDP to just over 10 percent during the two decade period, indicating that South Korea has increasingly been devoting government expenditures toward investment. The total government expenditures of Thailand, the second fastest-growing economy, were generally less than 20 percent of GDP throughout most of the period, and they also showed a trend toward increased government investment. Taiwan, third on the list, showed a substantial increase in total government expenditures, from 21.5 percent of GDP to 30.1 percent, but still ended the period with government

expenditures well below the world average. Taiwan's non-investment government expenditures were still less than 20 percent of GDP. Singapore and Hong Kong, the next two countries, saw substantial declines in government expenditures as a percentage of GDP, and both countries had 1995 government expenditures well below 20 percent of GDP.

The next five economies on the list had higher government expenditures than the five fastest-growing economies, but all were still well below the OECD average shown in Gwartney et al (1998) study. The average level of government expenditures of the 10 fastest-growing economies was 24.7 percent of GDP in 1995, compared to 25.2 percent in 1975. Thus, these economies were characterised by small and relatively stable government expenditures as a share of the economy. These characteristics were even more pronounced among the Top Five. Except for Taiwan, none of the five fastest-growing economies had government expenditures greater than 21 percent of GDP in 1995. The average level of government expenditures for the five fastest-growing economies was 20.1 percent of GDP in 1995, lower than the average for the Top 10. The noninvestment government expenditures of the five fastest-growing economies averaged less than 13 percent of GDP in 1995. Once again, the size of government figures from the world's fastest-growing economies are consistent with the hypothesis that the smaller the level of government expenditures, the higher the rate of GDP growth. Furthermore, in contrast with OECD countries, the tendency toward the growth of government was absent among the fast-growing economies.

4.7   Growth-Maximizing level of Government Expenditures

A persuasive argument can be made for designing government policies in order to maximize the economy's rate of growth. In the long run, a strong economy is the best way to benefit all citizens. One need only look at the progress of the 20th century to see how economic growth has helped even those least well-off in the economy or compare the well-being of those in poverty in the United States with the typical standard of living in less-developed economies, to see why policies that foster economic growth are the key to long-term prosperity of non-investment government expenditures in cases where these figures are available. If one wanted to design a government that maximized economic growth, how large would that government be? The data examined earlier give no indication because for every nation examined, none had governments so small that they impeded economic growth, even though there were several instances in which total government expenditures were less than 20 percent of GDP. Because there is no evidence that any existing government is smaller than the growth maximizing size of

government, some other method must be used to surmise what size of government would maximize an economy's growth rate. One way to address the question would be to look at the size of the government within the framework of the theory discussed earlier in the paper. There are certain core functions of government that assist economic growth by protecting property rights and creating an environment conducive to growth. As economies expand beyond these core functions, larger government impedes growth because of: (a) the disincentive effects of taxes, (b) the tendency of government to expand into areas that are better suited for private sector production, (c) increased rent-seeking (rather than productive) activities, and (d) the crowding out of private investment.

Thus, one way to conjecture what level of government would maximize economic growth is to examine the size of public sector expenditures on these core functions. What might fall into these core functions is itself a matter of debate. Gwartney et al (1998) study indicates the size of federal, state, and local government expenditures in the United States for various years for six categories that many would consider the core functions of government. Protection of persons and property would come high on the list, and the top section of Gwartney et al (1998)   study shows the percentage of GDP devoted to this area, broken out to show several sub-components. Expenditures on the protection of persons and property have been expanding over the years, rising from 0.64 percent of GDP in 1960 to 1.5 percent of GDP in 1992. Despite this growth, these expenditures consumed a relatively small share of GDP even in the 1990s. National defence and international affairs is another area that might be considered a core function of government. In most years it is the largest of the functions listed here, but has shown a considerable decline since the 1960s. The national security category was 9.3 percent of GDP in 1960, and after the end of the Cold War has fallen to approximately 5 percent in 1992.

One might debate over the issue of whether education should even be included as a core function of government, because the private sector has shown itself to be quite capable of providing high-quality education. Nevertheless, education is a key component in economic growth, and most education in the United States (and around the world) is produced by government. Education's share of GDP increased substantially in the 1960s, from 3.69 percent in 1960 to 5.38 percent in 1970s. It was only slightly more than that in 1992. Infrastructure is another area in which government might foster economic growth, even though the private sector has the capability to produce infrastructure without government. Gwartney et al (1998) shows government expenditures on (a) highways and (b) sewage, sanitation, and environmental protection. The combined government expenditures

in these categories summed up to less than two percent of GDP in 1992. The expenditures of the Federal Reserve System, which only constitute a tiny fraction of GDP, are also included. Function expenditures have been less than 15 percent of GDP. Gwartney et al (1998) showed that in the 1990s government outlays in the United States were 34.8 percent of GDP, suggesting that if government expenditures were half as large as they are today, they would still be large enough to cover the core functions of government.

A similar story emerges when government expenditures are examined in other developed economies. In addition to the data for the United States, Gwartney et al (1998) presents data for Canada (in 1960 and 1995), United Kingdom, Germany, Australia, and Sweden (for various recent years). In an effort to maintain compatibility of the data across countries, the categories of Gwartney et al (1998) study are slightly different. The primary difference is the substitution of expenditures on "transportation and communication" for those on highways, sewage, sanitation and environmental protection. The latter categories were unavailable for countries other than the United States and Canada. These data indicate that in recent years the actual government expenditures on these core functions sum up to between 9 percent and 14 percent of GDP. Interestingly, these core government expenditures in "big government" European economies like Sweden and Germany consume approximately the same share of the economy as in the United States. Finally, while data over a lengthy period of time were available for only the United States and Canada, in these two countries, expenditures on the core functions of government were a smaller share of GDP in the 1990s than in the 1960s. Clearly, the growth of expenditures in the core areas has contributed little to the rapid growth of government.

5.   Paradigm Shift for Public Policy- Welfare State to Optimal Size of Government

Caragata (1988) has reported that NewZealand has climbed a tax mountain for most of the 20th century. In 1921 the total tax take exceeded 15 per cent of GDP; in 1941 it exceeded 20 per cent; in 1943, 25 per cent; and in 1980 30 per cent. In 1990 it reached a historic peak of 36 per cent, falling back to 34 per cent in 1997. This tax mountain is the creation of rising government expenditure. In 1973-74, government expenditure accounted for 28 per cent of GDP. After 1975, it generally remained over 38 per cent and peaked in 1986-87 at 44.2 per cent. Much of this increase reflected the rising cost of social transfers, which jumped from 12 per cent of total government expenditures in the early 1970s to a peak of around 22 per cent in 1989.

During 1950-75, interest on the public debt averaged 2.4 per cent of GDP a year. It rose to 3.2 per cent in 1975-79, 5 per cent in 1980-84, and 7.2 per cent in 1985-89. It peaked at 8 per cent of GDP (and 20.7 per cent of government expenditure) in 1987-88. This level was comparable to the early years of World War II (1940-42), when interest payments consumed 22.4 per cent of total expenditures. The gross public debt itself was 40.5 per cent of GDP in 1973-74; within five years, it reached 53 per cent of GDP. At its peak in 1986-87, the gross public debt reached 77.2 per cent of GDP.

Even in the late 1980s, after the reforms of Roger Douglas, the Minister of Finance, government expenditure did not fall below 38 per cent of GDP, ten percent-age points above the 1973-74 level. The ratio remained at 38 per cent for the first two years of the Bolger National government (1991-92), reflecting the need to cushion those most affected by the structural adjustment of the economy and high debt service payments (Caragata, 1997:55-70).

This huge increase in the role of government, from 28 per cent to 44 per cent of GDP in the 13 years from 1973-74 to 1986-87, was not planned; nor was it subjected to any cost-benefit analysis or risk assessment of its potential impact on the economy. Rather, it reflected a dominant welfare-state paradigm about the role of government that has guided political thinking for over 50 years but is now beginning to lose its grip.

5.1   Optimal Tax Levels for Growth and Employment

Caragata (1998) presents the final report of the New Zealand Inland Revenue's Taxation Economics Group. One of the principal aims of our research project during 1994-97 was to determine the level of tax that is optimal with respect to two simultaneous objectives: (i) maximizing economic growth and employment; and (ii) efficiently minimizing tax evasion. Our approach was to estimate a range for the ratio of tax to GDP and the tax mix (direct and indirect tax relative to GDP) that would maximize economic growth and employment and efficiently minimize tax evasion. For New Zealand, we concluded that the optimal level of total tax (the level at which economic growth is maximized is probably located between 15 per cent and 25 per cent of GDP. We used five separate sets of models, with three research teams. This multiple-methods approach was designed to provide reassurance about the quality of the results.

Scully (1996a) uses a non-linear Cobb-Douglas production function model that combines analysis of the tax mix, the ratio of tax to GDP and the rate of real economic growth. The model can also be used to estimate the tax burden and tax

mix that maximises the employment and economic growth, and minimises the deadweight loss. The model involves an economy with a public sector and a private sector, exhibiting constant returns. The latter feature of the model is supported statistically by the data. With this constraint, and using the empirical estimates for the model's parameters, positive growth paths emerge. The empirical basis of the model is crucial: misleading results could be obtained if arbitrary values were assigned to the parameters. The rate of growth is a function of the tax level, and the model facilitates a calculation of the value of the latter rate that maximizes the output growth.

Scully (1996a) estimates that New Zealand loses two percentage points of growth a year because total taxes were higher than 20 per cent of GDP. His model yields a growth-maximizing tax level range, covering the years 1927-94, of 16.4 per cent to 23 per cent, for an average of 19.7 per cent of GDP. Scully also finds that the growth maximizing tax levels for some other countries are consistent with those for New Zealand Research by Scully (1996c) covering the period of 1951-94 in New Zealand indicating that a one percentage point increase in the ratio of tax to GDP appears to have its strongest impact in labour markets on employment growth, although the impacts on labour force participation and the unemployment rate are also strong. A one percentage point increase in the ratio of tax to GDP in New Zealand lowers employment growth by over 42,470 workers, decreases labour force participation by 11,900 workers and increases the unemployment rate by about 15,900. The optimal tax level for maximizing employment is about 20 per cent of GDP.

5.2   Deadweight Loss Estimates

Ballard and Fullerton (1992:118-19) note that deadweight loss analysis has typically ignored the effects of administration costs and compliance costs. By contrast, the work for New Zealand's Inland Revenue by Scully (1996a), Caragata and Small (1996a) and Branson and Lovell (1997) picks up these effects in their analysis of dynamic deadweight loss. Branson and Lovell (1997), using a two-tier model employing both econometrics and data envelopment analysis, conclude that for the period 1946-95, on average, economic output fell short of its annual potential by 17 per cent because taxes were at 35 per cent of GDP rather than a growth-maximising rate of 22.5 per cent of GDP. This 'deadweight loss' is the gap between actual and potential economic performance arising from taxes. Branson and Lovell conclude that if deadweight losses were added to the existing tax burden, the effective tax rate would be 51 per cent of GDP, not 35 per cent. Scully (1996a) estimates that, for each dollar of tax in New Zealand, there is a long-run

cost to the economy of about $2.70. The magnitude of these results is confirmed by Caragata and Small (1996a) and anticipated by Usher (1991), Bird (1991) and Feldstein (1995). These magnitudes are also consistent with the cumulative aggregation of output losses imposed by government intervention anticipated by Mancur Ol-son (1996). Thus, a cost-benefit analysis approach to tax policy-making would oper-ate on the assumption that, for a dollar of government spending to be justified, it would have to produce a long-run benefit of at least about $2.70.

5.2.1 Optimal Tax Levels for Efficiently Reducing Tax Evasion

Another approach to estimating the optimal size of the government is to determine the tax level that efficiently minimizes the hidden economy and tax evasion. Twenty-five years ago, when OECD countries' tax levels were averaging about 30 per cent of GDP, various studies estimated that their hidden economies ranged from 7 per cent to 16 per cent of GDP. Thus, an average of about 10 per cent of the income of OECD countries was unreported for tax purposes. Currently, with the average ratio of tax to GDP of about 38 per cent, many countries have underground economies ranging from 10 per cent to 25 per cent of GDP, with an average at about 16 per cent. That is to say, while their average tax burden has gone up by 30 per cent since 1970, their hidden economies grew by about 60 per cent. For New Zealand, the tax burden rose by 35 per cent between 1971 and 1994, while the hidden economy jumped from 7 per cent of GDP in 1970 to 11.3 per cent in 1994, an increase of 63 per cent (Giles, 1996). Thus, New Zealand's tax burden and hidden economy have been growing as fast as, or faster than, the OECD average. This raises the question of what ratio of total tax to GDP efficiently minimizes the hidden economy and related tax evasion.

Five models developed by Giles (1996) show that the hidden economy responds more to tax than to inflation and government regulation, and that the hidden economy was pro-cyclical rather than counter-cyclical. In New Zealand, the hidden economy is currently around 11 per cent of GDP and tax evasion is estimated at about $3.2 billion a year. As taxes are reduced, the hidden economy will shrink. But if taxes are driven to zero, the hidden economy will still be about 4 per cent of GDP, representing the hard core of criminal activity in the hidden economy that is driven by factors other than tax (Giles & Caragata, 1996).

Caragata & Giles (1996) develop a model for New Zealand estimating an efficient tax evasion-minimizing optimal tax level of 21 per cent of GDP. This provides further corroboration that the optimal tax level is close to 20 per cent of GDP. We

find that a mix of 33 per cent direct tax and 67 per cent indirect tax would most efficiently minimize the size of the hidden economy and tax evasion. It was concluded that if the tax department adopts scientific audit selection, there would be significant tax revenue gains and significant savings in terms of administrative efficiency for the tax department and compliance cost savings for business.

5.2.2 The Optimal Tax Mix

Two models that we developed for New Zealand with a growth maximization objective favour a tax mix that emphasizes direct taxes. Another model with a similar objective emphasizes indirect taxes. A fourth model with an objective of minimizing tax evasion emphasizes indirect taxes. All the models indicate that the total tax burden is far more important than the tax mix in its impact on economic growth and tax evasion. Branson and Lovell (1997) conclude that the level of tax is six times more important than the tax mix in influencing growth. Scully (1996b) concludes that a mix of 57 per cent direct tax and 43 per cent indirect tax would maximize economic growth at a tax: GDP ratio of 20 per cent. Branson and Lovell (1997) conclude that, on average, a mix of 65 per cent direct tax and 35 per cent indirect is optimal for promoting economic growth in New Zealand at an average optimal tax:GDP ratio of 23 per cent.

Caragata and Small's (1996b) non-linear model estimates that, with a ratio of tax to GDP of 20 per cent, tax policy would most accelerate economic growth when the tax mix is 28 per cent direct tax and 72 per cent indirect. This model finds that the relationship between growth and direct taxes is always negative: which implies that a tax mix of zero direct taxes and 100 per cent indirect taxes would potentially maximize economic growth. However, the Caragata-Small model is not free of measurement error and its conclusions are tentative and subject to caution despite their confirmation of the strong trend in economic theory favoring the abolition of the income tax.

Finally, Caragata & Giles (1996) find that a mix of 33 per cent direct and 67 per cent indirect would most efficiently minimize the size of the hidden economy and tax evasion. While both the objectives of maximizing economic growth and minimizing the hidden economy suggest that the current tax mix favoring direct tax over indirect is less than optimal, it seems that a growth-maximization objective suggests a frontier mix with a rough balance between the two. Thus, too much weight on indirect taxes in pursuit of reducing the size of the hidden economy could undermine economic growth. More research on these new findings is required.

5.3   Implications for Fiscal Policy

All countries have paid a high and often unseen price (in terms of reduced growth and employment and higher tax evasion) for climbing the tax mountain in pursuit of the objectives of the welfare state. The huge increase in the size of government that occurred mainly between the early 1970s and the late 1980s was a failure in economic development and policy management. The old ideological paradigm of the welfare state is now beginning to give way to the empirically based paradigm of the optimal size of government. How can governments most rapidly incorporate the insights of the new paradigm into its fiscal policies?

5.3.1   *Tax policy*: The first priority is to cut income taxes so that the total tax burden falls and the tax mix places greater emphasis on consumption tax. Tax cuts have weaker growth effects at higher rates (such as 35 per cent of GDP) than at lower rates (such as 25 per cent of GDP). Tax cuts are also best applied before an economy falls into recession. *Crisis management*: There is nothing wrong with counter-cyclical financing and government deficits as long as they occur only in emergencies and for short periods. Keynesian fiscal strategies became discredited because politicians wanted to run deficits even during boom times in order to buy votes.

Universality: End universal welfare benefits, which benefit the rich unnecessarily. Help those who need it. Means test all social services and programmes. *Transparency and accountability:* Each year, all efficiency and benchmarking reports produced for government departments and agencies should be made public so that taxpayers can determine if they are obtaining value for money from their taxes. *Public choice:* The public should be given more choice about how to spend their money. Many people who are dissatisfied with the government provision of police, education and health services opt for private sector solutions, but cannot avoid paying taxes. Thus, they pay twice for these services when they opt for private provision of such services. *Timing:* It took 40-50 years to push the state's share of the economy to its current level. It may take a decade or so to move taxes down to about 22-25 per cent of GDP, in part because of the need for a smooth transition. It should not be allowed to take much longer than that, because higher economic growth is needed in order to finance the expected increase in spending on health services when the retirement of the baby-boom generation peaks in 2025.

The culture of public control, or regulatory and intrusive management, that has grown up under the welfare state must be ended and replaced with the culture of public service that respects taxpayers as the shareholders of government. The

greater the numbers demanding benefits from government, the greater is the welfare dependency of the population, and the greater the level of government control. The greater the level of control, the less acceptable and the more wasteful are government services likely to be. Reducing taxes helps to encourage less wasteful spending and greater personal responsibility. The new paradigm of the optimal size of government offers politicians the basis for addressing 'democracy's discontent' by reducing the culture of dependency arising from the intrusive welfare state and promoting self-development and learning as the basis for national re-invigoration and enhanced international competitiveness.

6. Search for the Right Size of the Government Cabinet

The term cabinet is the most easily recognized generic description of this body, but it might create some confusion between cabinets as a collective political body and cabinets. In particular, France, sense a group of advisers working for a minister, comprising friends, political allies, and politically sympathetic civil servants dealing with political aspects of the post.

6.1 The Bangladesh Scenario

Until recently, the operation of the Peoples' Republic of Bangladesh have been running with 231 office organizations under 36 ministries. Soon after the independence, number of ministries were 21 in 1972, 13 in 1975, 33 in 1977 under military dictator, 19 in 1982 also under military dictator, 35 in 1995 under BNP-Jamat lead coalition, 36 in 2000 under Awami League-JSD & JP coalition, strikingly 72 in 2001 lead by BNP-Jamat. Since independence, different governments have formed 16 committees and commissions to reform bureaucracy and public services within the country. However, the situation has not changed under the Grand Alliance since 2009 showing significant increase in the size of the government in terms of size of cabinet, expenditure and number of civil servants and departments.

An analysis of the 231 office organizations reveal that 48 are under the supervision of the Ministry of Finance, 20 Law and Justice, 16 Health and Family Welfare, 11 Home Affairs, and 10 in Education. Ministries of Establishment, Defense, and Cabinet Division each have 9 offices under their supervision with the Prime Minister being the in-charge for all of these 27 offices. Ministries those have 7 offices under them are Communications, Information, Housing and Public Works, Shipping and Agriculture. Labor & manpower and Commerce are two Ministries who supervise 6 offices each. The Prime Minister being the in-charge

of Power and Energy Ministry has 5 offices under them. Ministries each of those have 4 offices under them are LGERD, Industries, Fisheries and Livestock, Land, including Environment and Forest. 5 Ministries, such as, Disaster and Relief, Religious Affairs, Planning, Youth and Sports and Culture each have 3 offices under their supervision. There are only 2 offices each work under the Ministry of Post & Telecommunications and Women & Children Affairs. There are 8 Ministries running with 1 office under them are Foreign Affairs, Food, Textiles, Hill Tracts, Civil Aviation & Tourism, Science and Technology, Social Welfare, Water Resources, and the Prime Minister's Office. In addition the Parliament Secretariat and Election Commission each have 2 offices and 1 office work under Bangladesh Public Service Commission.

Information provided above provoke a vital question about whether Bangladesh needs the existing 39 Ministries (current proposal 39) where 8 Ministries (22.22% of the number of ministries) each are supervising a single office under them and 2 Ministries (5.55%) each supervise only 2 offices. Five Ministries (13.88%) each supervises only 3 offices and another 5 Ministries (13.88%) each supervise 4 offices. Supervision of 5-6 offices are conducted by 3 Ministries (8.33) each, 7 offices each by 5 (13.88%) ministries, 9 offices each by 3 (8.33%) Ministries, 10 offices by 1 (2.77%) Ministry, 11 offices by 1 (2.77%) Ministry, 16 offices by 1 (2.77%) Ministry, 20 offices by 1 (2.77%) Ministry, 48 offices by 1 (2.77%) Ministry. Moreover, Prime Minister, being the head of the GoB has inducted her 11 family members in the cabinet in addition to several useless advisors for different ministries who are the main cause behind the increasing cost of doing business of the government. The vital ministries, like defense, establishment, Energy and mineral Resource, Home Affairs, Civil Aviation have been under the Prime Minister for the last four and half years most of which shown alarming performances with few exception.

Compared to the benchmark of other countries, the Cabinet and Prime Minister's Office (PMO) of Bangladesh is enormously large in size with 287 employees. The Public Administration Reform Committee further recommended increasing the number to 386. In Sweden, the PMO was as created in 1946, which remained surprisingly small, with a half time secretary and a Porter, until the 1970s. Since 1969 PMO have 10 staff members excluding typists and service staff. In Denmark the PMO covers the cabinet office with 3 permanent secretaries in addition to very small administrative support unit. In the UK the PMO has 100 people at 10 Downing Street that include policing and secretarial staff. Examples of small PMO are Ireland with 3 to 4 advisors who are politically appointed and a handful of professional civil servants, Norway has 9 civil servants and 5 political advisors,

Austria 30, Canada 85 and Germany 453 in the Chancellor's office. In 1930 the White House staff in the USA were three confidential secretaries, a stenographer, and a handful of clerks. Number of White House staff started expanding since Rossevelt's election victory in 1932 with the creation of Executive Office of the Presidency under the Reorganization Act of 1939. Sixty years later the requirements of the US presidency have generated a staff that is the size of a large village. Critics raise questions about whether PMO in Bangladesh is heading for the creation of a large village in competition with that of the US presidency.

These are the few facts and information on the ministries of different countries as well as of Bangladesh. The size of the newly elected government in Bangladesh does not reveal a good start. For delivery of better service to the nation, establishing good governance with transparent and accountable supervision & monitoring system the number of ministries should be within 17. All of us are talking about reduction in the size of the Government as well as public sectors. The Finance Minister of the new Government in Bangladesh (2001-2006), since day one, has been blaming the large size of the public sector and started closing the branches of Nationalized Commercial Banks, has however, closed his mouth to comment on the largest size of the Cabinet in the World's poorest country. It is perceived that the function of public sector reform first should start from reshaping the form of Cabinet from functional viewpoint. After functional analysis of GoB organs, the number of ministries should range from 12-17, which was proven to be smooth working during three caretaker Governments of Bangladesh in the years 1991, 1996 and 2001 in addition to the living examples from OECD practices. Functional analysis of GoB organs does not support current huge size of the cabinet when the Finance Minister is downsizing Annual Development Program for the welfare of the common people. This situation has created alternate powerhouses, family governments within the government, and Prime Minister's office in Bangladesh administration turned into a parallel to the elected government. Ultimately the key decisions appeared to have been taken beyond the knowledge of the main cabinet and has created enabling environment for massive corruption and facilitate destruction of credible public institutions.

This paper presented various data illustrating this increase in government growth and then focused on several economic theories that attempt to explain this growth. The theories fit into one of two philosophies of government growth: either (i) the growth of government is driven by citizen demand or (ii) the growth in government is a result of government itself, brought on by inherent inefficiencies in the public sector, the personal incentives of public officials, and representative democracy. The theories discussed in this article are not the only theories on

Government of Bangladesh Proposed size of the Cabinet

Prime Minister						
Education ICT Science & Techno Cultural Youth & Sports Education Infrastructure	Human Resource Dev Employment stablishment Training & Development	Finance and Planning	National Ressources Mangt Energy & Mineral Resources Land, Water, Forest & Environment Energy Infrastructure		Industry Commerce SME Textile & RMG Jute, Economic Zone EPZ and Infrastructure	National Defense and Defense infrastructure
Health & Family Welfare Health Infrastructure	Public Works Housing Town Planning Rural Development	Communications Road & Highways Railway Bridges Port & Shipping Civil Aviation	Foreign Relations and Foreign Employment	Internal Security Law and Order	Agriculture Food Fisheries & Livestock	Gender Minority & Children Affairs
Social Welfare Religion Minority Mental and Physical Disadvantaged Disaster Relief	News Media Statistics Tourism Information Technology		Law Justice & Parliamentary Affairs		Local Government Rural Development Rural Communications Cooperatives	

government growth that have been raised. Researchers have suggested that electoral cycles, in conjunction with citizen demand, may play a role in the size and growth of government (Downs, 1957, and Coughlin, 1992). The expansion of the voting franchise, an arguably more controversial explanation for government growth, was suggested by Meltzer and Richard (1981); their idea is that groups of individuals that were given the right to vote were typically from the lower end of the income distribution and demanded greater government services. Although each theory was presented here as a stand-alone explanation for government size and growth, the complexity of the public sector and the political process as well as the limits of empirical economic analysis suggest that government growth is likely to be a function of some or all of the above theories. In addition, many of the theories do a better job at either explaining size or growth, but do not adequately explain the current size of government or its growth over time. Some of the theories have not withstood empirical tests, and debate continues as to whether this is a result of incorrect theory or incorrect empirical modeling. The challenge for economists and political scientists is to formulate a single cohesive theory that accounts for all aspects of the citizen-over-state and state-over-citizen theories presented here.

7.   Concluding remarks

This paper have shown that most recent studies published in scientific journals tend to find a negative relationship between total government size and economic growth in rich countries. This stands in stark contrast to scholars such as Lindert (2004) and Madrick (2009), who have argued in book length treatments that there is no tradeoff between economic growth and government size. Studies that disaggregate taxes and expenditure typically seem to find that if the policy objective is economic growth then there are two consequences: First, that direct taxes on income are worse than indirect taxes, and second, that social transfers are worse than public expenditure on investment including human capital, which, if anything, increases growth.

Hence, results do not imply that government must shrink for growth to increase. There is potential for increasing growth by restructuring taxes and expenditure so that the negative effects on growth for a given government size are minimized. Furthermore, countries tend to cluster to institutions that go well together. As stressed by many observers (e.g. Freeman 1995), the Swedish welfare state can be seen as an economic model defined by a unique mix of institutions. The specific mix of institutions and the emergent idiosyncratic interactions among them are key determinants of economic performance.

Both the Scandinavian and the Anglo-Saxon welfare states seem able to deliver high growth rates for very different levels of government size. This does not mean low-tax countries can increase taxes without expecting negative effects on growth, nor that the various mechanisms by which high taxes distort the economy do not apply in Scandinavia. A more incisive interpretation is that there is something omitted from the analysis that explains how Scandinavian countries combine high taxes and high economic growth. We have suggested two such explanations—compensation using growth friendly policies and benefits from high historical trust (lack of apprehension) levels—but these at best remain only speculative, with ambiguous policy implications. Even if the debate regarding the existence of a correlation between growth and aggregate government size in rich countries now seems more or less settled, the research on policy change, institutions and growth is progressing rapidly. Bangladesh, to become a middle income country needs to formulate strategy considering the best practices keeping close tie with the East Asian experiences like South Korea, Malaysia and many other Asian examples of development models.

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