

The Social Benefits and Economic Costs of Taxes: A Comparison of High- and Low-Tax Countries

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(This is not a draft; it is a work in progress. In many places it is only a rough outline or notes to myself. To the extent the reader can discern the point of the paper, comments would be most appreciated.)

Abstract

Over the past two decades those ideologues in Anglo-American countries who wish to tightly constrain the ability of citizens to act collectively through democratically elected political institutions and who wish to completely liberate the pursuit of greed through private markets have made a staggering array of arguments as to why “governments bad, markets good” and, therefore, why taxes should be reduced. However, the two assertions they make most unremittingly, and politically the most telling, have been the following: First, government programs financed with taxes are generally ineffective in achieving their social objectives. Second, increased taxes have huge economic costs. Therefore, they conclude, we would all be better off if taxes were reduced. The central claim in this paper is a simple one. If these assertions were even remotely true one would expect those countries with high taxes to be no better off in terms of social outcomes than those countries with low taxes and to be modern day economic basket cases. The evidence suggests the opposite. Those countries with high taxes tend to have significantly better social outcomes than those with low taxes and their economies appear to be largely unaffected by the required higher taxes.

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1 What Do Taxes Buy and at What Cost?

“I believe all taxes are bad.” With these words, Steven Harper, the leader of the Canada’s Conservative party, announced that if he was elected Prime Minister in the national election to be held on January 23, 2006, he would reduce the Canada’s Goods and Services Tax from 7 percent to 5 percent.² So familiar is the bad rap against taxes that this deeply troubling statement by one of Canada’s national political leaders – perhaps soon to be its prime minister -- passed virtually without comment. This derision of taxes by neo-liberal politicians in Anglo-American countries has become standard electioneering fare since the election of Margaret Thatcher in the United Kingdom in 1979 and Ronald Reagan in the United States in 1981. Contempt for taxes has been encouraged and inflamed by right-wing economists. Again, to take just one recent example to give a flavour of their scorn for taxes, Michael Boskin, a well-known market-oriented American economist, in urging dramatic reductions in taxes and government spending recently asserted, “The evolution of taxes and spending will be a primary determinant of whether America remains a successful dynamic economy, providing rising standards of living, low unemployment and upward economic mobility or slides into complacent economic stagnation and socioeconomic ossification.”³ Support and strategic coordination for this assault on taxes in Anglo-American countries are provided by business-financed think tanks. Based on their analysis, one is left with the impression that tax money paid to the government just disappears into a black hole; that the quality of community life is not improved by the collection of taxes and the provision of services that they finance (in fact it is likely reduced); and, that if taxes were increased by even a small amount, indeed, if they are not drastically reduced, citizens of these Anglo-American countries will be flushing billions of dollars of potential national income and wealth down the drain.⁴

Those opposed to taxes, and more generally the welfare state that taxes support, employ a staggering array of attacks. Many of these attacks rest upon normative judgements relating to the meaning of the good life. The welfare state is seen as diminishing the autonomy and individual freedom of individuals, punishing the deserving and rewarding the undeserving, and undermining noble human qualities like self-reliance. However, the most telling political criticisms of the welfare state have centred around the empirical allegations that it has been, by and large, ineffective in achieving its objectives and, furthermore, that whatever progress the welfare state has made in achieving its social goals this progress has come at too high an economic cost.

The costs of the redistributive state are alleged to arise on two fronts. In transferring purchasing power from taxpayers to government through high taxes, social and economic costs are incurred by society in the form of increased administrative and compliance costs; greater tax evasion and avoidance activities; diminished incentives to work, save, and invest; and, reduced well-being

² Sean Gordon, “Harper vows GST cut to give ‘fair tax relief’; Other party leaders quickly reject proposal ‘I believe all taxes are bad,’ Tory chief declares” *Toronto Star* A06 (2 December 2005)..

³ See Michael J. Boskin, “A Broader Perspective on the Tax Reform Debate” *The Economists’ Voice*, vol. 3, Issue 1 (2006).

⁴ In Australia see any paper relating to tax by the Centre for Independent Studies and in particular their “Perspectives on Tax Reform” series. In New Zealand see any paper relating to tax by the New Zealand Business Roundtable.

because of the deadweight loss caused by taxpayers changing their behaviour in response to the tax.⁵ Similar costs are incurred in providing transfers to the beneficiaries of government programs. Business reporters tirelessly allude to these alleged costs. Again by way of example, a front page business reporter for Canada's leading national newspaper recently asserted, "The economic literature indicates that government spending in excess of 30 per cent significantly slows economic growth and impoverishes those the expenditures purport to help."⁶ In fact, although some economists who have calculated the costs of government taxes and transfers, including the marginal deadweight cost of any extra redistributive activity of government, have produced astoundingly high numbers, most economic studies find no casual relationship between the size of government and economic growth.⁷

These attacks on the welfare state have derived some credibility from the continuing economic problems many industrialized countries have faced over the past 15 years, including high unemployment and low rates of productivity and economic growth. However, the weight of the empirical evidence is that government spending and taxes have not contributed much to these economic woes. Hundreds of studies have been undertaken on particular government programs and taxes. Although a small number purport to find significant adverse economic effects, the overwhelming majority find little effect. Moreover, many policy analysts find that the social programs they study are effective in achieving their objectives. Nevertheless, the government-slashing, tax-cutting juggernaut rolls on. In many jurisdictions it now takes the form of large across-the-board tax cuts. The strategy here seems to be that if people cannot be convinced that the social programs they benefit from are not achieving their objectives, or that they come at too high an economic cost, then these government programs should simply be defunded.

The claim made in this paper is straightforward. If the story about taxes and the welfare state told by neo-liberals has any credibility, the results should be evident in comparisons between industrialized countries with low taxes and those with high taxes. Indeed, if the story told by neo-liberals in Australia and Canada is even remotely true one might expect those countries with even marginally higher tax levels than Australia or Canada to be modern day economic basket cases and to be no better off in terms of social outcomes or of the quality of the lives enjoyed by their citizens. So what is the evidence?

2 The Daunting Challenges of Comparative Tax Analysis and Political Economy

Comparing taxes and tax laws across countries has recently become a cottage industry among tax students, practitioners, legislators, and scholars. Tax students learn the details of foreign tax systems as a way of enriching their understanding of their own tax system. Comparisons allow

⁵ For a full conceptual accounting of the social costs of taxation see Joel Slemrod & Shlomo Yitzhaki, "The Costs of Taxation and the Marginal Efficiency Cost of Funds" 43 *IMF Staff Paper* 172 (1996).

⁶ Neil Reynolds, "Since when is fending for yourself a bad thing?" *Globe and Mail*, Jan. 11, 2205, p. B1.

⁷ See Xavier Sala-i-Martin, "15 Years of New Growth Economics: What Have We Learnt?," Discussion Paper #0102-47 (Department of Economics, Columbia University, April 2002) at 10 (One of the important lessons from the new growth economics literature is that "The size of government does not matter much. What is important is the 'quality of government'".)

them to make out the contours of their own system more clearly. Tax practitioners study the tax system of other countries in order to see how the tax laws of other countries might apply to contemplated transnational business transactions or in order to discover tax avoidance opportunities exploited in those systems that they might apply to their own system. Tax policy analysts examine how other tax systems have coped with particular issues in the hope that their solutions might suggest alternative ways of dealing with corresponding issues in a domestic setting. Tax scholars compare tax laws as a way of drawing generalizations about the factors that determine legislative outcomes in different countries. Tax laws are so clearly an artifact of a country's politics and culture that comparative tax analysis has been described as a wonderful way of studying the culture of a country.

In this paper, cross-country comparisons are studied as a way of testing two theoretical propositions; namely, that increased taxes and the government spending programs cannot be used as policy instruments for achieving better social outcomes and that taxes necessarily lead to adverse economic consequences. To test these claims, ideally, what an experimenter might like to do is take a sample of countries and randomly impose high tax rates on some and low tax rates on others and observe the consequences. If the former countries grew at slower rates than the latter, one might plausibly suggest it was due to the lower taxes. This type of controlled experiment is, of course, impossible; therefore, in undertaking cross-country comparisons experimenters are left using the comparative method to test theoretical statements. In order to test the effect of taxes, this paper simply observes the relationship between tax levels and a series of social and economic indicators across a number of countries.

There are formidable and well-known problems in testing propositions about the relationship between variables using the comparative method in a stubbornly complex world. Most obviously, in the context of this study, the institutions and cultures of countries are different in countless ways and these differences might be of decisive importance in determining the effect of increased tax levels in a country, for example. Even more seriously, the taxes that are raised in particular countries might be used for very different purposes with different degrees of efficiency and the effects of these uses cannot be controlled for. Therefore, in this type of analysis, since context cannot be controlled for it is instead dismissed from the analysis on the basis that if a given relationship (between tax levels and economic growth, for example) holds across a variety of contexts, then context cannot be so important.

Comparisons are made between countries in two ways in this paper. First, countries are ranked by the level of their taxes (as measured by expressing taxes collected in the country as a percent of the size of the country's economy) are then compared to see if there is any relationship between tax levels in countries and a large set of cross-country social and economic indicators. Countries with high tax levels were found to have significantly better social outcomes on many social indicators and to be indistinguishable from low-tax countries on the basis of familiar economic indicators. However, one difficulty with searching for correlations between tax levels across countries and social and economic indicators is that modern welfare states use a wide variety of policy instruments to achieve their objectives and tax levels do not necessarily serve as a useful proxy for state intervention across countries. There is a well-developed literature in comparative political economy categorizing modern industrialized countries based upon their dominant ideological inspiration, central organizing principle, and essential institutions.

Building upon the landmark work of Gosta Esping-Anderson,⁸ welfare states are commonly classified into four distinct models: Anglo-American, Mediterranean, Continental European, and Nordic. The Anglo-American countries are generally the countries with the lowest tax levels and the Nordic countries are generally the countries with the highest tax levels. Therefore, in attempting to determine the possible achievement of government programs financed with taxes and the economic effects of taxes, the Anglo-American countries were also compared directly with the Nordic countries. Here the differences were even more obvious. The Nordic countries scored much better than the Anglo-American countries on a broad range of social indicators and equaled or exceeded them on most economic indicators.

3 Literature Review: The Explosion in Cross-Country Comparisons

Over the past decade, perhaps because of the increased availability of cross-country data, the development of more nuanced theories of economic growth, and the general increasing internationalization of scholarship there has been an explosion of cross-country studies by economists attempting to measure the association between some measure of the size of government and some measure of economic prosperity or growth. Two of the most frequently cited reviews of these studies were undertaken by Anthony Atkinson⁹ and Joel Slemrod.¹⁰ Parenthetically, both authors concluded that in spite of the common belief among economists that large government has a substantial impact on prosperity, so far, this empirical program suggests that the economic cost of government is insignificant. Anthony Atkinson concludes his review by noting that “the results of econometric studies are mixed, and provide no overwhelming evidence that high spending on social transfers lead to lower growth rates.”¹¹ Slemrod concludes: “This review of the existing cross-country literature suggests that there is no persuasive evidence that the extent of government has either a positive or negative impact on either the level or the growth rate of per capita income...”¹² He also notes, “Although this is logically conceivable, I am not aware of any serious academic study that purports to demonstrate a significant negative causal relationship between the extent of government involvement and the *level* of prosperity...”¹³ Although studies that attempt to find an association between government size and economic progress are useful, they are incomplete as an assessment of the value of government since many goals of the welfare state do not relate directly or even indirectly to usual measures of economic activity. (review studies)

More generally, in comparative public policy and political economy the welfare state is a large and diverse area of study. The comparative political economy of the welfare state has become a

⁸ Gosta Esping-Anderson, *Three Worlds of Welfare Capitalism* (1990).

⁹ Anthony Atkinson, “The Welfare State and Economic Performance” 48 *National Tax Journal* 171 (1995).

¹⁰ Joel Slemrod, “What Do Cross-Country Studies Teach about Government Involvement, Prosperity, and Economic Growth?” [1995] 2 *Brookings Papers on Economic Activity* 373.

¹¹ *Supra* note 4 at .

¹² *Supra* note 5 at 401.

¹³ *Supra* note 5 at 377.

sub-discipline; the literature is enormous.¹⁴ (review studies and the European literature on the European social models)

There is another body of literature that is somewhat related to this paper. As is well known, the United States is a low-tax country with less social protection than European countries, and in which corporate governance is more narrowly focused on shareholder value. In recent years it has been enjoying high rates of economic growth and low rates of unemployment. By contrast, most European countries are high-tax countries and although they do not suffer from some of the social problems that plague the United States, many have been experiencing economic stagnation. These contrasts have led to a popular literature comparing the American brand of capitalism with that of the European social welfare states.¹⁵

The debate over the relative merits of the Anglo-American and European brands of capitalism undoubtedly goes on in every country's popular press. A few quotations from leading US newspapers will provide a sense of the terms in which that debate is generally conducted in Anglo-American countries. As far back as the early 1990s, when it appeared that the US had recovered its economic footing and many European countries appeared to lose theirs, the popular US weekly *Newsweek*, in an article entitled "Dismantling Europe's Welfare State," stated that "the panoply of social programs, benefits and protections designed to cushion Europeans from the harshest effects of their capitalist economies have become enormously expensive and, in some cases, their consequences extremely perverse. As a result, many people in government and private business believe the system is as much a source of Europe's problems - high unemployment, sluggish economies, lagging productivity growth - as a solace."¹⁶ More recently, in the Spring of 2005, after the rejection of the proposed European constitution in the

¹⁴ See, for example, the standard texts in comparative public policy, Arnold J. Heidenheimer, Hugh Hecló & Carolyn Teich Adams, *Comparative Public Policy: The Politics of Social Choice in American, Europe, and Japan*, 3rd ed. (New York: St. Martin's Press, 1990) and Catherine Jones, *Patterns of Social Policy: An Introduction to Comparative Analysis* (New York: Tavistock Publications, 1985); and, Thomas Janoski & Alexander M. Hicks, *The Comparative Political Economy of the Welfare States* (New York: Cambridge University Press, 1994) and Jan-Erik Lane & Svante Ersson, *Comparative Political Economy* (London: Pinter Publishers, 1990).

¹⁵ The following books are typical of those who celebrate the American model: Olaf Gersemann, *Cowboy Capitalism: European Myths, American Reality* (Washington, D.C.: Cato Institute, 2004) at 2-3 ("While U.S.-style capitalism may or may not have delivered results to be proud of, its performance, as measured by economic and social indicators, has clearly been superior to that of its continental European counterparts....the price Americans are paying for the benefits of their cowboy capitalism is surprisingly small, and it is likely that, if Europeans decided to Americanize their economic systems, they would gain much more than they would lose.")

Those who extol the European model include Mark Leonard, *Why Europe Will Run the 21st Century* (London: Fourth Estate, 2005) at 143 ("we will see the emergence of a 'New European Century'. Not because Europe will run the world as an empire, but because the European way of doing things will have become the world's"); T.R. Reid, *The United States of Europe: The New Superpower and the end of American Supremacy* (New York: Penguin, 2004) (reviews most realms of life – entrepreneurship, economic and trade policies, educational system, medical/health care system, health fads, cultural and religious, and foreign policy, for example – and concludes that the countries of the European Union will act as a counterweight against the United States in all of these areas); Jeremy Rifkin, *The European Dream: How Europe's Vision of the Future is Quietly Eclipsing the American Dream* (The US is being eclipsed by a new "economic superpower" – the 450 million of citizens of the European Union. Rifkin's books is a celebration of Europe's "community relationships over individual autonomy, cultural diversity over assimilation, quality of life over accumulation of wealth, sustainable development over unlimited material growth, deep lay over unrelenting toil.").

¹⁶ 20 December, 1993.

Netherlands and France, which many commentators interpreted as a refusal by the citizens of those countries to consider the adoption of badly needed neo-liberal economic reforms, US journalists resumed lecturing Europeans about the need to reform their dysfunctional welfare states. On the eve of the French No vote, Time's reporter James Graff noted that "The debate has centered mainly on whether the constitution is or isn't a kind of Trojan horse by which the dreaded 'Anglo-Saxon liberalism' – i.e., unfettered free-market capitalism – will be given free rein in France, gnawing at such hard-won social gains as the 35-hour workweek, well-funded public services and strong protection against layoffs."¹⁷ He lamented that, "Instead of embracing change with the vigor and elan that has been their historical trademark, many French seem afraid and petulant as they cling to a heroic image of their country that no longer matches reality."¹⁸ Scoffing that the French seek to "penalize Central Europe's embrace of low corporate taxes, and loosen the reins of deficit spending," Washington Post economics writer Robert J. Samuelson announced "The End of Europe," depicting the voter's judgment as merely the symptom of a larger problem. "Many Europeans – maybe most – live in a state of delusion," he wrote. Europe "faces a bleak future of rising domestic discontent and falling global power" unless it increases economic growth. "One way to revive economic growth would be to reduce social benefits, taxes and regulations," Samuelson suggested; but he deemed this happy ending to be unlikely since it "would imperil Europe's 'social model,' which supposedly blends capitalism's efficiency and socialism's compassion."¹⁹ David Brooks, the conservative New York Times columnist said, "Forgive me for making a blunt and obvious point, but events in Western Europe are slowly discrediting large swaths of American Liberalism." He wrote. "Most of the policy ideas advocated by American liberals have already been enacted in Europe: generous welfare measures, ample labor protections, highly progressive tax rates, single-payer health care systems, zoning restrictions to limit big retailers, and cradle-to-grave middle-class subsidies supporting everything from child care to pension security. And yet far from thriving, continental Europe has endured a lost decade of relative decline."²⁰ Thomas Friedman, another conservative Times' reporter wrote in his inimitable style: "What a bunch of antiglobalists Gauliist Luddites! Yo, Jacques, what world do you think you're livin' in, pal? Get with the program! It's called Anglo-American capitalism, mon ami."²¹

4 Refining the Claim: Assessing Competing Social Contracts

Ultimately, every society must be judged on how well it satisfies the wants and desires of its citizens. Somewhat surprisingly, based upon an examination of government reports and commissions across a broad range of diverse countries, and on the basis of the terms that capitalist welfare regimes of all stripes legitimize themselves to their publics, there is wide agreement on the goals of the good society. To be sure, people on the right accord these goals different emphasis than those on the left and the precise content of the concepts used to describe

¹⁷ James Graff, "Reality Check: France is split over the E.U. Constitution, but the real debate the country should be having is about itself," *Time International (Europe Edition)*, May 30, 2005, volume 165, issue 23, p. 18.

¹⁸ Ibid.

¹⁹ Robert J. Samuelson, "The End of Europe," *The Washington Post*, June 15, 2005, p. A25.

²⁰ David Brooks, "Fear and Rejection," *The New York Times*, June 2, 2005, p. 25.

²¹ Thomas L. Friedman, "We are all French now?" *New York Times*, June 24, 2005, p. 23.

the goals is often contested; nevertheless, the goals of most industrialized countries appear remarkably similar. Divided somewhat arbitrarily into social and economic goals, and in no particular order, the following list summarizes the goals that are commonly referred to in discussions of the objectives of public policy in Western societies.

Social Goals

- Relief from poverty and social exclusion
- Protection of the vulnerable
 - Children
 - Elderly
 - Those with disabilities
- Equitable distribution of economic resources
 - Income
 - Wealth
- Social equality
 - Gender
 - Race
 - Ethnicity
- Family security
 - Autonomy of family members
 - Protection against the risks arising from family change
 - Redistribution across the life cycle of family members
- Economic security
 - Labour market security
 - Employment security
 - Job security
 - Work security
 - Income security
 - Representation security
- Access to services essential to human development
 - Health
 - Education
 - Housing
- Personal physical security
- Opportunities for the enrichment of the quality of life
 - Arts and culture
 - Recreation
- Community and social solidarity
- Personal freedom and autonomy
- Happiness and life satisfaction
- Opportunities to participate in collective decision-making
- Sustainability
- Inter-nation equity

Economic Goals

- High standard of material living
- High rates of economic growth and productivity
 - Efficient allocation of resources
 - High rates of saving
 - Investment
 - Foreign investment
 - Innovation
- Economic stability
 - Stable prices
 - Sustainable debt levels
 - Full employment of human resources and stable rates of employment
 - Viable international balance of payments

In the light of these social and economic goals, the basic question asked in this paper might be restated: what is the evidence as to whether countries with high or low taxes are more likely to achieve these objectives? The answer to this question is sought by searching for an association between tax levels and a long list of social and economic indicators that could be fairly taken as indicative of the achievement of each of these goals. Taxes, in and of themselves, could contribute, of course, to only a small number of these goals. Therefore, a country's tax levels is being used as a proxy in this exercise for the extent to which a country relies upon public ordering processes, as opposed to private ordering processes, in the pursuit of these goals.

If one could imagine a world in which there was only a small number of individuals, stating, clarifying and assigning priority to these goals would be relatively straightforward. Also, selecting the best method of achieving them, while perhaps difficult, would require little coordination. However, once more than a few persons are consigned to share resources, let alone millions, both the need to assign priorities to the various goals and to arrive at a method for coordinating activities in pursuit of them become enormously problematic. Economists commonly assert that in deciding how to use its scarce resources, every society must make three sorts of decisions: what combination of goods to produce, how to utilize its resources efficiently, and how much of each good to distribute to each person. This is an adequate description of the problems faced by modern societies so long as "goods" is interpreted broadly to include all means of satisfying selected goals.

Prior to the 1980s, economists commonly divided the economy into two sectors, markets and government and many economic textbooks and models still refer only to these two sectors. However, it is increasingly common to recognize that there are five forms of social organization that might be used in the pursuit of these goals - markets, private firms, families, civil society, and governments. This is not the place to elaborate upon these forms of social organization and the relative competencies of each since in this paper taxes are used as the sole independent variable. Basically, the level of taxes in a country is used as a proxy for how much the country uses government policy instruments, or the public ordering process, for pursuing societal goals, as opposed to using primarily private ordering processes such as markets, private firms, families and civil society. However, by way of problematizing even this basic distinction between public and private ordering processes three reservations might be noted.

First, although it is helpful in many contexts to think of each form of social organization as having some fixed and unique attributes, and as being relatively autonomous from one another, in fact they are all the product of government action. Although economists are fond of referring to a self-regulating, free and neutral private marketplace, there is, of course, no such thing. Marketplace transactions are shaped and determined by countless detailed and complex rules of contract and property law that are coercive and have decisive and pervasive distributional consequences. In this respect, the background rules for the market are in important respects no different than any other form of government regulation, including taxation.²² One of the central insights of feminist legal scholarship has been that even family relations, which were traditionally regarded as private and personal, reflect broader power relations in society that are in turn determined by laws and government actions or inactions and that have been responsible for women's oppression and subordination.²³ In the same way, voluntary organizations do not arise as the result of a spontaneous ordering process reflecting some deep-seated needs of human nature. Almost every aspect of the voluntary sector is defined and shaped by government policy, most obviously through funding arrangements, tax treatment and the regulation of governance structures, and more subtly by the tasks undertaken by government. The point is that while it often promotes clear thinking to divide forms of social organization into various categories it is equally important to bear in mind that these categories are social constructs whose boundaries are profoundly influenced by government action.

Second, all five sectors are characterized by a large variety of organizational forms that often appear to have little in common. Thus, no matter how the forms of social organization are classified there will always be a continuum between them and it will never be entirely obvious where it is sensible to draw the line distinguishing between them. For example, the government itself is a multifaceted entity comprised of a bewildering array of central departments, regional offices, non-departmental public bodies, numerous quasi-autonomous local entities and so on. Particularly with the massive wave of bureaucratic reorganization ushered in by adherents to the new public management, which emphasizes delegation, disaggregation and contracting out, it is difficult to know where the government sector ends and the private sector begins.²⁴ Where the precise line is drawn between the sectors will depend upon the particular context and purpose of classifying the forms of social organization; some classifications might promote clarity of thought in some contexts but no others. However, for example, in almost any context, nonprofit organizations that depend on public contracts to such an extent that they are largely vehicles for the delivery of government services have more in common with organizations in the government sector than those in the voluntary sector.

²² There is a vast literature in institutional economics and critical legal studies making this point. Much of the literature is referred to and discussed in Barbara H. Fried, *The Progressive Assault on Laissez Faire: Robert Hale and the First Law and Economics Movement* (Cambridge: Harvard University Press, 1998).

²³ For an excellent collection of essays see Susan B. Boyd, ed., *Challenging the Public/Private Divide: Feminism, Law and Public Policy* (Toronto: University of Toronto Press, 1997).

²⁴ See Martin Rein, "The Social Structure of Institutions: Neither Public nor Private" in S.B. Kamerman and A.J. Kahn, eds., *Privatization of the Welfare State* (Princeton, NJ: Princeton University Press, 1989) at 49. For an attempt to categorize quasi-government organizations see Carsten Greve, Matthew Flinders & Sandra Van Thiel, "Quangos - What in a Name?: Defining Quangos from a Comparative Perspective" 12 *Governance: An International Journal of Policy and Administration* 129 (1999) (quangos are quasi-autonomous non-governmental organizations).

Third, since in the attack on taxes the refrain that increased taxes cannot be afforded is heard so often, it is worth noting the obvious point that for most goods and services provided through governments, if they were not provided through governments and paid for in taxes would have to be allocated through one of the other forms of social organization and individuals would bear their cost in other ways. That is to say, there is an important sense in which the refrain that taxes and public services and social programs cannot be afforded is simply incoherent. Take expenditures for health care and education. It cannot be a question of whether these expenditures are affordable. They are widely recognized as necessities. The only question is whether a society should provide these services through the public sector and pay for them with taxes or provide them through private markets and pay for them with prices. Which form of social organization is the most equitable and efficient way of providing these goods and services?

Sometimes when people say that their country cannot afford to provide certain services through the public sector what they seem to mean is that social and economic institutions should be structured so that women (by and large) end up delivering these services for free. For example, when people say that a national day care program or long-term elderly care cannot be afforded, what do they mean? Presumably they do not mean that children and the elderly should no longer be cared for. Again, what they often appear to mean is that women should continue to do this work unpaid in their own homes. But does that mean that these services are not being paid for? Of course not. It simply means that instead of spreading their cost equitably, through the tax system, across the entire population who benefits from their delivery, their costs are imposed on those women who, for whatever reason, do not work in the paid labour force or who are required to hold both a paid and an unpaid job. Thus, this misconceptualization of the reasons for not wanting to provide these services through the public sector obscures a rather vicious moral judgment.²⁵ The trade off involved can be seen from a quotation from the leader of Norway's conservative Christian Democrats explaining Norway's policy of paying new parents to leave their jobs temporarily and stay home: "We have decided that raising a child is real work. And that this work provides value for the whole society. And that the society as a whole should pay for this valuable service. Americans like to talk about family values. We have decided to do more than talk; we use our tax revenue to pay for family values."²⁶

Similarly, downloading government services to the voluntary sector does not mean that there is now no cost for these services. Assuming that the services are still being provided, someone will have to continue to pay for them. The cost of the services will simply be shifted from taxpayers to those who make charitable donations and to those who volunteer their time. Since most of these services provide public benefits, relying on the voluntary sector, instead of the government sector, means that those who do not donate their money or time will be able to free ride on the contributions of others.

²⁵ Carole Pateman, "The Patriarchal Welfare State" in Amy Gutmann, *Democracy and the Welfare State* (Princeton: Princeton University Press, 1988) 231 at 147 ("It is not surprising that the attack on public spending in the welfare state by Thatcher and Reagan governments goes hand-in-hand with praise for loving care within families, that is, with an attempt to obtain even more unpaid welfare from (house)wives.").

²⁶ T.R. Reid, *The United States of American: The New Superpower and the End of American Supremacy* New York: Penguin Books, 2004), at 152-153.

The point is that high taxes by themselves are not an indication that a country is spending too much on particular goods and services. When taxes are reduced there is usually no cost saving to individual households. Costs are simply shifted. Instead of being incurred in the form of taxes, households incur the costs in the form of prices for market purchases, self-service, additional time and donations for the voluntary sector, or reduced wages or higher prices to the extent the service is provided to workers by private firms. If high-tax countries are able to achieve better social outcomes than low-tax countries it is not necessarily because they are spending more on services that produce those outcomes, but because incurring the costs for those goods and services in the form of taxes is more efficient and equitable than having them provided through markets, imposing them on families or the voluntary sector, or having workers negotiate for them with private firms. Put another way, the average family in an Anglo-American country likely spends as much (even more, perhaps) than the average family in a Nordic country for social protection. They simply pay for it in a different, non-tax, form.

Every society possesses a social contract that establishes the obligations that its members assume towards each other. Indeed, a society or culture is defined by its social contract. It reflects the goals that the society regards as important and how the nation balances market, firm, family, community, and government responsibilities in the pursuit of those goals. In this paper tax levels are taken as a crude surrogate for the responsibilities assigned to government and the issue addressed is whether there is evidence, based upon a comparison of countries, that societies that assign a smaller share of responsibilities to government – that is to citizens acting collectively through democratically elected and controlled institutions – are more successful in achieving commonly agreed upon societal goals than those societies that assign a larger role to government and a smaller share of responsibilities to private ordering processes, namely, markets, firms, families and civil society?

5 Methodology

5.1 How Countries Rank by Tax Level

Even though it is obviously only very indirectly related to the selected social and economic variables examined in this study, a country's tax level was chosen as the independent variable since the debate over what form of social organization should be used in pursuing a particular social objective is often fought over the question of taxes: taxes are often assumed to limit the use of public ordering processes.

Industrialized countries are divided in Table 1 into four categories based upon their level of taxes: low tax countries, low-intermediate tax countries, high-intermediate tax countries, and, high tax countries. Tax levels vary from year to year, therefore, a 12 year average, from 1990 to 2002, was used. Any period chosen would be to some extent arbitrary, but this period immediately preceded the years of most of the social and economic indicators. Even taking the average tax level over a 12-year period, there are reasonably large differences between countries. Sweden, the highest tax country, collects almost twice as much tax as a percentage of its GDP (50.5 percent) as the lowest taxed country in the group, Japan (26.8 percent). The average for the five low-tax countries is about 29 percent; the average for the high-tax countries is 47 percent, almost 60 percent greater than the low-tax countries.

**Total Tax Revenue as Percent of GDP, High-Income OECD Countries,
Annual Average – 1990-2002**

Low-tax Countries		Low-Intermediate		High-Intermediate		High-tax Countries	
Japan	26.8	Spain	33.0	Germany	36.5	France	43.4
United States	28.0	Portugal	33.6	Netherlands	42.2	Belgium	44.9
Switzerland	28.0	New Zealand	35.4	Norway	41.9	Finland	46.2
Australia	29.8	Canada	35.7	Italy	42.1	Denmark	49.0
Ireland	32.6	Greece	34.0	Austria	42.3	Sweden	50.5
		United Kingdom	35.5				

Given these large differences, if well-developed welfare states were not achieving their objectives, or if they were doing so at substantial economic costs, this should be revealed in aggregate data relating to a number of social and economic variables.

Although the tax level in a country is clearly a significant and distinguishing characteristic of that country, ranking capitalist economies based solely upon their respective tax levels clearly obscures much about the nature of the social contracts struck across countries. For most of the 20th century, comparative political economy was primarily concerned with examining and appraising the differences between market and planned economies. Since the fall of the Soviet Union in the late 1980s and the marketization of the Chinese economy, that debate appears to be of only historical interest and has been replaced with a debate over the different characteristics of capitalist countries and an attempt to categorize them based upon the salient features of their social contracts.

Although efforts to classify countries on the basis of their implicit social contract have a long history, one of the most influential early attempts was by Richard Titmuss in the mid-1970s. He is well known for distinguishing between the “residual welfare model,” in which the private market and families have the primary responsibility for satisfying the needs of individuals and the state provides only a back-up social safety net and the “institutional redistributive model” which sees social welfare as a major integrating institution in society by providing universal services.²⁷

During the 1990s, when the role of the welfare state underwent a thorough re-evaluation, work on the resilience of welfare regimes gained considerable prominence. The reference work was

²⁷ R. M. Titmuss, *Social Policy* (London: Allen and Unwin, 1974).

Gøsta Esping-Andersen's (1990) *The Three Worlds of Welfare Capitalism*.²⁸ Based on an analysis of the arrangements between the market, the state, and the family, he classified advanced capitalist societies into three types, each designed to reconcile economic development with measures to protect citizens against the risks of the marketplace: the "Liberal welfare state," exemplified by the Anglo-American countries, in which the emphasis is on individual liberty and markets are the primary form of social organization; the "Conservative/corporatist welfare state," exemplified by most Western European countries, in which the emphasis is on social solidarity and occupation insurance plans offered by private firms play a large role in reducing social risks; and, the "Social democratic welfare state," basically the Scandinavian countries, in which the emphasis is on equality, and state-provided universal programs usurp the role of markets and the family in ensuring that the needs of individuals are met. His central concern in classifying countries was based upon the extent to which they decommodified labour (the extent to which individuals could obtain services and income without having to turn to the market) and promoted social solidarity (the extent to which social policies are regarded as social rights). In later work he included defamilization (the extent to which citizens are not dependent on families in times of need) as an organizing principle.

A burgeoning comparative welfare state literature developed around Gosta Esping-Andersen's book. Some contested his classification scheme. Most notably, a number of authors identified an additional regime type, namely the Mediterranean model – Portugal, Spain, Greece and to a limited extent Italy - that might be viewed as a separate model in which pensions are generous but otherwise state systems of support are less and in which the family and church played a larger role in meeting the needs of citizens²⁹

Comparative political economists writing in the worlds of welfare capitalism tradition would undoubtedly regard a linear distribution of welfare states between low tax levels and high tax levels as too simplistic classification for most purposes even though there is a relatively close correspondence between the categorization based on tax levels and that based upon notions of decommodification and related concepts. Very roughly, Liberal or Anglo-American countries are clustered in the low-tax column; Mediterranean countries are clustered in the low-intermediate column; continental countries are clustered in the high-intermediate column; and, the Scandinavian countries are clustered in the high-tax column. Nevertheless, in order to refine the analysis somewhat, in addition to searching for correlations between tax levels and social and economic indicators, this study also compares the social and economic outcomes across these four categories of welfare states. In particular, it compares outcomes in the six Anglo-American countries (United States, Australia, Ireland, New Zealand, Canada, and the United Kingdom), all of which are relatively low-tax countries, with those in the four Nordic countries (Norway, Finland, Denmark, and Sweden), all of which are relatively high-tax countries.

²⁸ Gosta Esping-Andersen, *The Three Worlds of Welfare Capitalism* (Cambridge: Polity, 1990); Social Foundations of Post-Industrial Economies (Oxford: Oxford University Press, 1999).

²⁹ There is a lively dispute in the literature as to whether these Mediterranean countries are rudimentary welfare states that are moving towards their more developed Northern states or in fact represent an entirely separate social contract. See Maurizio Ferrera, "The 'southern model' of welfare in Social Europe" 6(1) *Journal of European Social Policy* 17; Stephan Leibfried, "Towards a European Welfare State?" in C. Ones, *New Perspectives on the Welfare State in Europe* (London: Routledge, 1993), p. 133.

5.2 What Countries to Compare?

The initial question in any comparative study is, of course, what countries to compare. For two reasons, the 21 high-income, large industrialized countries of the Organization of Economic Cooperation and Development (OECD) are compared in this study.³⁰ First, these countries are relatively affluent stable democracies that share a wide range of important social, economic and political institutions. They also all have capitalist mixed economies but with a relatively wide range of public sector involvement in their economies. Thus by selecting these OECD countries, some general variables can be held constant such as a capitalist economy and a broadly Western cultural heritage.

The OECD is comprised of 30 countries; however, a number of the countries that were admitted in recent years are less industrialized than the majority of countries. In order to include only countries at a similar stage of economic development, countries with less than \$21,000 GDP per capita in USA PPP in 2004 were excluded. This excluded the Czech Republic, Hungary, Korea, Mexico, Poland, the Slovak Republic, and Turkey.

Although the countries compared are similar in terms of their institutions, they differ widely in their sizes. Two OECD countries, Iceland and Luxembourg, were excluded since, although they are relatively wealthy countries (indeed Luxembourg has the highest per capita income among the countries of the world and is much wealthier than the US) they are essentially small cities with populations of only about 300 thousand and 500 thousand respectively. Still the remaining countries range in size from the United States, with a population approaching 300 million, to Ireland, New Zealand, Norway, Denmark and Finland each with a population of less than or only slightly more than 5 million. In suggesting that Australia and New Zealand are in fact high-tax countries right-wing think tanks in both countries have argued that in comparing tax levels across countries the countries should be weighted according to their population.³¹ Weighting countries in this way dramatically reduce the OECD average tax level since the United States and Japan are both highly populated, low-tax countries. But since the whole point of these kinds of cross-country comparisons in testing theories is to derive conclusions about the effect of government policies, countries (unweighted) are the appropriate unit of analysis because the policies or institutions considered by the theories are country-specific.

5.3 The Use of Tax Levels as an Independent Variable: Measuring the Size of the Welfare State

5.3.1 General

³⁰ The OECD collects comparable data from its member countries, not only with respect to taxes, but also increasingly for almost all social and economic indicators. Therefore, using OECD countries has the obvious advantage of the availability of a good deal of comparable data.

³¹ Peter Burns, "How Highly Taxed are We? The Level and Composition of Taxation in Australia and the OECD" (Sydney: Centre for Independent Studies, 2004) and Sinclair Davidson, "Personal Income Tax in New Zealand: Who Pays and is Progressive Taxation Justified?" (Wellington: New Zealand Business Roundtable, 2005).

Obviously there are countless problems with, and limitations of, these kinds of cross-country studies, which are acknowledged by all researchers,³² but one of the most significant problems is selecting and defining the independent variable. Here tax levels are used as a proxy for the amount of government intervention in the economy. However altogether aside from the more fundamental problems of distinguishing between the government sector and interventions by markets, families, the voluntary sector and private firms, there are a host of more immediate problems in using taxes as an independent variable in measuring the size of the welfare state: First, it is not easy to distinguish between taxes and other transfers to government and because governments use different accounting conventions a transfer to government might be classified as a tax in one country but not another. Second, arbitrary accounting conventions can make economically equivalent programs in different countries appear either as tax offsets (and therefore not an instrument of government intervention) or as taxes and transfers. Third, taxes and transfers are simply one of many policy instruments that governments might use in achieving their objectives and many of the other policy instruments that they might substitute for taxes, such as regulation, while achieving the same objectives, will not have budgetary consequences. Fourth, in terms of their incentive effects, even privately negotiated amounts can sometimes act as near perfect substitutes for taxes. Finally, tax and spending ratios, as measures of government intervention, completely mask the details and design of the underlying spending programmes and tax system even though these details and design features can vary enormously and have significantly different impacts. All of these objections have some validity and for that reason are briefly reviewed here.

5.3.2 Distinguishing Taxes from other Transfers to Government

Contrary to common belief, tax is not a straightforward concept. In the early seventies, the Organization for Economic Cooperation and Development (OECD) in cooperation with the International Monetary fund (IMF) developed a standardised international classification of taxes and data based on this classification have been published annually since 1973 in the OECD volume *Revenue Statistics of OECD Member Countries*. It has become the standard source for tax comparisons. Nevertheless, numerous problems remain.

Current versus deferred taxes. In some countries, over the past 20 years, and even currently, a significant amount of government expenditures have been financed by government borrowing. World-wide economic conditions including recessions and reduced rates of economic growth made countries susceptible to deficits by causing increased spending and reduced revenues.³³ There is an argument that in an exercise of this kind deficits should be treated like deferred taxes

³² See A.B. Atkinson, "The Welfare State and Economic Performance" (1995) 48 *Nat'l Tax J.* 171 at 196; E. Engen & J. Skinner, "Taxation and Economic Growth" (1996) 44 *Nat'l Tax J.* 617 at 636; and, J. Slemrod, "What Do Cross-Country Studies Teach about Government Involvement, Prosperity, and Economic Growth?" [1995] 2 *Brookings Paper on Econ. Activity* 373.

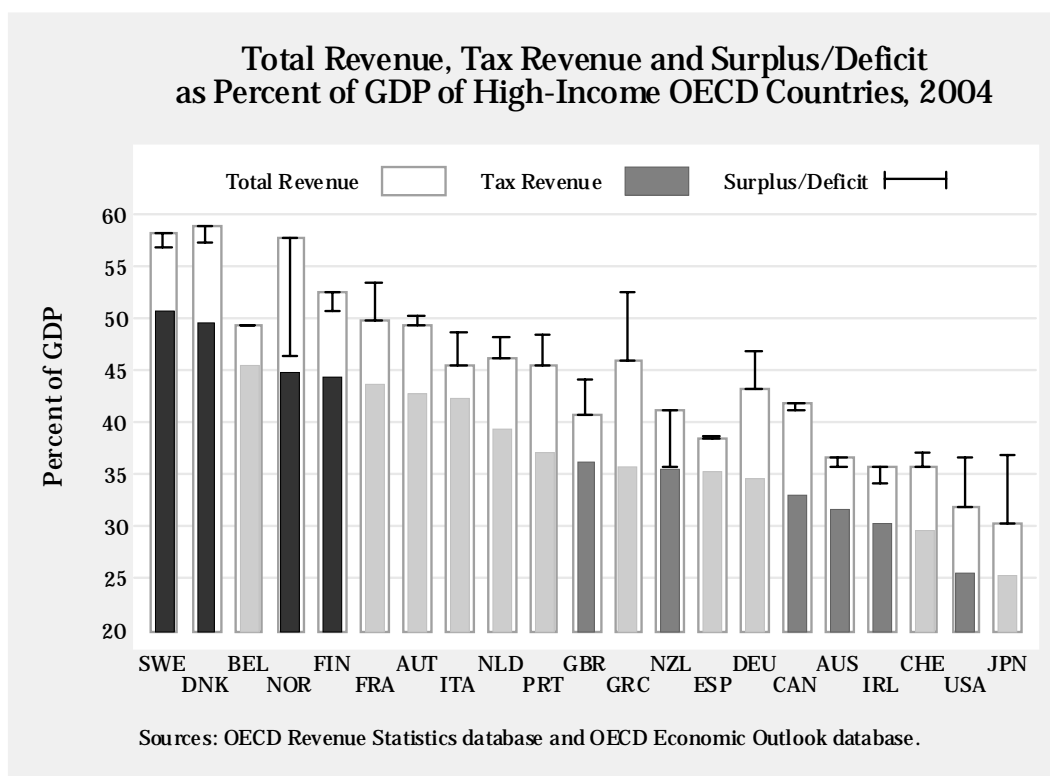
³³ Political economists have tested numerous explanations for the variation in deficit financing across countries including the ideology of the ruling parties (on the assumption that left-wing governments would be more willing to engage in deficit financing); the political power of the ruling power, regardless of identity (on the assumption that governments with more power would be more willing to bear the political costs of increased taxation to finance increased spending); and, the independence and influence of the fiscal bureaucracy (on the assumption that an independent and influential fiscal bureaucracy would be more likely to resist pressures for deficit financing - this explanation applies in particular to Belgium and Italy).

and added to the annual tax level. The difference it can make can sometimes appear significant. For example, in 2003 taxes in Australia were 31.6 percent of GDP; in the United States they were only 25.6 percent of GDP. Yet in 2004 the US deficit was 4.7 percent of GDP and Australia had a surplus equal to 1 percent of GDP. If tax ratios were adjusted by these amounts, tax levels in Australia would almost equal the US level.

Taxes versus prices. What is classified as a tax in one country might be fashioned as a government price in another; for example, government receipts from the exploitation of natural resources might be fashioned as a tax or as a royalty. (Give examples of the difference it makes.)

Figure 1 sets out the tax revenue, total revenue and deficit as a percentage of GDP of these high-income OECD countries in 2004.

Figure 1



Taxes versus government monopoly profits. Political decisions can result in an amount being classified as a tax or as part of the profits of state-owned enterprises. For example, if a government wishes to obtain more revenues from the monopoly businesses that it operates, such as gambling or the distribution of liquor, it can do so by imposing an excise tax on the products or by simply increasing the price of goods supplied by these nationalized businesses and thus increase their monopoly profits. Many countries have considerable sources of these non-tax revenues.

Taxes versus amounts paid by governments themselves. Another classification problem arises in deciding how to treat amounts paid by governments themselves. Taxes paid by government itself – either payments by the same level of government to itself or payments from one level of government to another – make up a large and varying proportion of government receipts. For example, in most countries the central government will pay its own value added tax on purchases. In Canada this accounts for almost \$1 billion of tax revenues. Often taxes such as local property taxes will be paid by the central government and most governments pay social security taxes and payroll taxes in their capacity as employers. In Canada these amounts are almost 2 percent of GDP; in Sweden they are 5 percent of GDP. If the concept of taxes is being used to estimate the distortionary effects of government activity, presumably taxes paid by government itself should be taken out of the ratio, the only ones that matter are those paid by individuals. However, the OECD treats such amounts as taxes. Somewhat interestingly, the IMF does not, which is the only conceptual difference between the tax data provided by these two organizations. The IMF eliminates them from its calculations of taxes on the grounds that

the purpose of its accounts is to show the flow of cash payments to the government sector from the rest of the economy. The OECD includes them on the grounds that the purpose of the concept or taxes is to show the value of government output in the context of the economy as a whole.

(Check amounts paid by European countries directly to the EU. Are they included in national income accounts as taxes?)

5.3.3 Distinguishing Tax-Offsets from Transfers.

Another reason that tax levels as a measure of the size of the welfare state must be used cautiously is that arbitrary budgetary accounting conventions for taxes and spending can result in economically equivalent programs appear to represent different levels of government involvement in different countries.

No country yet accounts properly for tax expenditures, that is, subsidy programmes implemented by allowing taxpayers to offset their subsidy cheques against their tax liabilities. Thus, even though a subsidy programme delivered through the tax system in the form of a tax exemption, deduction or credit is notionally equivalent to the taxpayer paying the amount of tax saved in tax and the government writing the taxpayer an equivalent subsidy cheque, a tax expenditure will not show up in budgetary accounts as a form of government intervention and recorded tax levels will be reduced accordingly. Under the OECD methodology, only that part that is paid in tax and then directly reimbursed is treated as a tax. Thus a country that uses tax credits as opposed to direct grants will show a higher tax level – even though the two country's programs are otherwise functionally equivalent.

The misleading affect this accounting convention can have on government accounts can be easily illustrated. A number of years ago, the Canadian government converted a taxable demogrant for children into an income-tested, refundable tax credit. Even though the policy instrument change was revenue neutral, and all that happened was that the programme was redesigned, recorded government spending declined by 1.5 percent of GDP, and taxes went down, since children benefits were now directly offsetting tax liabilities, even though the economic effect – and real cost to the government – of the programs never changed. Across countries, those countries that have fashioned their child benefits as direct subsidy programmes, such as France, will be recorded as having a larger public sector than those countries that deliver child benefits through their tax systems in the form of tax exemptions or credits, such as the United States, even though there might be no significant difference between the two programs. Also, in some countries social security transfers are normally taxed; in others they are not. If the benefits are taxed then in order to provide the same level of benefits they must obviously be larger than if they are not taxed. Consequently, in those countries that tax benefits (Sweden, for example) government spending and taxes will be recorded as larger (other things being equal) than in those countries in which all benefits are not taxed (such as the United States).

5.3.4 Distinguishing Taxes from Government Regulations

Governments have a large range of policy instruments, in addition to taxes and transfers, they can use in pursuing their social and economic objectives, such as regulations, monetary policy, credit programs, mandates, quotas, trade policies, public ownership and suasion. By and large they can substitute the use of one policy instrument for another. But, unlike taxes and transfers, most of these instruments do not have budgetary consequences. Thus figures for aggregate government spending or tax revenues obscure many dimensions of policy.

A few examples will illustrate how misleading the ratio of taxes to GDP might be as a proxy for the extent of use of public ordering processes. Many countries rely extensively on government social insurance programs that are funded by, essentially, a payroll tax. Other countries, however, achieve much the same objective through the regulation of private pension plans. Indeed, it is increasingly popular for governments to impose an obligation on the private sector to collect compulsory levies for the provision of certain social security benefits. In the case of Australia, for example, the mandatory superannuation guarantee charge of nine percent is not treated as a tax since that amount is paid directly into a private sector superannuation fund where the benefit accrues directly to individual employees. Yet it is similar in many respects to social security levies imposed in many countries to fund public pension entitlements. If it were treated as a tax in Australia, taxes as a percent of GDP would increase by over three percent. (Also in Australia worker's compensation premiums are not treated as taxes since they are not paid into general revenues.) Among OECD countries, these levies, which are not classified as taxes, represent between 4 to 6 percent of GDP in Finland, the Netherlands and Switzerland.

As a further example, protection against uninsurable labour market risk can either be provided by employment protection legislation, which protects workers against firing, or by providing state provided unemployment benefits in addition to those established by collective bargaining. Even though the two instruments are designed to achieve a similar purpose, and the tax and transfer instrument is arguably less distortionary than the regulatory instrument, if a government uses the tax and transfer policy instrument there will be budgetary consequences, but not if the regulatory policy instrument is used.³⁴

Parenthetically, it might be noted that along with the replacement of the state provision of services with more market-oriented, competitive approaches to delivering services (quasi-markets), the shift from taxes and transfers to various forms of legal regulation appear to be the two most fundamental changes currently under way in welfare states. For example, in a number of countries in order to assist the working poor, income supplements are being replaced with legal regulations such as increased minimum wages and legal limits on the working week. Child and elderly benefits are being replaced with the more rigorous enforcement of legal obligations of support. It is difficult to discern precisely what is driving this change in the use of governing

³⁴ The Nordic countries provide unemployment benefits that are generous and comprehensive, while employment protection laws are quite weak. By contrast, Germany and other Continental countries provide less generous unemployment benefits but their employment protection laws are much stricter. An allegedly important difference between the two systems is that employment protection legislation protects those who already have a job while unemployment insurance makes it easier for employers to adjust their work force and thus provide more opportunities for citizens looking for work.

policy instruments: a growing resistance to increased taxes, a loss of faith in the benevolence of human nature (that the tax and transfer welfare state appears to be premised upon but which legal regulation is arguably not), or a concern that the tax and transfer system cannot cope with the increase in market income inequality. Nevertheless, particularly in the low-tax countries, ironically, there appears to be a decided shift in thinking from tax and transfer strategies to strategies of legal intervention in achieving the goals of the welfare state. As this shift continues it will make the tax/GDP ratio an increasingly inappropriate measure of the size of the welfare state.

5.3.5 Distinguishing Taxes from Privately Negotiated Amounts

The one country in which taxes expressed as a percent of GDP very likely substantially misrepresents the amount of public ordering is Japan. At least if popular accounts are to be believed, Japan's bureaucrats exercise considerable influence over the private sector. Instead of providing grants to small business or directly financing research and development, for example, they are able to exert influence on banks to increase their amount of lending to small businesses and alliances of private firms to undertake basic research on directed projects. Public ends are met by private means.

But more generally, in many instances privately negotiated amounts, particularly amounts negotiated as part of wage settlements for in-kind benefits that might otherwise be provided publicly, are almost equivalent to taxes. For example, in most countries health care is provided publicly and financed through payroll taxes, in other countries, most notably the United States, it is provided privately, paid for by private health insurance companies, and financed, by and large, by employer payroll deductions.³⁵ It is hard to imagine that there could be any difference in the distortions caused whether health is financed by a payroll tax or a privately agreed upon but mandatory payroll deduction. However, in the former case it will show up as a tax and government spending program. In making the case for reduced taxes because of the adverse effects that the Canadian tax system has on economic incentives, Canadian business interests frequently point to the lower tax levels in the United States. Yet in Canada most health care costs are paid for publicly through taxes. When the amount that Americans spend in the form of prices in the private sector on health care, most of it involuntary, is added to their taxes they actually end up spending more than Canadians for this public-type good. Since health care costs are, by and large, an unavoidable and uncontrollable expense from a consumer standpoint, and there is no value to health insurance except offloading risk, it is not entirely obvious why, if economic costs were divided functionally into "taxes" and "not taxes," consumer purchases of health insurance would not end up on the tax side of the ledger.

³⁵ Concerned that Wal-Mart, in particular, is not providing adequate private health care insurance for its employees, and thus many of its employees are being forced to turn to tax-financed Medicaid health services, many states are considering passing legislation requiring employers with 10,000 or more workers to spend at least 8 percent of their payrolls on health insurance. See Michael Barbaro, "Maryland sets a health cost for Wal-Mart" *New York Times*, January 13, 2006.

5.3.6 Ignoring the Details and Design of the Tax System

Tax and spending ratios as measures of government intervention completely mask the details and design of the underlying spending programmes and tax system even though these details and design features have significant impacts and vary enormously. The ratio of taxes as a percent of GDP, for example, obscures a country's marginal and effective rates of each tax and the relative reliance on different tax bases. Also, the fine structure of welfare programmes in determining their disincentive effects cannot be underestimated. Some countries means-test all transfers, which results in large implicit tax rates, others make all transfer contingent on some level of labour force participation. Even with the same levels of spending, these differences in the design of transfer programmes can make large differences in results.

If it is the incentives created by the tax system that matter then a measure of marginal tax rates would be more appropriate than a measure of average tax rates. However, for many taxes, statutory marginal rates are difficult to determine across countries. They typically vary across the income spectrum, particularly if tax-back or phase-out rates for social security payments are included, and thus would be difficult to capture in the aggregate. In practice, the effective marginal tax rate often differs from the statutory rate since, among other things, it is often avoided by high-income individuals. Further, in many countries, high marginal tax rates can be avoided much easier than in other countries.

5.4 Problems with the Denominator: The Gross Domestic Product

Although the size of economies and rates of economic growth are invariably measured using gross domestic product (GDP), and it is the common denominator in expressing tax ratios, it is a problematic concept for this purpose for a number of well-known reasons such as the exclusion of values for leisure, non-market activity and capital services, and the inclusion of instrumental expenditures that are not a direct source of utility, such as the "regrettable necessities" of police and defence, and the cost of "disamenities," such as pollution. Moreover, GDP is difficult to measure and in many countries can be subject to large revisions. Arguably, a better denominator would be the size of the tax base for each tax, for example, corporate profits for the corporate income tax and total private consumption for consumption taxes; however, it is difficult to obtain comparable data across countries of the various tax bases.

5.5 The Use of Social and Economic Indicators as Dependent Variables

Requiring a serious assessment of whether individual countries have achieved their specified goals, or more generally a careful assessment and comparison of the quality of social life in each country, would be a formidable task. Therefore, the assumption of this study is that all countries are pursuing the social and economic goals listed above and that the extent to which they are achieving these goals can be discerned by examining commonly used social and economic indicators.

At least since the emergence of Keynesian economics and the development of national income accounting in the 1930s, the use of economic indicators to benchmark the economic performance of the economy of individual countries has become commonplace. The primary focus has been on economic growth, as measured by the growth of GDP per capita, price stability, as measured by the annual rate of inflation, and the broad indicators of labour market performance, as measured by the rate of employment and unemployment. The use of these and other economic indicators is well established and they have been thoroughly integrated into everyday discussions and policy decision making. Although initially developed to benchmark changes in particular economies, in order to fine-tune fiscal and monetary policy, they soon came to be used to make broad economic comparisons between countries.

Although the limitations of these economic indicators as exclusive measures of the progress and quality of life in a country have always been recognized, it has only been in over the last twenty years that their use has been complemented with the widespread use of social and environmental indicators. Now there is an extensive literature on the comprehensive measurement of economic, social and environmental outcomes and individual well-being and the principles that should guide the construction of indicators. It is too extensive even to be fully acknowledged here let alone review.³⁶ Most governments are now making comprehensive efforts to measure the quality of life in their countries and its progress over time, including the Australian,³⁷ Canadian,³⁸ Irish,³⁹ and American governments.⁴⁰ In each of these countries the measurement of social progress by non-governmental organizations are also well known.⁴¹

Fortunately, over the past two decades the quality of these indicators and their reliability and equivalence across countries have been greatly increased because of the interest of but

³⁶ For an extensive review see Andrew Sharpe and Jeremy Smith, "Measuring the Impact of Research on Well-being: A Survey of Indicators of Well-being," Centre for the Study of Living Standards Research Paper Number 2005-02 (Ottawa: Centre for the Study of Living Standards, February, 2005).

³⁷ Beginning in 2002, the Australian Bureau of Statistics (ABS) has published annually *Measuring Australia's Progress* (MAP). It contains a suite of indicators relating to key aspects of Australia's economic, environmental and social progress.

³⁸ Since 2001, The Treasury Board of Canada has released an annual report entitled *Canada's Performance*. The most recent report, released in November 2004, focuses on the quality of life of Canadians using a set of 23 societal indicator groups that reflect a balance between social, economic and environmental interests. These indicators have been grouped according to six themes that public opinion research has identified as mattering strongly to Canadians, namely Canada's Place in the World; Canada's Economy; Society, Culture and Democracy; Aboriginal Peoples; the Health of Canadians; and the Canadian Environment.

³⁹ In 2003 the Central Statistical Office of Ireland published *Measuring Ireland's Progress*, containing 108 indicators and covering 48 domain themes. The purpose of this publication is to present a manageable set of indicators which, when taken together, would broadly summarise the progress being made in Ireland in achieving desirable outcomes for society.

⁴⁰ A recent report of the General Accounting Office documents the many efforts in the US to define and use social indicators, "Informing Our Nation: Improving How to Understand and Assess the USA's Position and Progress."

⁴¹ By way of example, in Canada, The Canadian Policy Research Networks (CPRN), a not-for-profit think tank, in 2002 produced a set of Quality of Life indicators for Canada. Since 1999 the Conference Board of Canada has published a "scorecard" for Canada in its annual report entitled *Performance and Potential*. The most recent report, released in October 2004 and subtitled *How Can Canada Prosper in Tomorrow's World?* benchmarks Canada's socio-economic performance against 24 OECD countries for 110 variables in six categories: the economy (12 indicators), innovation (17), environment (24), education and skills (17), health (24), and society (16).

international bodies such as the United Nations and its member agencies, the World Bank, the IMF, the Organization of Economic Cooperation and Development, and the European Union.⁴² Both the United Nations Development Program and the World Bank publish an annual publication on indicators, but for developed countries the most extensive list of comparable social and economic indicators is the publications of the OECD.⁴³ All of these sources were used in searching for relevant social and economic indicators to use in this study.

6 Comparing Social and Economic Outcomes Between Low- and High-Tax Countries

I initially collected cross-country data relating to about 180 social and economic indicators. The table in the appendix contains data for about 75. The next draft will contain a much more complete suite of indicators. Also, there is obviously a good deal that could be said by way of explanation about each of these indicators. Again, the next draft will contain a more complete analysis. In this draft, I simply state a tentative conclusion with respect to each indicator shown. Nevertheless, even the data presented here points quite unequivocally to the conclusion that high-tax countries have been much more successful at achieving their social objectives than low-tax countries and that they have done so with almost no, or very little, economic cost. On a majority of the social measures, the high-tax countries' ranking above the low-tax countries is statistically significant. And, quite astoundingly, in only a small number of the social indicators do the low-tax countries rank above that of the high-tax countries, and in these cases the difference is trivial, almost certainly due to chance. On a number of the economic indicators, the low-tax countries rank above the high-tax countries, but in no case is the difference statistically significant. But even on many of these economic measures, high-tax countries outrank low-tax countries.

The indicators are presented here in no particular order.

6.1 Social Goals

6.1.1 Relief from poverty and social exclusion

One obvious social good that citizens buy with their taxes is fewer individuals living in poverty. The correlation between higher taxes and lower rates of poverty in a country is strong and statistically significant. In low-taxed United States over 17 percent of individuals live below 50 percent of the country's median income; in high-taxed Denmark the percentage of individual

⁴² The development of an increasing concern in the EU with social policy over the last two decades, and the development of social indicators is reviewed in Julia S. O'Connor, "Policy coordination, social indicators and the social policy agenda in the European Union," 15(4) *Journal of European Social Policy* 345 (2005) .

⁴³ In 2005 the OECD organized the first OECD World Forum on Key Indicators to identify and discuss the key indicators that are used to assess and compare the social, environmental and economic progress of countries. Many of the papers presented at the forum, which collectively provide a state of the art review of the use of key indicators, are published in OECD, *Statistics, Knowledge and Policy: Key Indicators to Inform Decision Making* (Paris: OECD, 2005), www.oecd.org/oecdworldforum.

living below the poverty line is only about one-quarter of this percentage (4.3 percent). In Anglo-American countries, on average 12.6 percent of the population lives below this poverty line; in Nordic countries the percentage living below the poverty line is only 5.6 percent. (col. 7)

The difference between the percentages of children living in poverty in high- as opposed to low-tax countries is even more dramatic. In the United States almost 22 percent of children live in poverty, in Australia more than 11 percent, and in Denmark only 2.4 percent of children live in poverty. On average, in the low-taxed Anglo-American countries 15.9 percent of children live in poverty, in the Nordic countries the percent is almost one-fifth of that, less than 3.3 percent. (col. 8) The strongest correlation between the level of taxes and a social indicator was for the percentage of children in single-parent families who lived in poverty. In the United States, almost 50 percent of children in single-parent households live in poverty, and in the average Anglo-American country 45.2 percent of children in single-parent families live in poverty. In Nordic countries less than 10 percent of children in single-parent families live in poverty. (col. 9)

There was no significant difference between low- and high-taxed countries with respect to the percentage of elderly who live in poverty: the average for Anglo-American countries is 13.5 percent while the average for the Nordic countries is 9.2 percent. (col. 10) The Mediterranean countries have the greatest percentage of elderly living in poverty, 22.9 percent; and the Continental European countries the least, 7.5 percent. One might have expected Anglo-American countries to score relatively well on this indicator since universal public pensions are the one aspect of the welfare state that most have adapted. Nevertheless, the average percentage of elderly living in poverty is only as low as it is for these countries because the percentages for Canada and New Zealand are very low. In both the United States and Australia almost one-quarter of the elderly live in poverty: 24.6 percent in the United States and 23.6 percent in Australia. (col. 10)

Figure 2 illustrates the differences in rates of child poverty across these industrialized countries; figure 3 illustrates the close correlation between tax levels and rates of child poverty.

Figure 2

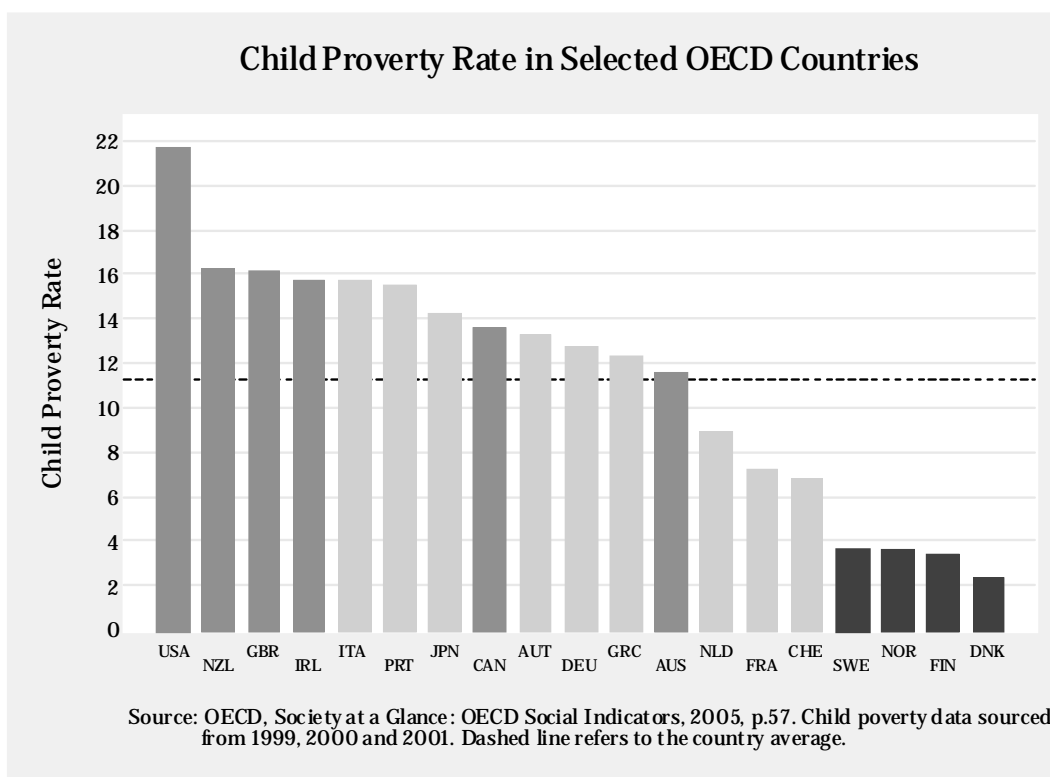
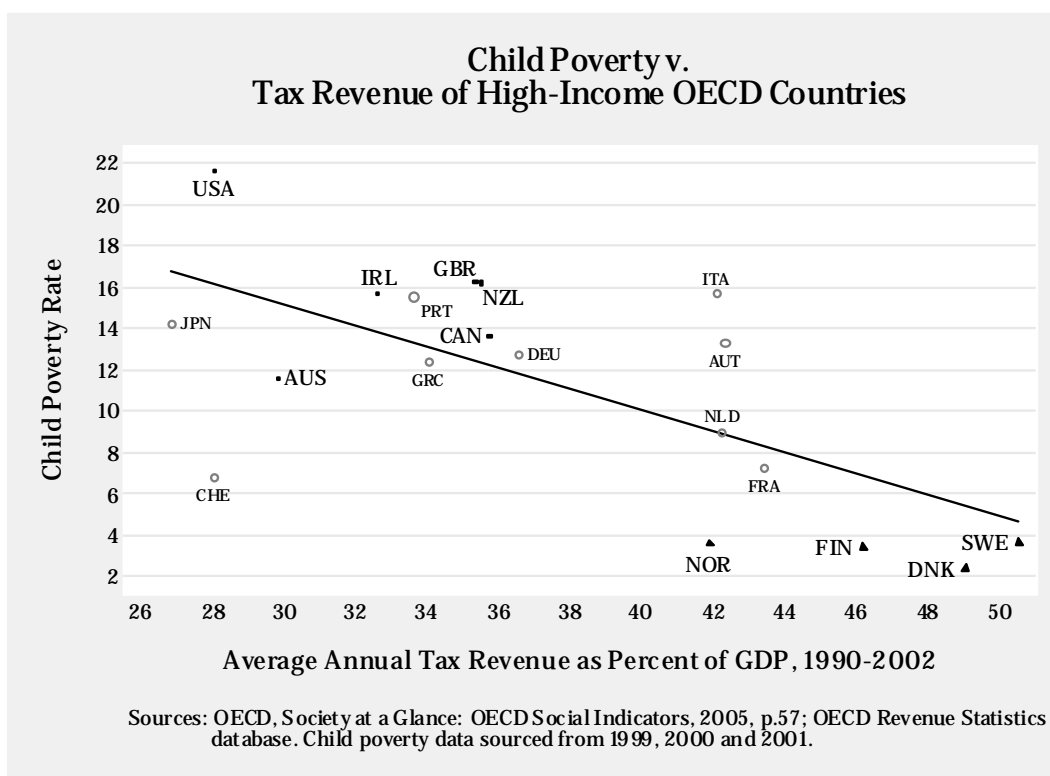


Figure 3



6.1.2 Protection of the vulnerable

- Children
- Elderly
- Those with disabilities

Every just society must protect the vulnerable. One way to measure how well a society is able to accommodate those with disabilities is to compare the income of persons with disabilities relative to that of the general population. Although the difference between high- and low-taxed countries is only statistically significant at a ten-percent level, it is large. Among industrialized countries, the relative income of disabled persons is lowest in Australia where the income of those with disabilities is on average only 43.9 percent that of the general population. In the United States it is also low, 58.7 percent. The average for Anglo-American countries is 67 percent; whereas in Continental European and Nordic countries the income of those with disabilities is around 86 percent of the general population. (col. 12)

6.1.3 Equitable distribution of economic resources

- Income
- Wealth

In addition to the relief of poverty, one of the great moral issues facing a democracy is how the economic resources that all members of the society collectively produce should be distributed. Extreme levels of inequality have been shown not only to have a negative impact on economic growth at all stages of development, but also to directly threaten most political and social values. One of the strongest associations in the table is between tax levels and a more equal distribution of economic resources. In all three indexes of inequality reported in the table, there are statistically significant differences between the Anglo-American and Nordic countries. (cols. 13 to 15) For example, in the United States the richest 10 percent of families receive almost 16 times as much of national income as the poorest 10 percent, in Anglo-American countries on average the richest 10 percent receive about 12.4 times the poorest 10 percent (which is almost exactly the Australian multiple). In Finland, by contrast, the richest 10 percent only receive 5.6 times as much as the poorest 10 percent, about one-third the American multiple, and in the average Nordic country the richest 10 percent receive only 6.5 times that of the poorest 10 percent. (col. 14)

6.1.4 Social equality

- Gender
- Race
- Ethnicity

Every Western country is committed to equality for women. Nevertheless, although progress has been slow, countries with higher taxes have achieved greater success in achieving this social goal according to every commonly used indicator of gender equity. One obvious explanation for this is that in societies with high taxes a considerable amount of the care-giving work that is borne by women in low-tax Anglo-American societies is paid for and financed by taxes in high-taxed

countries. Thus not only is the cost of these services spread more equitably across the entire population in high-tax countries, but women are also freed to take a greater part in market, civil and political life.

In Anglo-American countries, on average, about 32 percent of doctors are females, 21 percent of members of parliament are females and 22 percent of senior civil servants are females; by contrast, in Nordic countries, about 43 percent of doctors are females, 40 percent of members of parliament are females, and 44 percent of senior civil servants are females. (cols. 18 – 20) In Anglo-American countries 68 percent of women participate in the labour force, in Nordic countries 75 percent of women participate in the labour force. (col. 17) Also, as an indication of how these differences affect public attitudes (or are effected by them) in Anglo-American countries 17 percent of the population reported in a survey that men should have a priority in filling jobs, while in Nordic countries only 8 percent of the population held this view. (col. 21)

In their annual *Human Development Report*, the United Nations Development Programme computes both a gender development index and a gender empowerment index. On both of these indexes higher tax levels in a country have weak correlations with higher scores. However, the difference of the Gender Empowerment Measure between lower-taxed Anglo-American countries and the higher-taxed Nordic countries is statistically significant. (col. 16)

6.1.5 Family security

- Autonomy of family members
- Protection against the risks arising from family change
- Redistribution across the life cycle of family members

6.1.6 Economic security

- Labour market security
- Employment security
- Job security
- Work security
- Income security
- Representation security

An important value in any society is economic security: “people need a combination of forms of social and work-related securities in order to flourish and develop.”⁴⁴ The World Commission on the Social Dimension of Globalization concluded that “Basic security is a recognized human right, and a global responsibility.” It went on to say, “A global commitment to deal with insecurity is critical to provide legitimacy to globalization.” Last year, the International Labour Office published a major report on economic security as part of its socio-economic security programme. That programme examined how country’s organized work and how their organization of work connected to broad social goals. The International Labour Office identified seven forms of work-related security: labour market security (adequate employment opportunities); employment security (protection against arbitrary dismissal and so on); job security (a niche designated as an occupation or “career”, barriers to skill demarcation etc); work

⁴⁴ International Labour Organization, *Economic Security for a Better World* (Geneva: ILO, 2004), at 276.

security (protection against accidents and illness at work); skill reproduction security (widespread opportunities to gain and retain skills); income security (protection of income through minimum wage machinery, wage indexation, comprehensive social security; and representation security (protection of collective voice in the labor market etc). It developed an index for each of these forms of security and then combined them into one overall index – an economic security index.

According to the International Labour Office’s economic security index, which indicates the economic security provided in a country relative to other countries, there is a strong correlation between tax levels and economic security. A high score indicates that country is providing more security than a country with a lower score. The average score for Anglo-American countries is 0.70; the average score for Nordic countries is 0.94. (col. 22)

6.1.7 Access to services essential to human development

○ Health

Generally, people tend to be able to live healthy lives in all high-income, industrialized countries, certainly relative to poorer countries. Therefore, it is hard to find an index that discriminates between health outcomes in industrialized countries. A common measure of health outcomes is life expectancy at birth. But life expectancy at birth in these countries varies for men from only 74 years (in Portugal) to 78.4 years (in Japan) and for women from 79.5 years in Finland to 85.3 years in Japan. (cols. 23 – 24) Another common measure of health outcomes is infant mortality rates. The Anglo-American countries have the highest rates of infant mortality (5.5 per 1,000 live births) and there is a statistically significant difference between the rates in these low-taxed countries and the Nordic countries (3.5 per 1,000 live births). (col. 25) On this common measure of health outcomes there is a significant difference between those two groups of countries.

○ Education

The Nordic countries spend a greater percentage of the GDP on education than Anglo-American countries (6.4 percent versus 5.9 percent), and naturally a much larger share of it is public expenditures financed with taxes (96.8 percent versus 80.4 percent). Although the Nordic countries have a higher percent of students who complete high-school (81.5 percent versus 73 percent) and university (22.1 percent versus 20.6 percent) the differences were not significant. Moreover, the PISA scores of 15-year old students on reading, science and math test were indistinguishable across countries. (cols. 26 – 34)

○ Housing

6.1.8 Personal physical security

A global index of personal security is difficult to imagine. One statistic that is frequently referred to is the number of homicides per population of 100,000. On this index countries cluster very closely, except the United States. In the average industrialized country, excluding the United States, there are about 1.1 homicides per 100,000 of population. In the United States there are 7.1, over 6 times that many. (col. 35)

6.1.9 Opportunities for the enrichment of the quality of life

- Arts and culture
- Recreation

6.1.10 Community and social solidarity

In the late 1990's the concept of social capital (defined as "networks together with shared norms, values and understanding that facilitate cooperation within or among groups") gained wide interest among researchers and policy makers. The interest developed because of some research results that suggested social capital was important not only in facilitating productive organization and economic development but also in enriching many aspects of social life and fostering social engagement and democracy. Unfortunately, the concept of social capital is difficult to operationalize, nevertheless, based upon an admittedly inadequate basis for making a solid judgment, from the social indicators I examined it would appear that citizens of high-tax countries are likely to have higher degrees of trust in one another and more confidence in public institutions; that is, to be living in societies with more social capital.

In Anglo-American countries about 38 percent of survey respondents agreed with the statement that people can be trusted; whereas 64 percent of survey respondents in Nordic countries agreed with that statement. (col. 36) Trade unions are one of the most important organizations in society for the creation of social capital. That is to say, unions are organizations where people develop skills that are absolutely essential in a flourishing democracy – such as tolerance, willingness to compromise, and respect for other viewpoints. They also stimulate political participation and increase people's political skills. Moreover, they promote an appreciation of both the rights and obligations of citizenship. Furthermore, they are organizations that foster collegiality. Not surprisingly perhaps, there is a strong and statistically significant correlation between high levels of tax and trade union density. About 24 percent of the work force in unionized in Anglo-American countries, whereas over 71 percent are unionized in Nordic countries.

Although none of these results are statistically significant, people are much more likely to report that they have confidence in their public institutions in Nordic countries than in Anglo-American countries. For example, in Anglo-American countries 32 percent of the population reported having confidence in Parliament and 46 percent in the justice system. The comparable

percentages in Nordic countries are 53 percent and 69 percent. Somewhat interestingly, about the same percentage in both groups of countries reported having confidence in the civil service (about 48 percent) and major companies (about 51 percent). (cols. 37 – 39)

6.1.11 Personal freedom and autonomy

(But in some stuff on economic freedom – But the interesting result is that there appears to be very little difference between low-tax and high-tax countries in their ranking on the index of economic freedom. The average ranking for Anglo-American countries is 1.78; the average ranking for Nordic countries is 1.97. (col. 40) Although this difference is not statistical significance, somewhat interesting on the scale higher-tax countries had a greater amount of economic freedom than low-tax countries. Also, survey evidence suggests that the sense of freedom of citizens in Nordic countries is as almost as high as it is in the average Anglo-American country (82.7 percent versus 84.4 percent). (col. 41)

6.1.12 Happiness and life satisfaction

Ultimately, what it is all about is happiness and satisfaction with one's life. As set out so eloquently in the American Declaration of Independence, everyone has an unalienable right to "life, liberty and the pursuit of happiness." Given the enormous diversity of individual preferences and tastes, it is hard to imagine indicators that could measure very directly whether individuals are happy and satisfied with their lives.

On the assumption that most people prefer leisure to work, one indirect measure might be the amount of leisure that individuals are able to enjoy. On this score, there is a moderate correlation between tax levels and the amount of hours people work in a country: the higher the taxes the less people work (and thus the happier they are?). The difference between the Anglo-American countries – in which the average person works 1,752 hours a year - and the Nordic countries – in which the average person works only 1,550 hours a year (over 200 hours less than in Anglo-American countries) is statistically significant. (col. 42) But the interesting question is what explains the increased leisure taken by people in high-tax countries? Does it reflect a life style choice that contributes to the quality of their lives or do high taxes cause them to substitute leisure for work and thus diminish their well being?

Three recent studies reach contrasting conclusions. The Nobel Prize-winning economist Edward C. Prescott concludes that changes in marginal tax rates are the main reason for the differences⁴⁵ and hence the increased leisure in high-tax countries does not indicate individuals are better off. Oliver Blanchard puts the differences down to differences in taste. Europeans, he says, put a higher implicit price on their leisure: "There is plenty of anecdotal evidence that Europeans enjoy their leisure more than their American counterparts."⁴⁶ In the most recent paper, Alberto

⁴⁵ Edward C. Prescott, "Why Do Americans Work So Much More Than Europeans?" 28(1) *Federal Reserve Bank of Minneapolis Quarterly Review* 2 (July, 2004).

⁴⁶ O. Blanchard, "The Economic Future of Europe" forthcoming, *Journal of Economic Perspectives*

Alesina, Edward Glaeser, and Bruce Sacerdote conclude that the differences are largely due to European labour market regulations.⁴⁷ After the first oil shock in 1973, Europeans unions pushed hard for shorter work weeks and longer vacations. In addition to their collective bargaining efforts, unions also played a major role in lobbying for the adoption of government-mandated vacation time and a generous number of holidays. If this is the correct explanation for the differences then the effect on worker's well being is ambiguous. On the one hand, if these regulations force workers to take time off when they would prefer to work then presumably the regulations reduce their well being. On the other hand, if these regulations help solve a collective action problem then they increase worker well being. For example, suppose that most workers would prefer to take more leisure but only if other workers also took more leisure. Workers would be unable to reach their preferred position if each acted individually. Regulation helps them solve this coordination problem. The authors of this study suggest that this latter explanation might be the correct one. They note that "Europeans seem to be happy to work less and less."⁴⁸

A broad range of additional indicators might be examined in order to infer the quality of life in a country; however, it is not obvious what inference can be drawn from most of them. Simply to provoke further thought, I have left two in the table – cannabis use and the rate of suicide. On cannabis use there is a significant difference between Anglo-American and Nordic countries: 11.6 percent of the population between the ages of 15 and 64 reported using cannabis in the past year in the former countries but only 3.8 in the Nordic countries. I might just note that Australia and New Zealand drag up the average of the Anglo-American countries (with 15 percent and 13.4 percent of the designated population using cannabis, respectively). (col. 43) Is the high percentage of cannabis users in Australia and New Zealand an indication of people's dissatisfaction with their lives or satisfaction? Suicide rates might be an indication of the quality of life in a community. The suicide rate is higher in the Nordic countries: 11 per 100,000 in Anglo-American countries and 15 per 100,000 in Nordic countries. (col. 44)

Aside from inferring the happiness and life satisfaction of people in a country from indirect indicators, citizens could, of course, just be asked directly about their happiness and life satisfaction. Over the past two decades there has been an explosion of research relating to what might be called "happiness studies" – research on the determinants of human happiness – including a large number of cross-national studies. The World Values Survey, conducted by a world-wide network of social scientists and carried out in four waves since 1981, has included questions relating to the respondent's perceived happiness and their overall satisfaction with their life. Based upon responses to these questions there would appear to be no difference between high- and low-tax countries; however, the direction of the association indicates that people in high-tax countries may be happier than those in low-tax countries. (cols. 44 – 46)

⁴⁷ Alberto Alesina, Edward Glaeser, Bruce Sacerdote, "Work and Leisure in the U.S. and Europe: Why So Different?" Working Paper 112789, NBER (Cambridge: National Bureau of Economic Research, 2005) ("Our punch line is that Europeans today work much less than Americans because of the policies of unions in the seventies, eighties and part of the nineties and because of labour market regulation.")

⁴⁸ Ibid at 30.

6.1.13 Opportunities to participate in collective decision-making

Several indicators might be used as measures of the vibrancy of democratic institutions in a country. None that I examined indicated any significant difference between high- and low-tax countries. However, on all scales high-tax countries scored higher than low-tax countries. For example, Anglo-American countries scored an average of 8.4 on a perception of government corruption scale (from 0 (most corrupt) to 10 (least corrupt)), whereas Nordic countries scored 9.3. (col. 47) In Anglo-American countries on average about 13 percent of people reported in response to a survey question that had frequent discussion of politics with friends, while in Nordic countries about 18 percent reported frequent discussion of politics with friends. (col. 48)

6.1.14 Environmental Sustainability

Constructing composite environmental indicators has become a growth industry, but a country's rank on them is often determined by geography or other characteristics beyond the control of the country's government, by the method used to aggregate individual indicators, by the comparability of the data, and by the purpose of the evaluation. The composite index in the table is taken from a Canadian study that used OECD data to rank the environmental performance of countries. On this index, there is a positive relationship between a country's tax level and its ranking on the environmental performance scale: the higher the tax levels the higher the ranking. The Nordic countries rank is much higher than that of the average Anglo-American countries: on average the Nordic countries ranked 13th (even though Norway ranked 25th, considerably pulling down the Nordic countries average rank); while the Anglo-American countries ranked 24th. However, the correlation is not statistically significant. (col. 49)

6.1.15 Inter-nation equity

Countries with higher taxes are better able, or more willing, to provide assistance to less developed countries. The difference between the Anglo-American countries and the Nordic countries is statistically significant. The Anglo-American countries give an average 0.28 percent of their GNI for official development assistance; the Nordic countries give an average 0.71 percent of the GNI, more than double that of the Anglo-American countries. (col. 50)

6.2 Economic Goals

One of the fundamental tenants of classical economics is that there is a trade-off between equity and efficiency. The pursuit of social goals must come, to some expense at the expense of economic goals. Although there are some studies that purport to show that government spending hampers economic growth, in recent years there has been a growing body of literature arguing that there is no necessary trade-off to be made between economic efficiency and equity. There are a number of obvious reasons why social justice might contribute to economic efficiency and growth: spending on education and health care contributes to a better educated and healthier work force; the increased economic security of workers enhances their capacity to adjust and the

readiness to accept change, bear more risk, acquire more specialized skills, and pursue investment opportunities; social justice policies can channel and mitigate industrial conflict in periods of structural adjustment and foster political stability and social cohesion; a smaller range of wage dispersion encourages structural change and thus productivity growth; social stratification in an unequal society has high costs not only because of the waste of human potential but also because of the high external costs such as increased health costs, crime control costs and costs of inner city decay

The review of social indicators suggested that high-tax countries have been better able to achieve their social objectives than low-tax countries; the following review of economic indicators suggests that there have been no significant economic costs of higher taxes.

6.2.1 High standard of material living

The commonest way of measuring the material well-being of a country is simply by dividing the country's gross domestic product (GDP) by its population. Countries are compared by converting the GDP per capita of the country to US dollars on the basis of purchasing power parity. By this measure, Luxembourg is the wealthiest country in the world with an astonishing GDP per capita of \$57,500. It was excluded from the study because of its small population. Parenthetically if it were included it would have increased the relationship between high taxes and material well-being since the tax level in Luxembourg is above the OECD average, at about 42 percent of GDP. The next wealthiest country in the world is the United States; its GDP per capita is \$39,700. The poorest country among the OECD high-income countries is Portugal with a per capita GDP of only \$19,400, less than one-half the United States' material standard of living. Although the United States is both a low-tax and wealthy country, across the high-income OECD countries there is essentially no correlation between tax levels and material well-being. Indeed, while in Anglo-American countries the GDP per capita is \$32,083; in Nordic countries it is slightly higher at \$32,825.

The United States is one of the wealthiest countries in the world and, therefore, its economic policies, particularly its low taxes, are often held up as the model for other countries to imitate. However, as is well known, there are many problems with using GDP per capita as a measure of the well-being of the citizens of a country. First, GDP measures the market values of activities carried on in the country without regard to whether they contribute to material well-being. In the United States, for example, to the extent its GDP is measuring the value of activities such as police and private security guards, inefficiently delivered health care services, prisons and so on it is not necessarily a good measure of the material well-being of Americans. Second, a country's GDP is a function, of course, not only of the productivity of workers but also how many hours they work. On average, American workers work about 300 more hours a year than workers in Nordic countries. Thus while American workers might be wealthier they have much less leisure. Third, and most importantly, the simple measure of GDP per capita reveals nothing about how income in the country is distributed and, therefore, who is benefiting from the wealth produced in the economy. It is an average figure which is arrived at simply by taking the total wealth and dividing it by the total population. It would remain the same whether all of the wealth in a country was distributed to one person or equally across all persons. Presumably in

judging even the economic success of a country what matters is the material wealth of the typical or median family (a real family), not the average family (a statistical construct). A number of years ago a study by Statistics Canada found that even though the GDP per capita was substantially higher in the United States (for 2004 the GDP per capita in the United States was \$39,700, but it was only \$31,500 in Canada) the median Canadian earned about the same as the median American and low-income Canadians, and those in the bottom 25 percent of the population by income were substantially better off than low-income Americans. Bill Gates and a relatively small number of obscenely wealthy Americans pulled up the American GDP per capita making it an unreliable measure of the material well-being of the median American family.

6.2.2 High rates of economic growth and productivity

- Efficient allocation of resources
- High rates of saving
- Investment
- Foreign investment
- Innovation

The United States is not only one of the wealthiest countries in the world, but over the past 15 years its economy has also grown faster than most others (as measured by GDP per capita). It has not been the fastest growing economy in the world; that honour goes to Ireland. From 1990 to 2004 the Irish economy has grown at the staggering rate of 6.6 percent a year. Ireland has always been a relatively low-tax country but from 1994 to 2003 its tax level declined even further from about 35 percent to about 30 percent of GDP. Ireland's low general tax level along with its low corporate tax rate of 10 percent on the manufacturing profits of foreign multinationals has lead tax cutters in Anglo-American countries to urge that their respective governments follow the Irish tax model. However, there is little reason to suppose that tax cuts had much to do with the Irish economic miracle: Ireland reaped the advantages of huge European Union subsidies, particularly in the late 1970s, 1980s (reaching 6 percent of GDP) and even in the early 1990s, that it invested in infrastructure, including free higher education; it had an English-speaking, well-educated, under-utilized labour force; it aggressively courted foreign investment through industrial development agencies; it was perfectly posed to take advantage of the American boom in information technology at a time when American multinationals were looking for places to invest overseas for the European market; and, once it had attracted a number of firms there was a well-known agglomeration effect of industrial concentrations that in turn contributed to spin-off growths and attracting more firms. Furthermore, Ireland is not really a good exemplar of the Anglo-American model. In the late 1980s and throughout the 1990s it had high levels of employment and unemployment protection and a highly coordinated system of wage setting that kept wages down. It seems reasonably clear that the Irish miracle is due to a unique set of circumstances that cannot be duplicated in other countries and that there would be little to be gained by trying to imitate its beggar-thy-neighbour corporate tax rate strategy.

From 1990 to 2004 the average annual growth rate of GDP was 3.6 per capita in Anglo-American countries and only 2.3 percent in the Nordic countries. This is one of the facts that is referred to in suggesting that European countries are going to have to adopt the Anglo-American model if they hope to increase the prosperity of their nations. Certainly these average growth

rates would suggest that low taxes contribute to higher rates of economic growth; however, this difference is not statistically significant. But.....

The wealth that a nation produces is determined not only by how many hours workers work but also by how productive they are when their working. As noted above, American and Anglo-American workers generally work many more hours than European workers. However, European workers are generally more productive than Anglo-American workers and the amount of GDP workers produce per hour worked is actually weakly correlated with high tax levels. The higher the tax levels, the more productive the workers. American workers tend to be very productive, on average producing goods and services worth \$46.3 per hour. However, it might be noted that they are not as productive as French workers who produce \$47.7 per hour or workers in Norway who produce \$56.6 per hour. Overall Anglo-American workers produce goods and services worth \$38.2 per hour, whereas Nordic countries workers produce goods and services worth \$44.1 per hour.

With the strong pick-up in economic growth in the United States, particularly since the mid-1990s, after 50 years catching up to the United States, European countries now find themselves falling behind. In the United States, from 1995 to 2004 the average annual growth in GDP per hour worked was 2.5 percent. Indeed, this was the average of the Anglo-American countries. Over the same period, the annual average growth in GDP per hour worked in European continental countries was only 1.5. Clearly, if this difference persists over a number of years it will make a large difference in living standards. However, it is odd to contribute the lack of productivity growth in Europe to high tax levels. For one thing, Sweden, the country with the highest tax levels in the world experienced productivity growth over this period at almost the same level as the United States (an annual rate of 2.4 percent versus 2.5 percent), but the average productivity growth rate among the Nordic countries was 2.1 percent. (fix up)

6.2.3 Economic stability

- Stable prices

There might be good reasons for believing that higher taxes may enhance economic stability. First, the higher levels of government spending that result from higher taxation tend to act as an automatic stabiliser, reducing the impact on production and employment of fluctuations in other elements of demand. Second, if the tax system is progressive, this might act to dampen fluctuations. Finally, it may be expected that if the distribution of personal income is more equal, because of high taxes and a generous transfer system, personal consumption will fluctuate less. Lower income families are more likely to consistently spend their income, and thus contribute to stable aggregate demand, than higher income families who might veer between bouts of cautionary savings and credit-financed consumption binges. Nevertheless, the relationship between tax levels and a measure of economic stability over the past 20 years was weak; nevertheless, in the most recent year for which there is comparable data the inflation rate in Anglo-American countries was 2.8 percent on average, while it was only 0.8 percent in Nordic countries. (col. 59)

- Sustainable debt levels

Anglo-American countries had on average net financial liabilities of 23.7 percent of GDP, while Nordic countries had a surplus of 39.1 percent of GDP.

- Full employment of human resources and stable rates of employment

The one economic measure that the Anglo-American countries have significantly outperformed the Nordic countries is on employment growth. From 1992 to 2002 they had an average annual employment growth rate of 2.1 percent compared to the Nordic countries where the employment growth rate was only 0.6 percent.

The unemployment rate in Anglo-American countries in 2004 was lower than that of other countries, 5.2 percent. But the rate in Nordic countries was almost as low, at 6.4 percent. However, the unemployment rate in other European countries was significantly higher, 9.0 percent in the Mediterranean countries and 8.4 percent in the Continental European countries. (col. 61) The difference in the long-term unemployment rate between Anglo-American and Nordic countries was almost indistinguishable (18.4 percent in the former countries and 18.5 in the latter). (col. 62)

The labour force participation rate of Anglo-American countries was 74.8 percent, which was higher than Mediterranean countries (67.9 percent) and Continental European countries (70.9 percent), but lower than the Nordic countries (77.9 percent). (col. 63) The labour participation rate of men was about the same for both sets of countries, but the labour participation rate of women was somewhat higher in Nordic countries than the Anglo-American countries (75.1 percent in the former and only 67.7 percent in the latter).

- Viable international balance of payments

6.2.4 Innovation and Competitiveness

Finally, high-tax countries appear to be well placed to capitalize on opportunities for future economic growth and productivity. For example, the average Nordic country spends significantly more than the average Anglo-American country on research and development (3.4 percent of GDP versus 1.7 percent), have more researchers per 10,000 of workers (11.6 versus 7.3), and have more broadband subscribers per 100 inhabitants (15.8 per 100 inhabitants versus 9.5). (cols. 71 – 73)

Every year, in September or October, the World Economic Forum, a business-dominated, Geneva-based, private organization, releases its annual competitiveness report. It has formulated a comprehensive index that measures the competitiveness of countries based upon a large number of variables including each country's macroeconomic performance, the quality of its public institutions and the level of its technological readiness. In 2005 they estimated that the most competitive country in the world was Finland. Indeed, all four Nordic countries were

ranked in the top six most competitive countries in the world, along with the United States and Taiwan. Not surprisingly, there is a statistically significant difference between the competitiveness index of Anglo-American countries and Nordic countries. (col. 74) The high-tax countries are more competitive.

Consistent with the claim made in this paper, the World Economic Forum concluded that “There is no evidence that relatively high tax rates are preventing these countries [the Nordic countries] from competing effectively in world markets, or from delivering to their respective populations some of the highest standards of living in the world.”

7 What’s Up with Those Finns?

In their attack on taxes neo-liberals argue that the programs that taxes finance are ineffective in achieving their objectives and that they have huge economic costs. This comparison between high- and low-tax countries would suggest the opposite. Not only do government social programs appear effective in achieving their objectives, but also taxes appear to have little if any economic costs.

Nordic countries have achieved dramatically better outcomes than Anglo-American countries in the pursuit of their social goals. Of the 40 social indicators examined, in 21 the outcomes in Nordic countries were significantly better than those in low-tax countries. Nordic countries had significantly lower rates of poverty across almost all social groups, the elderly had higher pension income replacement rates, income was distributed much more equally in Nordic countries, on every measure there was significantly more gender equality, workers had significantly more economic security, infant mortality rates were significantly lower, there was significantly more trust among individuals and for public institutions, there was less drug use, individuals had significantly more leisure time, and the Nordic countries gave significantly more in foreign aid. On 13 other measures, they had better but not significantly better outcomes. The income received by those with disabilities relative to the population was much higher, life expectancy was longer, a greater percentage of the population completed secondary school and university, 15-year old students scored higher on math tests, homicides were much lower, according to the index of economic freedom individuals had more freedom, individuals reported more life satisfaction, they were more likely to discuss politics with friends, and they rated much higher on an index of environmental performance.

On only 6 social indicators did Anglo-American countries rank higher than Nordic countries and in each case it was a trivial difference that could have been easily due to chance: 15-year olds did slightly better on reading and science tests, individuals reported a marginally greater sense of freedom, people committed fewer suicides, individuals reported that they were slightly happier than that reported by individuals in Nordic countries, and they perceived there was less corruption in government.

With respect to the pursuit of economic goals, the indicators would seem to suggest that both sets of countries have been about equally successful. Over the past 15 years the Anglo-American countries have experienced greater economic growth but it would appear that the Nordic

countries have positioned themselves for greater growth in the future. Of the 22 economic indicators examined, the Nordic countries lead on 12 indicators and the Anglo-American countries on 10. The Nordic countries had a marginally higher GDP per capita, they had a higher GDP per hour worked, they had significantly lower rates of inflation, they had a higher female labour participation rate and a higher total labour participation rate, they had much higher rates of household saving and net national saving, they spend a higher percentage of GDP on research and development and had a higher percentage of their workers working as research and development researchers, they had a higher percentage of broadband subscribers, the World Economic Forum ranked Nordic countries significantly higher than Anglo-American countries in their growth competitiveness index, and Richard Florida ranks them higher on his global creativity index.

Anglo-American countries had a higher rate of growth in GDP per capita from 1990 to 2004, a higher rate of growth in GDP per hour worked from 1995 to 2004, a higher rate of growth in multi-factor productivity from 1995 to 2002, a significantly higher growth in employment from 1992 to 2002 (this is the only measure on which Anglo-American countries exceeded Nordic countries in a way that was statistically significant), a lower rate of general unemployment, a marginally lower rate of long-term unemployment, a marginally higher rate of male labour participation rates, a greater change in fixed capital formation, and greater inward foreign direct investment and inward foreign direct investment performance.

(Compare US and Finland)

It does appear from this data that the social contract struck by the citizens of Nordic countries – and the mix of markets, families, civil society, firms, and government used in the pursuit of these social and economic objectives – has been dramatically more successful than that struck by citizens of Anglo-American countries. As mentioned at the outset of this paper, there are countless problems with, and limitations of, this kind of cross-country study, particularly the kind of simple statistical analysis undertaken in this paper. Nevertheless, although it tells a simple story - namely that based upon cross-country comparisons well-developed welfare states appear to have achieved many of their objectives at little or no economic cost - it should at least serve as an antidote to another tale that gets as simple a story out of a complex set of facts. The economic experiences of the world, so the neo-liberal story goes, show that private ordering processes invariably do much better than public ordering processes. This story drives the movement for tax reductions. The associations revealed in this study should at least raise the question as to whether this is the right lesson to draw from economic and social experiences around the world or at the very least call for an explanation of current social and economic problems that is considerably more subtle than that offered by those who tout lower taxes as an elixir.

Assuming that the claim made in this paper is correct, four important questions remain. First, in the light of the widely accepted view that there is a trade-off between social justice and economic growth, how have the Nordic countries been able to so successfully reduce social exclusion, equalize incomes and generally achieve their social objective at such a low or even indiscernible cost in terms of the production of national product? Peter Lindert, the prominent American economic historian has suggested that one of the “keys to the free-lunch puzzle” is that European

countries with high taxes and transfers tend to collect most of their tax revenues from regressive taxes like consumption and payroll taxes and less from progressive taxes such as taxes on income from capital.⁴⁹ Have progressive tax reformers in Anglo-American countries been wrong all these years in their spirited defense of the treasured progressive income tax?

Second, what explains the adoption of a particular social contract by members of a society? Obviously countless contingent historical, cultural and political factors; however, one theory to explain at least American exceptionalism that has been making the rounds in recent years is that welfare states are larger in countries that are racially homogenous: The United States has the poorest social outcomes of any country in the industrialized world because it has a large visible minority population and a substantial number of racist voters.⁵⁰

A third important question is whether the Nordic model exportable. It might be that the Nordic countries are so unique – relatively small homogenous populations “with a preference for equality, inclusion, and collective action” and a long history of political dominance by social democratic parties – that their policies, either on the tax or the spending side of the government budget, could not easily be transferred to other countries. Furthermore, in addition to unique cultural and political characteristics their economies undoubtedly enjoy institutional complementarities that might make it difficult to transplant policies piecemeal.⁵¹

Finally, there is the question as to whether any advanced welfare state can survive in the light of increased economic integration, an ageing population, post-industrialization, the increased economic and political power of business interests, and the apparent continued vitality of neo-liberalism. Scholars seem about evenly split between those defending the “resilience thesis” and those espousing the “convergence (at the bottom) hypothesis”.⁵² Although a cottage industry has developed in all academic disciplines speculating about this question, the lesson taught by Philip Tetlock’s recent book, *Expert Political Judgement: How Good is it?*, is that with respect to these

⁴⁹ See Peter H. Lindert, *Growing Public: Social Spending and Economic Growth Since the Eighteenth Century* (Cambridge: Cambridge University Press, 2004), ch. 10. This hypothesis has, of course, been explored by numerous authors, see for example Junko Kato, *Regressive Taxation and the Welfare State* (New York: Cambridge University Press, 2003).

⁵⁰ See Erzo Luttmer, “Group Loyalty and the Taste for Redistribution” 109(3) *Journal of Political Economy* 500 (“Individuals increase their support for welfare spending as the share of local recipients from their own racial group rises....Welfare benefit levels are relatively low in racially heterogeneous states.”); Alberto Alesina, Edward Glaeser and Bruce Sacerdote, “Why Doesn’t the United States Have a European-Style Welfare State?” [2001] *Brookings Papers on Economic Activity* 187 (“Racial animosity in the US makes redistribution to the poor, who are disproportionately black, unappealing to many voters.”); Woojin Lee and John Roemer, “Racism and Redistribution in the United States: A Solution to the Problem of American Exceptionalism” Working Paper (27 January 2004) (“Racism among American voters decreases the degree of redistribution that would otherwise obtain...We numerically compute that during [the period 1976-92] voter racism reduced the income tax rate by 11-18 percentage points.”).

⁵¹ See European Policy Centre, “The Nordic Model: A Recipe for European Success?” EPC Working Paper No. 20, September 2005.

⁵² For a brief review of the literature see Peter Starke, “The Politics of Welfare State Retrenchment: A Literature Review” 40(1) *Social Policy & Administration* 104 (2006).

kinds of political predictions the experts are likely to be no better forecasters than dart-throwing monkeys.⁵³

End

⁵³ Philip E. Tetlock, *Expert Political Judgment: How Good is it? How Can We Know?* (Princeton University Press, 2005).

Appendix I: Summary Table – Anglo-American Versus Nordic Countries

	Anglo-American	Nordic
<u>Social Goals</u>		
1 Relief of Poverty		
Relative*	12.6	5.6
Child*	15.9	3.3
Child – single parent*	45.2	9.2
Elderly	13.5	9.2
2 Protection of Vulnerable		
Services for elderly		
Pension replacement*	47.4	66.6
Services for disabled		
Relative income	67	86
3 Economic inequality		
Income		
Gini coefficient*	32.1	24.7
Richest 10%/Poorest 10%*	12.4	6.5
90 th percentile/50 th percentile*	4.6	2.9
4 Social Equality		
Gender		
Gender empowerment*	0.773	0.868
Labour force participation*	67.7	75.1
Female doctors*	31.9	42.5
% in Parliament*	21.4	39.5
% in senior civil service*	21.8	44.3
% of population who favour*	17	8
5 Economic Security		
Economic security index*	0.702	0.904
6 Access to Services Essential to Human Development		
Health		
Life expectancy (males)	76.2	76.2
Life expectancy (females)	81.2	82.4
Infant mortality per 1,000*	5.5	3.5
Education		
Completed secondary school	73	81.5
Completed university	20.6	22.1
PISA scores – reading+	517	512
PISA scores – science+	512	503
PISA scores – math	513	516

Appendix I (contd)

	Anglo-American	Nordic
7 Personal Security		
Homicides per 100,000	2.2	1.4
8 Social solidarity		
People can be trusted*	37.9	63.9
Confidence in Parliament*	32.1	52.7
Confidence in Corporations	51	51.5
Confidence in Justice System*	45.8	68.9
9 Self-realization goals		
Index of economic freedom	1.78	1.97
Sense of freedom+	84.4	82.7
Average hours worked*	1,752	1,550
Drug use*	11.6	3.8
Suicides+	11.1	15.2
Happiness+	39.5	34.1
Life Satisfaction	86.7	88
10 Democratic attributes		
Corruption perceptions index+	8.4	9.3
Political discussion with friends	13.3	18.2
11 Environmental sustainability		
Environmental performance - ranking	24	13
12 Inter-nation equity		
Official development assistance*	0.28	0.71
<u>Economic Goals</u>		
1 Material standard of living		
GDP per capita	32,083	32,825
Average growth rate – 1990-2004+	4.1	2.8
2 Productivity		
GDP per hour worked	38.2	44.1
Growth in GDP per hour worked 1995-2004+	2.5	2.1
Growth in multi-factor productivity 1995-2002+	1.7	1.2
3 Inflation		
Inflation 2003-04*	2.8	0.8

Appendix I (cond)

	Anglo-American	Nordic
4 Employment		
Average growth in employment – 1992-2002+*	2.1	0.6
Unemployment rate+	5.2	6.4
Long-term rate+	18.4	18.5
Male participation rates+	81.9	80.7
Female participation rates*	67.7	75.1
Total participation rates	74.8	77.9
5 Rates of saving		
Household saving	2.9	6.1
Net national saving	5.9	11.6
6 Investment		
Change in fixed capital formation 2003-04+	8.1	5.7
7 Foreign Direct Investment		
Inward foreign direct investment+	3.7	0.9
Inward FDI performance+	2.3	0.8
8 Innovation		
R& D as % of GDP*	1.7	3.4
R&D researchers per 10,000*	7.3	11.6
Broadband subscribers	9.5	15.8
9 Growth Competitiveness		
Index*	5.2	5.66
10 Global Creativity		
Index	0.565	0.675
11 Human Development		
Index	0.944	0.949

Appendix II: Detailed Tables

	General					
	Tax as % of GDP, 2004	Average tax as % of GDP, 1990-2002	Total government revenue, 2004 (% of GDP)	Total government spending, 2004 (% of GDP)	Ratio of surplus (+) or deficit (-) to nominal GDP, 2004	Public social expenditure, 2001 (% of GDP)
	[1]	[2]	[3]	[4]	[5]	[6]
Australia	31.6	29.8	36.6	36.2	1.0	18.9
Austria	42.9	42.3	49.3	50.6	-1.1	26.8
Belgium	45.6	44.9	49.3	49.3	0.0	27.2
Canada	33.0	35.7	41.7	41.1	0.7	18.2
Denmark	49.6	49.0	58.9	56.3	1.7	29.5
Finland	44.3	46.2	52.5	50.7	1.9	24.9
France	43.7	43.4	49.8	53.4	-3.6	28.5
Germany	34.6	36.5	43.2	46.8	-3.7	28.8
Greece	35.7	34.0	46.0	52.0	-6.5	24.3
Ireland	30.2	32.6	35.6	34.2	1.4	13.8
Italy	42.2	42.1	45.4	48.5	-3.3	25.8
Japan	25.3	26.8	30.3	38.2	-6.5	17.5
Netherlands	39.3	42.2	46.2	48.6	-2.1	22.4
New Zealand	35.4	35.4	41.2	37.0	5.5	18.5
Norway	44.9	41.9	57.9	46.4	11.4	25.2
Portugal	37.1	33.6	45.4	48.4	-3.9	21.5
Spain	35.1	33.0	38.4	38.6	-0.2	19.6
Sweden	50.7	50.5	58.3	57.3	1.4	29.5
Switzerland	29.4	28.0	35.6	35.5	-1.4	27.0
United Kingdom	36.1	35.5	40.8	43.9	-3.2	22.4
United States	25.4	28.0	31.9	36.5	-4.7	15.2
Relationship between Tax and Indicators						
Correlation			0.92	0.85	0.4	0.71
R-squared			0.85	0.72	0.1	0.50
Group Averages						
Anglo-American (A)	31.9	32.9	38.0	38.2	0.1	17.8
Mediterranean (M)	37.5	35.7	43.8	46.9	-3.5	22.8
European (E)	41.2	41.9	47.6	49.7	-2.1	26.7
Nordic (N)	47.4	46.9	56.9	52.7	4.1	27.3
t-test Group Comparisons						
A v. M	0.05	0.27	0.04	0.02	0.1	0.03
A v. E	0.00	0.00	0.00	0.00	0.2	0.00
A v. N	0.00	0.00	0.00	0.00	0.2	0.00
M v. E	0.20	0.04	0.12	0.34	0.4	0.06
M v. N	0.01	0.01	0.00	0.18	0.0	0.06
E. v. N	0.05	0.07	0.00	0.29	0.0	0.76

Appendix II (contd)

	Relief of Poverty				Services for the Elderly	Services for Disabled	Income Inequality		
	Relative poverty, 2000 (%)	Child poverty rate, 2000 (%)	Child poverty in single-parent household, 2000 (%)	Poverty rate of elderly of 65 and over, 2000 (%)	Net old-age pension replacement rate, 2005	Relative income of disabled persons, late 1990s (%)	Gini coefficient, 2000	Income share of richest 10% to poorest 10%, 1990s	Ratio of incomes at 90th percentile to those at 10th percentile, 1990s
	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]
Australia	11.2	11.6	38.4	23.6	52.4	43.9	30.5	12.5	4.33
Austria	9.3	13.3	30.0	9.2	93.2	86.3	25.2	7.6	3.17
Belgium	..	..	..	..	63.1	82.3	..	7.8	3.31
Canada	10.3	13.6	42.1	4.3	57.1	84.6	30.1	10.1	3.95
Denmark	4.3	2.4	7.2	6.1	54.1	86.0	22.5	8.1	2.85
Finland	6.4	3.4	10.5	10.4	78.8	83.0	26.1	5.6	2.90
France	7.0	7.3	26.6	10.5	68.8	79.9	27.3	9.1	3.54
Germany	9.8	12.8	31.4	8.5	71.8	93.0	27.7	6.9	3.29
Greece	13.5	12.4	19.8	24.3	99.9	66.2	34.5	10.0	4.77
Ireland	15.4	15.7	53.9	..	36.6	69.6	30.4	9.7	4.56
Italy	12.9	15.7	24.9	15.3	88.8	79.7	34.7	11.6	4.48
Japan	15.3	14.3	57.3	21.1	59.1	..	31.4	4.5	..
Netherlands	6.0	9.0	30.3	1.6	84.1	87.6	25.1	9.2	2.98
New Zealand	10.4	16.3	47.5	0.4	39.5	..	33.7	12.5	..
Norway	6.3	3.6	9.9	12.4	65.1	79.4	26.1	6.1	2.80
Portugal	13.7	15.6	32.5	29.2	79.8	59.0	35.6	15.0	..
Spain	..	..	..	..	88.3	70.6	..	9.0	4.78
Sweden	5.3	3.6	9.3	7.8	68.2	95.6	24.3	6.2	2.96
Switzerland	6.7	6.8	..	11.2	67.3	87.9	26.7	9.9	3.38
United Kingdom	11.4	16.2	40.7	14.4	47.6	78.0	32.6	13.8	4.59
United States	17.1	21.7	48.9	24.6	51.0	58.7	35.7	15.9	5.45
Relationship between Tax and Indicators									
Correlation	-0.74	-0.67	-0.84	-0.55	0.24	0.63	-0.64	-0.4	-0.72
R-squared	0.54	0.45	0.71	0.30	0.06	0.40	0.41	0.2	0.52
Group Averages									
Anglo-American (A)	12.6	15.9	45.2	13.5	47.4	67.0	32.1	12.4	4.58
Mediterranean (M)	13.4	14.6	25.7	22.9	89.2	68.9	34.9	11.4	4.68
European (E)	8.0	10.6	29.6	7.5	76.2	85.8	26.3	8.1	3.26
Nordic (N)	5.6	3.3	9.2	9.2	66.6	86.0	24.7	6.5	2.88
t-test Group Comparisons									
A v. M	0.69	0.56	0.00	0.24	0.00	0.84	0.08	0.5	0.77
A v. E	0.02	0.03	0.00	0.34	0.00	0.04	0.00	0.0	0.00
A v. N	0.00	0.00	0.00	0.47	0.01	0.07	0.00	0.0	0.00
M v. E	0.00	0.10	0.30	0.01	0.11	0.01	0.00	0.0	0.00
M v. N	0.00	0.00	0.00	0.01	0.01	0.02	0.00	0.0	0.00
E. v. N	0.05	0.00	0.00	0.50	0.25	0.96	0.20	0.1	0.01

Appendix II (contd)

	Gender					
	Gender empowerment measure, 2005	Female labour force participation rate as % of population, 2004	Female doctors as % of total number of doctors, 2003	% of women in parliament, 2005	Women in government at ministerial level (% of total), 2005	% of population agreed that when jobs are scarce, men should have more right to a job than women, late 1990s
	[16]	[17]	[18]	[19]	[20]	[21]
Australia	0.826	66.3	31.5	28.3	20.0	26.2
Austria	0.779	63.5	35.3	32.2	35.3	28.6
Belgium	0.828	57.7	..	35.7	21.4	25.0
Canada	0.807	73.5	33.1	24.7	23.1	15.6
Denmark	0.860	76.1	41.4	36.9	33.3	6.2
Finland	0.833	72.0	53.2	37.5	47.1	9.0
France	..	63.7	37.2	13.9	17.6	21.7
Germany	0.813	66.1	37.1	31.3	46.2	26.6
Greece	0.594	54.1	34.6	14.0	5.6	19.9
Ireland	0.724	58.0	36.8	14.2	21.4	16.4
Italy	0.589	50.6	..	10.4	8.3	27.0
Japan	0.534	60.2	15.5	9.3	12.5	31.8
Netherlands	0.814	69.2	36.8	34.2	36.0	12.5
New Zealand	0.769	69.6	34.5	28.3	23.1	13.1
Norway	0.928	75.7	34.6	38.2	44.4	14.4
Portugal	0.656	67.0	46.3	20.0	16.7	27.2
Spain	0.745	57.7	..	30.5	50.0	16.8
Sweden	0.852	76.6	40.7	45.3	52.4	2.3
Switzerland	0.795	73.9	30.7	24.8	14.3	29.2
United Kingdom	0.716	69.6	..	17.9	28.6	21.0
United States	0.793	69.2	23.4	14.8	14.3	9.7
Relationship between Tax and Indicators						
Correlation	0.457	0.23	0.67	0.62	0.51	-0.48
R-squared	0.209	0.05	0.45	0.38	0.26	0.23
Group Averages						
Anglo-American (A)	0.773	67.7	31.9	21.4	21.8	17.0
Mediterranean (M)	0.646	57.4	40.5	18.7	20.2	22.7
European (E)	0.809	64.1	36.6	29.5	31.3	22.9
Nordic (N)	0.868	75.1	42.5	39.5	44.3	8.0
t-test Group Comparisons						
A v. M	0.009	0.03	0.14	0.60	0.85	0.15
A v. E	0.177	0.25	0.11	0.11	0.10	0.14
A v. N	0.009	0.03	0.04	0.00	0.00	0.04
M v. E	0.005	0.12	0.35	0.11	0.33	0.97
M v. N	0.002	0.00	0.78	0.01	0.07	0.01
E. v. N	0.042	0.00	0.18	0.08	0.10	0.01

Appendix II (contd)

	Economic Security	Heath		
	Economic Security Index	Life expectancy at birth, 2003 (years)		Infant mortality, per 1,000 live births, 2003
		Male	Female	
		[22]	[23]		[24]	[25]
Australia	0.72	77.8	82.8	4.8
Austria	0.78	75.6	81.6	4.5
Belgium	0.83	75.1	81.1	4.3
Canada	0.79	77.2	82.1	5.4
Denmark	0.91	74.9	79.5	4.4
Finland	0.95	75.1	81.8	3.1
France	0.83	75.8	82.9	3.9
Germany	0.79	75.5	81.3	4.2
Greece	0.78	75.4	80.7	4.8
Ireland	0.74	75.2	80.3	5.1
Italy	0.68	76.9	82.9	4.3
Japan	0.72	78.4	85.3	3.0
Netherlands	0.87	76.2	80.9	4.8
New Zealand	0.61	76.3	81.1	5.6
Norway	0.93	77.0	81.9	3.4
Portugal	0.74	74.0	80.6	4.1
Spain	0.76	77.2	83.7	4.1
Sweden	0.98	77.9	82.4	3.1
Switzerland	0.73	77.8	83.0	4.3
United Kingdom	0.74	76.2	80.7	5.3
United States	0.61	74.5	79.9	6.9
Relationship between Tax and Indicators				
Correlation	0.77	-0.2	-0.2	-0.4
R-squared	0.60	0.0	0.1	0.2
Group Averages				
Anglo-American (A)	0.70	76.2	81.2	5.5
Mediterranean (M)	0.74	75.9	82.0	4.3
European (E)	0.82	75.6	81.6	4.3
Nordic (N)	0.94	76.2	81.4	3.5
t-test Group Comparisons				
A v. M	0.38	0.7	0.4	0.0
A v. E	0.01	0.4	0.5	0.0
A v. N	0.00	1.0	0.8	0.0
M v. E	0.02	0.7	0.6	0.9
M v. N	0.00	0.7	0.6	0.1
E. v. N	0.00	0.4	0.8	0.0

Appendix II (contd)

	Education								
	Total public and private expenditures on education as % of GDP, 2001	Public expenditure on education as % of GDP, 2001	Expenditure on pre-primary education for children 3 and older as % of GDP, 2002	% of population in the 25-64 age group who had		PISA 2003 score of 15-year-old students			Difference of PISA 2003 math scores attributed to occupational status of either parent
				completed at least upper secondary school, 2003	attained university education, 2003	Reading	Science	Math	
[26]	[27]	[28]	[29]	[30]	[31]	[32]	[33]	[34]	
Australia	6.0	4.5	0.1	62.5	20.5	525	525	524	77
Austria	5.8	5.6	0.5	78.6	7.3	491	491	506	81
Belgium	6.4	6.0	0.6	62.0	13.0	507	509	529	108
Canada	6.1	4.9	..	83.6	22.0	528	519	532	63
Denmark	7.1	6.8	0.8	80.5	25.0	492	475	514	73
Finland	5.8	5.7	0.4	75.9	16.4	543	548	544	61
France	6.0	5.6	0.7	64.9	14.2	496	511	511	87
Germany	5.3	4.3	0.5	83.4	14.1	491	502	503	102
Greece	4.1	3.8	..	51.1	12.6	472	481	445	84
Ireland	4.5	4.1	..	61.6	16.3	515	505	503	70
Italy	5.3	4.9	0.4	44.4	10.4	476	486	466	72
Japan	4.6	3.5	0.2	83.9	20.9	498	548	534	62
Netherlands	4.9	4.5	0.4	66.5	21.9	513	524	538	83
New Zealand	..	5.5	0.3	77.5	16.1	522	521	523	80
Norway	6.4	6.1	1.0	87.4	28.5	500	484	495	72
Portugal	5.9	5.8	0.3	22.6	8.4	478	468	466	80
Spain	4.9	4.3	0.5	42.8	17.9	481	487	485	65
Sweden	6.5	6.3	0.5	82.2	18.5	514	506	509	74
Switzerland	..	5.4	0.2	69.7	17.5	499	513	527	81
United Kingdom	5.5	4.7	0.5	65.1	19.3	..	..	..	..
United States	7.3	5.1	0.5	87.5	29.4	495	491	483	82
Relationship between Tax and Indicators									
Correlation	0.37	0.67	0.60	0.15	-0.12	0.15	-0.11	0.15	0.10
R-squared	0.14	0.46	0.36	0.02	0.01	0.02	0.01	0.02	0.01
Group Averages									
Anglo-American (A)	5.9	4.8	0.3	73.0	20.6	517	512	513	74
Mediterranean (M)	5.0	4.7	0.4	40.2	12.3	477	481	466	75
European (E)	5.7	5.2	0.5	71.1	14.1	500	508	517	92
Nordic (N)	6.4	6.2	0.7	81.5	22.1	512	503	516	70
t-test Group Comparisons									
A v. M	0.21	0.80	0.46	0.00	0.02	0.00	0.01	0.01	0.86
A v. E	0.68	0.33	0.07	0.77	0.06	0.05	0.58	0.71	0.02
A v. N	0.36	0.00	0.09	0.20	0.67	0.71	0.60	0.86	0.40
M v. E	0.20	0.38	0.17	0.00	0.59	0.00	0.01	0.00	0.05
M v. N	0.02	0.02	0.21	0.00	0.03	0.02	0.22	0.01	0.34
E. v. N	0.07	0.04	0.36	0.08	0.06	0.29	0.80	0.88	0.01

Appendix II (contd)

	Personal security	Community and social solidarity			Self-realization Goals				
	Homicides, per population of 100,000, 2002	% of population agreeing that people can be trusted, 2001	% of population having confidence in social institutions, 2001			Index of Economic Freedom, 2006	Sense of freedom, 2001	Average annual number of hours worked, 2004	Drug Use % of 15-64 population used cannabis, late 1990s
			Parliament	Major companies	Justice system				
	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]
Australia	1.5	40.0	30.5	58.5	34.7	1.84	84.3	1816	15.0
Austria	0.9	33.4	40.2	39.2	68.1	1.95	79.8	1550	5.6
Belgium	..	29.2	39.1	50.3	36.7	2.11	69.3	1522	6.1
Canada	1.5	37.0	39.6	55.5	54.0	1.85	86.4	1736	10.8
Denmark	1.2	66.5	48.6	38.0	78.4	1.78	81.1	1517	6.9
Finland	2.5	57.4	42.3	42.9	66.7	1.85	86.7	1737	2.9
France	0.8	21.3	40.4	47.9	46.3	2.51	64.9	1520	9.8
Germany	0.7	37.5	37.2	39.8	57.3	1.96	83.9	1443	6.0
Greece	0.7	23.7	24.3	19.9	43.7	2.80	78.6	1925	4.4
Ireland	1.0	36.0	33.0	52.4	55.6	1.58	80.0	1642	9.0
Italy	0.9	32.6	34.1	49.6	31.5	2.50	64.8	1585	6.2
Japan	0.5	43.1	21.7	28.5	79.5	2.26	66.7	1789	0.1
Netherlands	1.2	60.1	54.3	47.8	47.5	1.90	79.0	1357	6.1
New Zealand	1.4	49.1	15.1	45.6	46.7	1.84	86.8	1826	13.4
Norway	0.9	65.3	69.4	60.3	69.5	2.29	80.1	1364	4.5
Portugal	1.6	12.3	50.5	55.1	42.3	2.29	76.3	1983	3.3
Spain	1.0	34.0	49.6	44.2	42.3	2.33	73.9	1744	9.7
Sweden	0.9	66.3	50.6	64.9	60.8	1.96	83.0	1585	1.0
Switzerland	1.1	37.0	46.9	46.0	67.7	1.89	79.3	1627	7.0
United Kingdom	0.9	28.9	36.2	40.2	47.1	1.74	79.7	1668	10.6
United States	7.1	36.3	38.0	53.7	36.7	1.84	89.0	1824	11.0
Relationship between Tax and Indicators									
Correlation	-0.25	0.47	0.42	0.19	0.19	0.02	-0.08	-0.57	-0.33
R-squared	0.06	0.22	0.18	0.03	0.03	0.00	0.01	0.33	0.11
Group Averages									
Anglo-American (A)	2.2	37.9	32.1	51.0	45.8	1.78	84.4	1752	11.6
Mediterranean (M)	1.1	25.7	39.6	42.2	40.0	2.48	73.4	1809	5.9
European (E)	0.9	36.3	42.2	45.0	51.2	2.09	75.4	1478	6.7
Nordic (N)	1.4	63.9	52.7	51.5	68.9	1.97	82.7	1550	3.8
t-test Group Comparisons									
A v. M	0.37	0.05	0.30	0.25	0.27	0.00	0.01	0.51	0.01
A v. E	0.31	0.82	0.07	0.14	0.41	0.02	0.04	0.00	0.00
A v. N	0.52	0.00	0.01	0.93	0.00	0.11	0.49	0.03	0.00
M v. E	0.52	0.26	0.70	0.71	0.13	0.05	0.69	0.01	0.60
M v. N	0.48	0.00	0.18	0.39	0.00	0.02	0.03	0.07	0.31
E. v. N	0.28	0.01	0.13	0.34	0.04	0.49	0.13	0.39	0.08

Appendix II (contd)

	Self-realization Goals (contd)			Democratic rights		Quality of environmental governance	Inter-nation equity
	Subjective well-being and happiness			Corruption perceptions index 2005	% of population having frequent political discussions with friends, 2001	Ranking of environmental performance of OECD countries, 2005	Official development assistance as % of GNI, 2004
	Suicides per 100,000 people, 2003	Happiness, 2001	Life satisfaction, 2001				
	[44]	[45]	[46]				
	[47]	[48]	[49]	[50]			
Australia	12.7	43.3	84.6	8.8	16.0	25	0.25
Austria	19.3	36.6	88.8	8.7	20.2	7	0.23
Belgium	21.1	41.2	83.2	7.4	14.7	29	0.41
Canada	11.7	45.2	87.9	8.4	11.0	28	0.27
Denmark	14.3	45.1	90.1	9.5	24.9	3	0.85
Finland	21.0	24.7	89.9	9.6	6.6	17	0.35
France	17.5	33.0	77.9	7.5	11.4	18	0.41
Germany	13.5	18.5	84.2	8.2	24.0	6	0.28
Greece	3.6	18.9	73.0	4.3	21.3	20	0.23
Ireland	12.2	42.4	92.1	7.4	13.5	27	0.39
Italy	7.1	18.4	81.5	5.0	12.9	9	0.15
Japan	25.5	28.6	71.5	7.3	7.4	16	0.19
Netherlands	9.4	45.8	94.9	8.6	16.0	10	0.73
New Zealand	11.9	33.1	84.4	9.6	14.1	14	0.23
Norway	12.1	30.0	85.8	8.9	21.0	25	0.87
Portugal	5.1	17.1	79.3	6.5	14.4	11	0.63
Spain	8.4	20.1	78.9	7.0	12.1	21	0.24
Sweden	13.4	36.6	86.0	9.2	20.2	8	0.78
Switzerland	19.1	39.1	89.2	9.1	16.9	2	0.41
United Kingdom	7.5	33.2	84.0	8.6	9.1	18	0.36
United States	10.4	39.5	87.2	7.6	16.3	30	0.17
Relationship between Tax and Indicators							
Correlation	0.1	0.10	0.31	0.26	0.26	-0.29	0.56
R-squared	0.0	0.01	0.09	0.07	0.07	0.08	0.32
Group Averages							
Anglo-American (A)	11.1	39.5	86.7	8.4	13.3	24	0.28
Mediterranean (M)	6.1	18.6	78.2	5.7	15.2	15	0.31
European (E)	16.2	35.0	85.8	8.1	17.3	14	0.41
Nordic (N)	15.2	34.1	88.0	9.3	18.2	13	0.71
t-test Group Comparisons							
A v. M	0.0	0.00	0.00	0.00	0.43	0.07	0.74
A v. E	0.0	0.38	0.77	0.49	0.13	0.08	0.16
A v. N	0.1	0.26	0.52	0.07	0.20	0.07	0.00
M v. E	0.0	0.02	0.07	0.01	0.52	0.83	0.48
M v. N	0.0	0.01	0.00	0.00	0.53	0.74	0.05
E. v. N	0.8	0.89	0.55	0.01	0.84	0.91	0.08

Appendix II (contd)

	Material standard of living and Economic Growth				Productivity		
	GDP per capita in USD PPP, 2004	Annual average growth rate of GDP per capita (%)			GDP per hour worked in US\$, 2004	Annual average growth in GDP per hour worked in 1995-2004 (%)	Multi-factor productivity growth in 1995-2002 (%)
		1990-1995	1995-2004	1990-2004			
	[51]	[52]	[53]	[54]	[55]	[56]	[57]
Australia	30200	3.3	3.7	3.5	34.7	2.4	1.5
Austria	31700	2.2	2.2	2.2	38.4	1.7	0.6
Belgium	30900	1.6	2.2	2.0	50.8	1.4	0.5
Canada	31500	1.7	3.4	2.8	35.2	1.7	1.2
Denmark	31600	2.0	2.0	2.0	40.9	1.3	0.0
Finland	30600	-0.8	3.7	2.1	39.2	2.3	2.2
France	29600	1.3	2.3	2.0	47.7	2.0	1.5
Germany	28500	2.2	1.4	1.7	42.1	1.7	0.9
Greece	21500	1.3	3.8	2.9	28.6	3.0	2.0
Ireland	35800	4.7	7.7	6.6	47.1	4.5	4.4
Italy	27700	1.3	1.5	1.4	36.3	0.5	-0.2
Japan	29600	1.5	1.1	1.3	32.5	2.0	0.4
Netherlands	31100	2.1	2.4	2.3	44.2	0.7	0.4
New Zealand	23900	3.1	3.2	3.2	26.4	1.4	0.8
Norway	38700	3.9	2.8	3.2	56.6	2.2	..
Portugal	19400	1.7	2.4	2.1	23.9	1.7	1.2
Spain	25600	1.5	3.5	2.8	36.5	0.9	0.1
Sweden	30400	0.8	2.7	2.0	39.9	2.4	1.3
Switzerland	33600	0.1	1.4	0.9	36.7	1.3	..
United Kingdom	31400	1.7	2.8	2.4	39.6	2.2	1.2
United States	39700	2.5	3.4	3.1	46.3	2.5	1.4
Relationship between Tax and Indicators							
Correlation	0.03	-0.24	-0.17	-0.22	0.37	-0.21	-0.23
R-squared	0.00	0.06	0.03	0.05	0.13	0.04	0.05
Group Averages							
Anglo-American (A)	32083	2.8	4.1	3.6	38.2	2.5	1.7
Mediterranean (M)	23550	1.4	2.8	2.3	31.3	1.5	0.8
European (E)	30360	1.9	2.1	2.0	44.7	1.5	0.8
Nordic (N)	32825	1.5	2.8	2.3	44.1	2.1	1.2
t-test Group Comparisons							
A v. M	0.03	0.04	0.25	0.15	0.18	0.23	0.25
A v. E	0.50	0.11	0.04	0.05	0.14	0.12	0.15
A v. N	0.82	0.19	0.23	0.15	0.29	0.54	0.52
M v. E	0.01	0.09	0.22	0.40	0.01	0.98	0.98
M v. N	0.01	0.99	0.98	0.98	0.05	0.40	0.67
E. v. N	0.23	0.65	0.08	0.30	0.91	0.14	0.51

Appendix II (contd)

	Unit Labour Cost	Inflation	Jobs			Labour force participation rate as % of population, 2004		
	Average percentage change in unit labour cost in the business sector in 1994-2003	Change in consumer prices in 2003-2004 (%)	Average annual employment growth in 1992-2002 (%)	Unemployment, 2004		Total	Male	Female
				Standardized rate (%)	Long-term rate (%)			
	[58]	[59]	[60]	[61]	[62]	[63]	[64]	[65]
Australia	1.6	2.6	1.9	5.4	20.7	73.6	80.8	66.3
Austria	-0.1	2.9	0.5	5.0	24.5	70.2	77.1	63.5
Belgium	1.1	2.3	0.7	12.0	49.6	65.3	72.7	57.7
Canada	1.6	2.1	1.9	7.2	9.5	78.2	83.0	73.5
Denmark	1.5	1.2	0.4	5.7	22.6	80.2	84.2	76.1
Finland	1.1	0.4	0.7	8.8	23.4	73.8	75.5	72.0
France	0.9	2.1	1.0	10.1	41.6	69.5	75.3	63.7
Germany	0.3	2.1	0.2	9.9	51.8	72.7	79.1	66.1
Greece	4.1	3.1	0.6	10.2	54.7	66.5	79.1	54.1
Ireland	0.2	2.6	4.1	4.4	34.3	68.6	79.1	58.0
Italy	2.0	2.0	0.3	8.1	49.7	62.5	74.5	50.6
Japan	-1.5	0.2	-0.2	4.7	33.7	72.2	84.2	60.2
Netherlands	2.5	1.2	1.9	5.0	32.5	76.6	83.9	69.2
New Zealand	1.3	2.7	2.3	3.9	11.7	76.6	83.8	69.6
Norway	2.5	1.1	1.3	4.5	9.2	79.1	82.5	75.7
Portugal	3.1	2.5	0.8	6.7	43.2	72.9	79.0	67.0
Spain	2.7	3.2	2.4	11.0	37.7	69.7	81.6	57.7
Sweden	1.7	0.3	0.1	6.6	18.9	78.7	80.7	76.6
Switzerland	0.9	1.3	0.4	4.2	33.5	81.0	88.0	73.9
United Kingdom	2.6	3.5	0.9	4.7	21.4	76.2	83.1	69.6
United States	1.8	3.3	1.4	5.5	12.7	75.4	81.9	69.2
Relationship between Tax and Indicators								
Correlation	0.09	-0.40	-0.27	0.27	-0.02	0.01	-0.43	0.23
R-squared	0.01	0.16	0.08	0.07	0.00	0.00	0.19	0.05
Group Averages								
Anglo-American (A)	1.5	2.8	2.1	5.2	18.4	74.8	81.9	67.7
Mediterranean (M)	3.0	2.7	1.0	9.0	46.3	67.9	78.6	57.4
European (E)	1.0	2.1	0.9	8.4	40.0	70.9	77.6	64.1
Nordic (N)	1.7	0.8	0.6	6.4	18.5	77.9	80.7	75.1
t-test Group Comparisons								
A v. M	0.03	0.78	0.15	0.00	0.00	0.02	0.05	0.03
A v. E	0.31	0.08	0.06	0.05	0.01	0.12	0.05	0.25
A v. N	0.73	0.00	0.04	0.23	0.98	0.16	0.50	0.03
M v. E	0.01	0.19	0.76	0.75	0.38	0.34	0.72	0.12
M v. N	0.05	0.00	0.48	0.10	0.00	0.01	0.40	0.00
E. v. N	0.22	0.01	0.57	0.31	0.01	0.02	0.29	0.00

Appendix II (contd)

	Rates of saving		Investment	Foreign direct investment	
	Household saving rate as % of household disposable income, 2004	Net national saving as % of GDP, 2004	Percentage change in real total gross fixed capital formation in 2003-2004	Inward foreign direct investment as % of GDP, 2004	Inward FDI performance index 2002-2004
	[66]	[67]	[68]	[69]	[70]
Australia	-3.0	4.1	6.6	6.6	2.3
Austria	8.3	9.6	1.6	1.7	0.9
Belgium	10.7	7.7	4.4	22.2	19.7
Canada	1.4	8.7	6.6	0.6	0.7
Denmark	2.9	7.3	3.3	..	-0.1
Finland	2.7	8.4	4.7	2.5	1.8
France	11.8	6.4	2.2	1.2	1.2
Germany	10.5	5.7	-1.5	..	0.3
Greece	..	9.0	5.7	0.7	0.2
Ireland	9.9	11.1	8.0	7.7	7.9
Italy	11.5	5.6	1.9	1.0	0.6
Japan	6.9	6.1	1.6	0.2	0.1
Netherlands	7.3	7.5	2.9	..	1.5
New Zealand	..	5.6	13.9	2.6	1.4
Norway	10.2	19.0	9.1	0.9	0.6
Portugal	11.8	-2.6	0.6	0.7	1.2
Spain	7.2	8.8	4.9	0.9	2.0
Sweden	8.6	11.7	5.5	-0.5	0.8
Switzerland	8.9	11.1	3.3	1.3	1.6
United Kingdom	4.4	4.3	4.9	3.7	1.2
United States	1.8	1.3	8.4	0.9	0.4
Relationship between Tax and Indicators					
Correlation	0.22	0.32	-0.13	0.16	0.14
R-squared	0.05	0.10	0.02	0.03	0.02
Group Averages					
Anglo-American (A)	2.9	5.9	8.1	3.7	2.3
Mediterranean (M)	10.2	5.2	3.3	0.8	1.0
European (E)	9.7	7.4	1.9	8.3	4.7
Nordic (N)	6.1	11.6	5.7	0.9	0.8
t-test Group Comparisons					
A v. M	0.05	0.82	0.03	0.09	0.40
A v. E	0.02	0.39	0.00	0.37	0.52
A v. N	0.31	0.07	0.23	0.18	0.32
M v. E	0.77	0.41	0.40	0.25	0.41
M v. N	0.18	0.14	0.21	0.87	0.67
E. v. N	0.11	0.13	0.04	0.35	0.38

Appendix II (contd)

	Innovation			Growth Competitiveness Index 2005	Global Creativity Index 2002	Comprehensive Measures of Well-Being
	R & D as % of GDP, 2002	R & D researchers per 10,000, 2002	Broadband subscribers per 100 inhabitants, 2004			Human Development Index for 2003
	[71]	[72]	[73]			[74]	[75]	[76]
Australia	1.6	7.6	7.7	5.21	0.528	0.955
Austria	2.1	5.8	10.2	4.95	0.526	0.936
Belgium	2.2	8.4	15.6	4.63	..	0.945
Canada	2.0	7.2	17.8	5.10	0.548	0.949
Denmark	2.5	9.2	18.8	5.65	0.613	0.941
Finland	3.4	17.7	15.0	5.94	0.684	0.941
France	2.3	7.5	10.6	4.78	..	0.938
Germany	2.5	6.9	8.4	5.10	0.577	0.930
Greece	0.6	3.7	0.4	4.26	..	0.912
Ireland	1.1	5.3	3.4	4.86	..	0.946
Italy	1.1	3.0	8.1	4.21	..	0.934
Japan	3.1	10.4	15.0	5.18	0.766	0.943
Netherlands	1.8	5.2	19.0	5.21	0.611	0.943
New Zealand	1.2	9.1	4.8	5.09	..	0.933
Norway	..	9.1	14.9	5.40	0.595	0.963
Portugal	0.9	3.5	8.2	4.91	..	0.904
Spain	1.0	5.6	8.4	4.80	..	0.928
Sweden	4.1	10.6	14.5	5.65	0.808	0.949
Switzerland	..	6.3	17.3	5.46	0.637	0.947
United Kingdom	1.9	5.5	10.5	5.11	0.517	0.939
United States	2.7	9.3	13.0	5.81	0.666	0.944
Relationship between Tax and Indicators						
Correlation	0.42	0.3	0.33	0.11	0.14	0.14
R-squared	0.18	0.1	0.11	0.01	0.02	0.02
Group Averages						
Anglo-American (A)	1.7	7.3	9.5	5.20	0.565	0.944
Mediterranean (M)	0.9	3.9	6.3	4.55	..	0.920
European (E)	2.2	6.8	12.8	4.93	0.571	0.938
Nordic (N)	3.4	11.6	15.8	5.66	0.675	0.949
t-test Group Comparisons						
A v. M	0.03	0.0	0.33	0.02	..	0.01
A v. E	0.14	0.5	0.31	0.16	0.89	0.19
A v. N	0.01	0.0	0.06	0.04	0.11	0.48
M v. E	0.00	0.0	0.06	0.09	..	0.03
M v. N	0.00	0.0	0.00	0.00	..	0.02
E. v. N	0.02	0.0	0.25	0.00	0.15	0.11

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- [29] Education at a Glance: OECD Indicators, 2005, p.36.
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