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Less Income Inequality
and More Growth – Are they
Compatible? Part 4. Top
Incomes

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**LESS INCOME INEQUALITY AND MORE GROWTH - ARE THEY COMPATIBLE?
PART 4. TOP INCOMES**

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by Peter Hoeller

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ABSTRACT/RÉSUMÉ

Less income inequality and more growth – Are they compatible?

Part 4. Top incomes

Over the past decades, top incomes have soared, especially in the English-speaking countries. Despite a considerable amount of research on top income developments, there is still substantial disagreement about the causes for their rapid increase. Potential explanations include changes in taxation, technical progress, globalisation and changes in way the remuneration of top income recipients is set.

JEL classification codes: D31

Keywords: Income inequality; top incomes; globalisation; technological change; taxation

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Moins d'inégalités de revenu et plus de croissance – Ces deux objectifs sont-ils compatibles?

Partie 4. Hauts revenus

Au cours des dernières décennies, le nombre de titulaires de hauts revenus est monté en flèche, notamment dans les pays anglophones. Malgré les nombreuses études consacrées à l'évolution des ménages à hauts revenus, les analyses divergent quant aux facteurs qui sous-tendent leur augmentation rapide. Parmi les explications possibles, on peut citer les changements dans le régime fiscal, les progrès techniques, la mondialisation et la modification du mode de rémunération des titulaires de hauts revenus.

Classification JEL : D31

Mots-clés : Inégalités de revenu ; hauts revenus ; mondialisation ; avancées technologiques ; fiscalité

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LESS INCOME INEQUALITY AND MORE GROWTH – ARE THEY COMPATIBLE?

PART 4. TOP INCOMES

by Peter Hoeller¹

Introduction and main findings

Many OECD countries experienced a rise in income inequality over the past decades. The widening dispersion in income is often shaped by the increasing concentration of income at the top end of the income distribution. In the United States, for example, the top 1% of the population received 18% of pre-tax income in 2008, up from 8% in 1980. While the income share of the top income recipients also rose in most other OECD countries, there is great variation across countries with respect to both the extent of this increase and the time when it started. Despite a growing interest in the rise in top incomes, there is still substantial disagreement about the causes and their relative importance.

The second section of this paper reviews top income developments across 19 OECD countries, while the third section assesses the forces shaping the rise in top incomes, focusing on taxation, globalisation, technical progress and remuneration issues. The remainder of this section summarises the main findings.

Main findings

Top income developments

- Excluding capital gains, the share of the top 1% income recipients in total income ranged from 4% in Sweden to 18% in the United States in 2008.
- After declining for many decades, top income shares started to rise in the mid-1970s in the English-speaking countries and later in the continental European countries and Japan. The rise was especially steep in the English-speaking countries, Finland and Portugal with the US top income share being as high in 2008 as it was in 1913.
- Top income recipients tend to be found among executives in the non-financial sector and people working in financial professions and to a lesser extent among the "stars" of the sports and entertainment industries.

1. The author is a member of the Economics Department of the OECD. This is one of the background papers for the OECD's project on Income Distribution and Growth-enhancing Policies. The author would like to thank Jorgen Elmeskov, Isabelle Joumard, Isabell Koske, Mauro Pisu and Matthew Stephens for their useful comments and suggestions, Chantal Nicq for meticulous statistical work and Susan Gascard for excellent editorial support.

The forces shaping top income developments

Changes in taxation

- Top income tax rates have come down considerably over time which may have boosted the income declared by top earners to the tax authorities. Studies estimating the elasticity of taxable income at the top with respect to the marginal tax rate typically put it at around minus one for a top marginal tax rate of 50%.
- Tax regimes may influence the mix of compensation, tilting it towards lower taxed forms of compensation, and thereby boost disposable income particularly at the top. For example, capital gains are often taxed at a lower rate than other income and, in a few countries, they are not taxed at all. Stock options also benefit from preferential tax treatment in many OECD countries and the same holds for carried interest arrangements.

Globalisation, technological change remuneration issues

- New information technologies together with globalisation have widened the market for “stars” and thus boosted top incomes in the sports and entertainment industries.
- The skill requirements and responsibilities of top managers have become more complex, owing not least to stronger competition associated with deregulation and globalisation. Moreover, the stability of top management positions has declined while the outside options of top managers have improved, raising their bargaining power. To the extent that these outside options include jobs in foreign countries, the latter may explain why the top-income shares of some countries influence those of others. For example, the top income share in the United States is found to have a considerable influence on the one in Canada, while that in the United Kingdom and Australia influence the one in New Zealand.
- Globalisation has also led to a sharp increase in the market capitalisation of large multi-national companies, with the rise in executive pay closely following the rise in company size.
- Collective bargaining is unlikely to affect top earners, but the growing use of performance-related pay and changes in pay norms, has boosted their earnings. Moreover, the winner-takes-all pay-off structure has spread beyond fields such as sport and entertainment, with rewards of CEOs or financial market traders depending heavily on performance relative to others. These developments seem to be more prevalent in the English-speaking than in the continental European countries and Japan.

Top income developments

The share of income going to the top earners has risen sharply in many countries, most notably in the United States. Top income earners comprise by definition only a small share of the population, but they can earn a very large share of total income. In the United States, for instance, the top 1% of the population captured 18% of total income in 2008, up from 8% in 1980. Changes in top incomes can have a considerable effect on the overall income distribution. Atkinson *et al.* (2011), for instance, calculated that the change in the share of the top 1% more than explains the increase in US inequality between 1976 and 2006. For those OECD countries for which data are available, the cross-country correlation between the change in household market income's Gini indices and the change in the top 10% income share from the

mid-1980s to the mid-2000s is 0.46.² This is in line with the finding by Koske *et al.* (2012) that in about half of the countries that experienced an increase in labour income inequality, the increase was driven by rising inequality in the upper half of the earnings distribution.

Top incomes can also have a sizeable influence on measures of income growth of different population groups (Atkinson *et al.*, 2011). In the United States, for instance, real household income rose by 1.2% on average per year in the ten years to 2007. Excluding the top 1%, the average income of the bottom 99% grew by only 0.6%, which implies that the top 1% captured 58% of the real income gain. The skewing effect of top incomes can also be gauged by the difference in the development of the mean and median incomes. According to data from the US Census Bureau, average real household income grew by 34% from 1980 to 2007, but median real household income increased by just 18% during the same period. Also international income growth rankings can change. Real household income growth was faster in the United States (at 32%) between 1975 and 2006 than in France (at 27%). However, excluding the top percentile, the US growth rate was only 18%, while the French growth rate was virtually the same. Different measures of income growth can thus lead to different conclusions about growth performance (Atkinson *et al.*, 2011).

Atkinson and Piketty (2007, 2010) and their research associates have assembled data on top incomes for many countries and over a very long time span. Matthews (2011) includes data to 2008 for some of these countries. The data on top incomes are based on income tax returns, except for Finland (Box 1).

Box 1. Data issues

Household surveys tend to be biased at both ends of the income ladder. Concerning top incomes, the richest often fail to respond and, when they do, they tend to under-report their income. Inequality thus tends to be underestimated. Moreover, the non-response rate may be higher for some income components, such as the income from self-employment and capital income.

Tax data should in principle cover all high income recipients, *i.e.* provide “census” rather than sample data. They do not suffer from the high non-response rates characterising household surveys for high income levels. Although tax evasion and avoidance may distort the data, the bias is generally perceived to be smaller than for household surveys since the income data are audited by the tax authorities. Using tax data, the income share of the top 10% richest is often considerably higher than when using household surveys. However, tax data also have limitations, in particular:

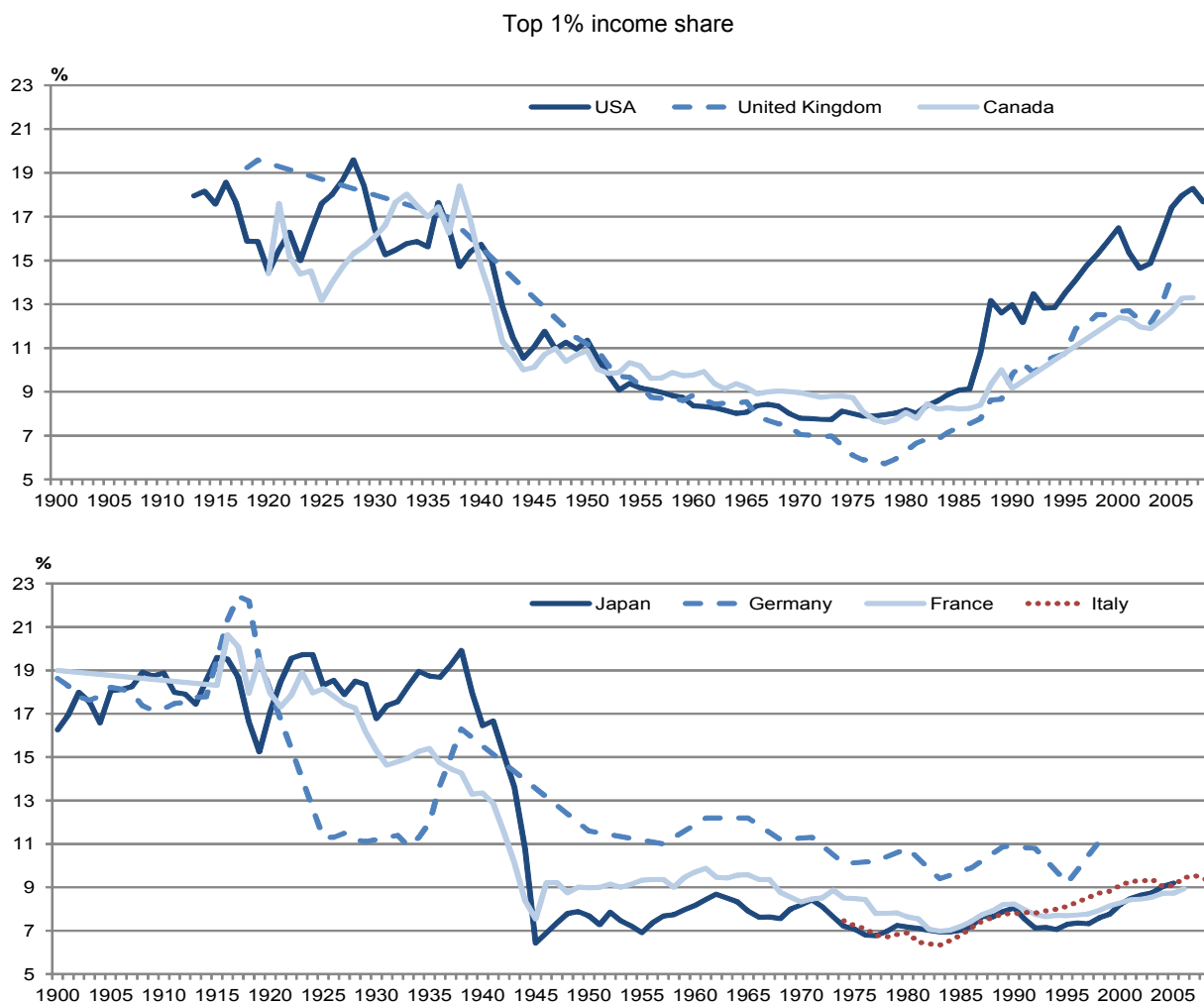
i) Under-declaration of income can be significant and varies across countries, reflecting the penalties imposed for under-declaration of income and the efficiency of tax authorities in fighting tax evasion. *ii)* The tax authorities generally only collect information on income that is potentially taxable. Differences in tax codes can thus lead to differences in the concept of income used in different countries. In particular, imputed rent from owner-occupied housing is not covered in most countries and capital gains only in the countries, where they are taxed. *iii)* The tax unit (joint versus individual filing) varies between countries. *iv)* Possibilities for tax planning and tax avoidance will affect the amount of income declared in tax returns.

Figure 1 shows the top income share for the G7 countries from about the start of the previous century. A pronounced downward trend can be detected for all countries for many decades, but there was a substantial increase for the English-speaking countries starting in the late 1970s or early 1980s, with the US top income share being as high in 2008 as it was in 1913. While there was an up-tick in top income shares in Germany, Japan and France that started later than in the United States, it was much less pronounced. Looking at developments since 1980 and including also many other smaller European

2. Data for top incomes come from Matthews (2011). Household market income inequality is sourced from the OECD Income Distribution and Poverty Database.

countries as well as Australia and New Zealand, confirms this picture (Figure 2). Inequality among the top income earners has also risen. The increase in the income share of the 1% and 0.01% of the top earners relative to the average of the top 10% was especially steep in the United States, but occurred also in all other countries with the exception of Japan.

Figure 1. Top income shares over the long run



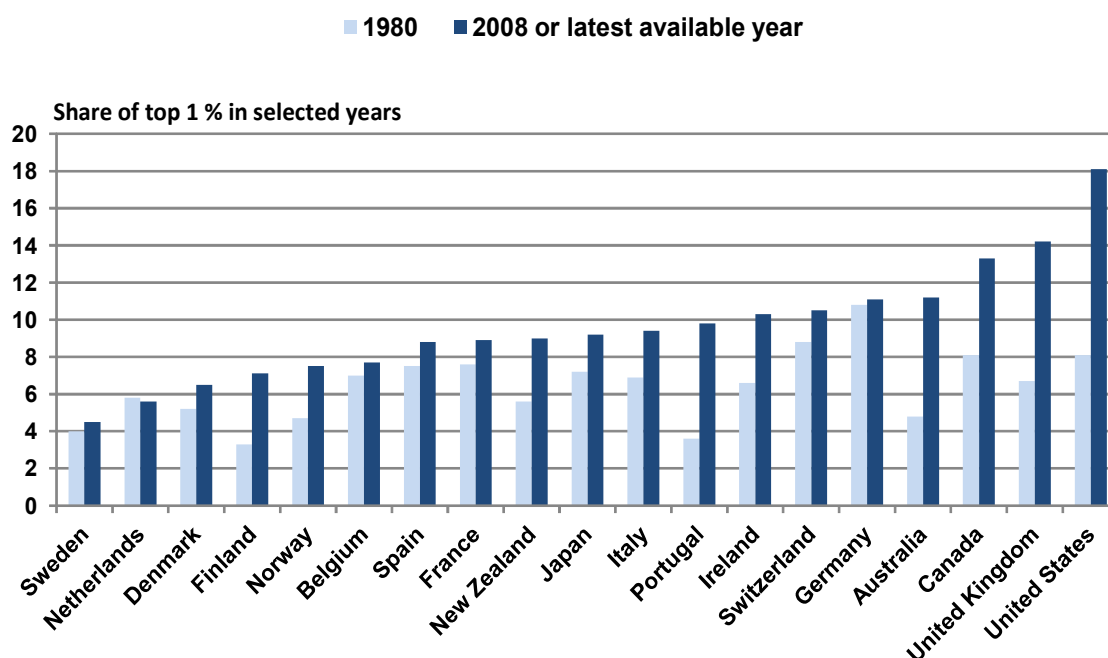
Note: Income is defined as market income excluding realised capital gains plus transfers.

Source: Alvaredo, F., A.B. Atkinson, T. Piketty, and E. Saez (2011), The Top Incomes Database, <http://g-nd.parisschoolofeconomics.eu/topincomes> and Matthews, S. (2011), "Trends in Top Incomes and their Tax Policy Implications", *OECD Taxation Working Paper Series*, No. 12.

While capital income provided the largest income source for top income earners early on in the previous century, its share has shrunk, and that of labour and self-employment income has risen considerably since the early 1980s. In the United States, for instance, labour and self-employment income accounted for about half of the total income of the top 0.1% earners in 2006. The contribution of capital gains to top incomes is very volatile, but provided a very large contribution in the United States prior to the

Great Depression and prior to the recent economic and financial crisis. A sharp increase prior to the recent recession can also be observed for Canada, Spain and Finland, but not for Australia and Norway.³

Figure 2. Share of top 1% income recipients in total earnings



Note: Income data exclude capital gains, except for Australia and Finland.

Source: Alvaredo, F., A.B. Atkinson, T. Piketty, and E. Saez (2011), The Top Incomes Database, <http://g-nd.parisschoolofeconomics.eu/topincomes> and Matthews, S. (2011), "Trends in Top Incomes and their Tax Policy Implications", *OECD Taxation Working Paper Series*, No. 12.

Top income recipients tend to be concentrated in certain professions: In the United States, they are mostly found among executives in the non-financial sector (41%) and people working in financial professions (18%) (Bakija *et al.*, 2010).⁴ In the United Kingdom, 21% of the top 1% income recipients work in financial markets, though they make up only 3% of the tax payers. In France, where a finer split exists, 40% of the salaried top 1% earners are managers in headquarters of companies, while 15% work in the financial industry (INSEE, 2010). 4% are sportsmen or work in the media and entertainment sector. 87% of the top earners are men. Among the self-employed, doctors and lawyers are the largest group, with a share of 27% and 12%, respectively.

Forces shaping top income developments

The significant decline in top income shares until the 1980s has been shaped by a combination of factors (Atkinson *et al.*, 2011). The major ones include: *i*) the destruction of capital during the two world wars and war time inflation during the first world war or hyperinflation afterwards in some countries; *ii*) wealth losses due to the financial crisis of the 1930s; *iii*) a narrowing of the labour income distribution during the second world war, partly as a result of wage controls; *iv*) nationalisations after the second world

3. Capital gains data are only available for seven countries.

4. For the United States, Kaplan and Rauh (2007) estimate that among the top 0.1% earners, the most important groups are Wall Street-related professionals, non-financial public company CEOs and lawyers. These groups comprise between 15% and 26.5% of the individuals at and above the 0.1% top earners.

war; and v) income taxation, that became more progressive and taxation of inheritances and wealth, the latter making it more difficult for the top earners to accumulate wealth.

The more recent increase in top income shares has differed considerably across countries as has the timing when the increase started (Figure 2). Though it is clear that a sharp rise in capital income is not a major culprit, there is substantial disagreement about the causes of the rise in top incomes and their relative importance. Only a start has been made on testing different explanations and the impact of policy (Atkinson *et al.*, 2011).

Taxation

Top income tax rates have come down considerably and this may have contributed to boost the income declared by top earners to the tax authorities. Top marginal tax rates stood at or above 70% in the early 1980s in Italy, Japan and the United States and were above 50% in the other G7 countries, while they are currently between 40% and 50% in all G7 countries. Lower personal income tax rates can have several effects: *i*) They reduce the benefits of tax evasion and aggressive tax avoidance and can lead to tax planning that can imply more income taking the form of personal, rather than corporate income.⁵ *ii*) They raise incentives to work and foster entrepreneurial spirits.⁶ *iii*) They increase the ability of high earners to accumulate wealth.

Concerning work incentives, estimated elasticities tend to be small (Meghir and Phillips, 2010 and Gruber and Saez, 2002). These elasticities are based on a broad income concept, which includes also income items, including those that are untaxed. However, the elasticity of taxable income is substantially higher, at 0.57 in the United States, for high income individuals, largely because they engage in more tax planning and tax planning responds to marginal tax rates. In a review of the literature, Saez *et al.* (2009) report a similarly-sized taxable income elasticity for Canada (after controlling for top incomes in the United States), Sweden and the United Kingdom. These estimates are semi-elasticities. At a marginal tax rate of 50%, a rise in the tax rate to 51% leads to a decline in tax receipts of 1%.

For Canada, Department of Finance Canada (2010) reported that the taxable income elasticity is rising sharply among top income earners: the elasticity is 0.2 for the top 10%, but larger than 0.5 for the top 1%. In a study that estimates elasticities by income source for Canada, a very high elasticity was found for self-employment income and a very low one for labour income. A similar difference was found in a Swedish study. There is thus considerable evidence that the elasticity of taxable income is higher for high-income individuals who have access to avoidance opportunities, but that it also depends on the income source and the broadness and extent of enforcement of the tax base.

Tax avoidance incentives are also shaped by the different treatment of income sources. Capital gains on shareholdings escape the income tax rate schedule in many countries. Capital gains are often taxed at a lower, flat rate, while a few countries do not tax capital gains at all (Table 1). And in a qualitative

5. In the United States the use of “pass-through” entities has risen considerably since the 1986 tax reform, which brought the personal below the corporate income tax rate (CBO, 2011).

6. Andrews *et al.* (2010) investigated the link between rising top incomes and growth. They found evidence that from 1960 to 2000 a rise in top income shares was associated with a rise in growth rates during the following year, but the effect is fairly small. They also found that as long as the increase in top income shares persists, the rise in the growth rate also persists. Initially, increasing the share of income going to the top decile lowers the income of the bottom nine deciles. But if the positive effect of greater inequality on growth persists indefinitely, the resulting rise in total income will eventually exceed the loss entailed by lowering the share of personal income going to the bottom nine deciles, but this would take 13 years to materialise.

assessment of the taxation of stock options, OECD (2005) found that the tax treatment was preferential in many, though not all OECD countries. The same probably holds for carried interest arrangements,⁷ though such schemes are not well documented. The differential tax treatment favours mainly executives, finance professionals and entrepreneurs and there is no apparent market failure that would justify a preferential treatment (Matthews, 2011).

Apart from the decline in income tax rates, the taxation of property has come down as a per cent of total taxation, despite the sharp rise in property values in most countries. Dwindling taxation of property, wealth and inheritances makes it easier to accumulate wealth. Table 1 shows that many countries do not tax wealth, or abolished wealth taxation in recent years and tax revenues tend to be small. While most countries tax inheritances and gifts, tax receipts are small also in this case in most countries. For the United States, Burman *et al.* (2008) show that the federal estate tax is the most progressive tax, applying to only the wealthiest 2% of descendants. Finally, Joumard *et al.* (2012) show that residential property taxation can be progressive or regressive, depending on the features of the property taxation system. While the high elasticities of taxable income imply that taxing the top earners more heavily may not raise much additional government revenue, reducing tax avoidance incentives and raising property taxation would reduce the after-tax income of top earners and thus inequality.

Technical progress and globalisation

Skill-biased technical progress could have played some role in raising the top part of the income distribution, but it cannot explain the rising income concentration among the top 10% income earners, as they do not include unskilled individuals. On the other hand, globalisation in tandem with new information technologies has widened the market for “stars” for some professions (Rosen, 1981), which is likely to be one reason for the increasing inequality among the top earners. Globalisation has also led to a sharp increase in the market capitalisation of large, multi-national companies, with the rise in pay of US top managers closely following the rise in company size (Gabaix and Landier, 2008).

Migration is also likely to have played a role. Saez and Veall (2005), for instance, find that the US top income share has a considerable influence on the Canadian one, while Atkinson and Leigh (2008) finds a similar effect of UK and Australian income shares on the top incomes in New Zealand. Migration could thus provide a strong link between top incomes that is likely to be stronger for the English-speaking countries.

Remuneration issues

While most labour market policy instruments or institutions, such as minimum wages or collective bargaining are unlikely to affect top earners, the growing use of performance-related pay and changes in pay norms, including in the remuneration of top executives, certainly have. For the United States, for instance, Lemieux *et al.* (2007) found that nearly all of the change in the wage dispersion of the top 20% earners is due to the spread of performance-related pay. Moreover, Gordon and Dew-Becker (2008) have argued that the winner-takes-all pay-off structure has spread beyond fields such as sport and entertainment, with rewards of CEOs or financial market traders depending heavily on performance relative to others. Conyon *et al.* (2009) estimated that executive pay in the United States is 23% higher than in the United Kingdom and 55% higher than in continental Europe.

7. Carried interest is a share of the profits of a partnership that is paid to the manager of the partnership (a private equity fund or hedge fund) as a form of compensation.

Table 1. The tax treatment of capital gains on shares, net wealth and inheritances

2010, resident taxpayers

	Shares	Rate and regime	Net wealth		Estate/ Inheritance	Gift	Weight in total tax revenues % ¹
			Tax imposed (Y) or not (N)	Weight in total tax revenues % ¹	Tax imposed (Y) or not (N)		
Australia	Taxable. Indexation or halving of capital gain allowed for disposals 1 year+	Marginal income tax rate	N	0.0	N (since 1979)	N	0.0
Austria	Not taxable except speculative gains	Normally zero/ half of effective income tax rate on speculative gains	N since 1994	0.3	N (from Aug 08)		0.1
Belgium	Not taxable except speculative transactions	Normally zero; 33% on speculative transactions; 16.5% on short-term immovable property gains	N since 2008	0.1	Y	N after 2 yrs	0.9
Canada	Taxable	50% of realised gains taxed at income tax rate	N	0.0	N ²	Y	0.0
Czech Republic	Not taxable	Not taxed	N	0.0	Y	Y	0.1
Denmark	Taxed as income from shares	28/43/45% above ceiling	N since 1997	0.1	Y	Y	0.5
Finland	Taxable as income from capital	Flat rate tax of 28%	N since 1/1/06	0.1	Y	Y	0.6
France	Taxable as professional income	Taxed at flat 18%	Y	0.4	Y	Y	1.0
Germany	Not taxable until 2010, except speculative gains: 1 year for shares	Normally zero; speculative gains taxed at income tax rates	N since 1998	0.5	Y	Y	0.4
Greece	Exempt prior to 1/1/2010	Now flat rate of 10% on shares	N	0.1	Y	Y	0.6
Hungary	Taxable	Flat rate of 25%	N	0.0	Y	Y	0.1
Iceland	Taxable	18% in 2010; 10% prior to June 2009	N since 2006	1.2	Y	N	0.2
Ireland	Taxable	Flat rate of 20% until 2008; 25% since April 2009	N	0.0	Y		0.5
Italy	49.72% subject to tax	Subject to progressive income tax rates 23%-43%	N	0.2	Y (since 1/1/07)		0.1
Japan	Withholding tax of 1.05% or tax assessment on 26% of proceeds	Taxed at 10%	N	0.0	Y	Y	1.5
Korea	Exempt	Not taxed	N	0.0	Y	Y	0.9
Luxembourg	Taxable as miscellaneous income; speculative gains as ordinary income	Maximum rate of 19.5%	N since 2006	5.6	Y	Y	0.3

Table 1. Tax treatment of capital gains on shares, net wealth and inheritances, *continued*

Shares	Rate and regime	Net wealth		Estate/ Inheritance	Gift	Weight in total tax revenues % ¹	
		Tax imposed (Y) or not (N)	Weight in total tax revenues % ¹	Tax imposed (Y) or not (N)			
Mexico	Exempt when securities are classified as available to the general public	Subject to income tax rates	N	0.0	N	N among families	0.0
Netherlands	Not taxable	Not taxed	N since 2001	0.3	Y	Y	0.7
New Zealand	Not taxable	Not taxed	N	0.0	N (since 1992)	Y	0.1
Norway	Taxable	Included in taxable income	Y: up to 0.7% municipal & 0.4% national	1.3	Y	Y	0.2
Poland	Taxable	Flat rate of 19%	N	0.0	Y	Y	0.1
Portugal	Taxable	10% unless the taxpayer opts for its inclusion in his taxable income	N	0.0	N since 1/1/04		0.2
Slovak Rep	Exempt up to a ceiling	Flat rate of 19%	N	0.0	N since 1/1/04		0.0
Spain	Treated as ordinary income	Income tax at rates of 24-43%	N since 1/1/08	0.5	Y	Y	0.6
Sweden	Included in income from capital	Flat rate tax on capital income: 30%	N since 2007	0.4	N	N	0.0
Switzerland	Exempt except for professional share dealing	Cantons set their own tax rates	Y at cantonal level	4.5	Y	Y ³	0.9
Turkey	Taxable but exemption for shares in resident companies held for 3-12 months	Income tax rates: 15-35% with inflation adjustment	N	0.0	Y	Y	0.1
United Kingdom	Taxable	Marginal income tax rate before 2008/9; now at a flat rate of 18%	N	0.0	Y	Y	0.6
United States	Taxable	Short-term gains taxed at income tax rate; long-term gains (more than a year) 5-15% until 2010.	N	0.0	Y ²	Y ²	1.0

1. The period average is 1985 to 2008, except for the countries, where only a shorter sample is available.

2. Estate tax and generation-skipping transfer tax were gradually phased out from 2002 to 2010 but have been partially reinstated in 2011 to 2012.

3. No at the federal level, but most cantons levy such taxes.

Source: Price, W.R. and T.T. Dang (2011), "Adjusting Fiscal Balances for the Asset Price Cycle", *OECD Economics Department Working Paper*, No. 860.

The link between corporate governance and executive compensation is likely to differ between the English-speaking and other countries. In the English-speaking countries, companies claim to maximise shareholder value and compensation practices seek to align the interests of the executives with those of the shareholders. Hostile takeovers are a device to discipline managers and performance-related pay aligns the interest of management with that of the dispersed shareholders. In Europe and Japan, this principal-agent dilemma applies less directly, as other stakeholders are more powerful. Banks are key players in financing

firms and there is often an attendant close relationship between banks and companies. Moreover, businesses and labour unions often tend to co-operate and exchange information. Consultations with worker representatives before important decisions, including on pay, are made, are likely to have at least some influence on the pay of top executives and how performance-related pay is structured (McCall and Percheski, 2010 and Sjöberg, 2009).

The economic and financial crisis also brought remuneration issues in financial markets to the fore. In financial markets, managerial compensation schemes were skewed towards the short term and fostered excessive risk taking. Moreover, managers often have an influence on the terms of performance-based pay and pay was often not closely linked to performance, especially in the case of losses. The FSB (2009) suggested that compensation practices should be harmonised for large, systemically relevant banks and other financial institutions. Compensation packages should include deferral, vesting and claw-back clauses and bonus payments should be limited (as well as dividend pay-outs), when regulatory capital is close to the minimum.⁸

8. The UK government slapped a bank payroll tax on banks that awarded discretionary bonuses above £25 000 between December 2009 and April 2010. The banks awarding these bonuses had to pay tax of 50% on bonuses above £25 000. As the tax did not reduce bonus payments, but was paid by the employers, the government introduced a permanent bank levy. Also the non-taxation of overseas income and capital gains of the non-domiciled, many of which work in the financial sector was abandoned. They now pay a flat tax of £30 000, when staying in the United Kingdom for seven years and £50 000 after 12 years. Also the low taxation of carried interest (at only 10%) aroused quite some discussion, and it was raised to 18% in 2008.

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