TAX REFORMS AND TAX BURDENS IN SELECTED OECD COUNTRIES

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ABSTRACT

Recently (since 2000), there has been discussion in many states about possible elimination of the complications in relation to personal income tax, e.g. the countries of Central and Eastern Europe in particular tend to consider a new tax phenomenon – an even tax rate[1]. An even tax rate has become a part of the Czech tax system since 1/1/2008.

Such a rate is - viewing the existence of deductibles, allowances or tax credits – progressive tax as well, though. Moreover, the nominal tax rates predicate the real rate of taxation insufficiently. A more objective way of measuring the tax circumstances of taxpayers in individual countries is relative indicators such as the tax burden of a taxpayer with an average wage, the calculation of an efficient tax rate or measuring the tax progressiveness.

The aim of this paper is to compare the development of the tax burden in selected OECD countries. The achieved results and adopted methodology can help to evaluate the changes of the tax system in other countries.

1. INTRODUCTION

Many OECD countries have engaged in fundamental reforms of their tax systems. These reforms have tried to create a competitive fiscal environment, which encourages investment, risk taking and entrepreneurship and provides increased work incentives. At the same time, fairness and simplicity have become the byword of reformers. Fairness requires that taxpayers in similar circumstances pay similar amounts of tax and that the tax burden is appropriately shared. Simplicity requires that paying taxes becomes as painless as possible and that the costs of collecting taxes are kept at a minimum. Almost all of these tax reforms reduced the tax rates and broadened the tax base. Many countries have moved away from comprehensive personal income tax systems, which tax all or most wage and capital income according to the same progressive rate schedule. A number of alternative tax systems have been introduced. The dual income tax system established in the early 1990s in the Scandinavian countries taxes personal capital income at low and proportional rates while labour income continues to be taxed at high and progressive rates. More recently, flat tax proposals have been put high on the political agenda. Flat tax reforms mainly consist of two elements: reducing the tax rate schedule to a single rate and eliminating special tax reliefs, with the possible exception of a basic allowance.[2]

There are large differences between OECD countries in the share of personal income tax as a percentage of both total tax revenue and GDP. There are substantial differences between OECD countries in the level of personal income taxes and in the reliance on social security contributions also. Recently at personal income taxes there is a general trend of reducing tax rates at all income levels. It also suggests a reduction in the use of high marginal rates for top-

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[1] The author purposely avoids the term "even tax", because at deductibles, allowances or tax credits existence, "even tax" will always be progressive tax and theoretically the value of an efficient tax will achieve the "even tax" value in infinitude.

[2] OECD Tax Policy Studies, No. 9, 2004.

income earners as a vehicle for income redistribution. The number of brackets in the personal income tax system in 2007 varies from just one rate in the Slovak Republic to 17 in Luxembourg.

The nominal tax rates predicate the real rate of taxation insufficiently which is related to countries with the so-called even tax rate as well. A more objective way of measuring the tax circumstances of taxpayers in individual countries is relative indicators such as the tax burden of a taxpayer with an average wage, the calculation of an efficient tax rate or measuring the tax progressiveness.

The paper is focused on the development of the tax wedge, the progressiveness and individual and household tax burden. The tax burden is analysed in OECD countries during the period 2000-2007. The paper deals with cross-national comparisons and the aim of this paper is to compare the development in OECD countries during the period.

2. EFFECTIVE TAXATION

The legal regulation itself tells very little about what part of their personal income the taxpayers pay to the government. We have to look into the effective taxation which finds out how the legal form of a tax system transforms into the effective tax burden. Effective taxation is characterized by the average tax rate that is defined as per cent ratio of the tax obligation to gross pay. Tax rebates do not work with the average rate; it is construes by the tax theory for measuring the tax burden. It is then dependent on the amount of the statutory limit rates, the width of tax brackets and construction of the tax base (exemption, deductibles, credits, etc.).

Calculations of the average rate of various types of taxpayers are used for international comparison. In principle this is assessment of two aspects: degree of tax burden and degree of tax progressiveness. While the degree of tax burden only tells what part of their income the taxpayers pay in form of tax, the degree of progressiveness characterizes the degree of difference of the tax burden of individual taxpayers according to their income.

According to the tax progression, the tax can be proportional, progressive and regressive. Tax is progressive if the average tax rate grows together with growth of the gross income, and there are more characteristics: e.g. we can say that tax grows more quickly than income.

3. METHODOLOGY

The personal circumstances of taxpayers vary greatly. To identify representative taxpayers and to calculate the amount of their taxes, this paper uses a specific methodology. The focus is on employees. It is assumed that their annual income from employment is equal to a given fraction of the average gross wage earnings of adult, fulltime workers in a broad range of industry sectors of each economy.

Taxes paid and cash transfers received by employees are presented for one-earner and two-earner families at various fractions of average gross wage earnings. The number of taxpayers with the defined characteristics and the wage level of the average workers differ between particular economies.

I. Calculation of gross wage earnings

The average earnings are determined for the standard definition of "average workers". Levels of gross wage earnings have been established using statistical data. Earnings levels for the year 2007 were estimated, as relevant statistical data were not available.

II. Taxpayer characteristics

The main analyse is focused on:

- a single individual with no children earning 67 % (two-thirds), 100 % and 167 % (five-thirds) of the average earnings level.

Moreover, there is mentioned the development of the tax burden in following types of households:

- a lone parent with two children earning 67 % (two-thirds), 100 % and 167 % (five-thirds) of the average earnings level;
- a married couple with two children with a single earner at the average earnings level;
- three cases of two-earner married couples, with earnings split between the two partners at 100-33 (one-third) per cent of the average earnings level, both with and without children, and finally a couple with children with the earnings split 100-67 (two-thirds) per cent of the average earnings level.

III. Calculation of personal income taxes

The method by which income tax payments are calculated is following: first, the tax allowances applicable to a taxpayer with the characteristics and income level related to gross annual wage earnings of an average worker are determined. Next, the schedule of tax rates is applied and the resulting tax liability is reduced by any relevant tax credits. An important issue that arises in the calculation of personal income tax due involves determining which tax reliefs should be taken into account. Two broad categories of reliefs may be distinguished:

- Standard tax reliefs: reliefs which are unrelated to actual expenditures incurred by the taxpayer and are automatically available to all taxpayers who satisfy the eligibility rules specified in the legislation. Standard tax reliefs are usually fixed amounts or fixed percentages of income and are typically the most important set of reliefs in the determination of the income tax paid by workers. Standard reliefs are taken into account in calculating the tax position of employees and include:
  - The basic relief which is fixed and is available to all taxpayers or all wage earners, irrespective of their marital or family status;
  - The standard relief which is available to taxpayers depending on their marital status;
  - The standard child relief granted to a family with two children between but not including the ages of five and twelve;
  - The standard relief in respect of work expenses, which is usually a fixed amount or fixed percentage of (gross) wage earnings;
  - Tax reliefs allowed for social security contributions and other (sub-central government) income taxes are also considered as standard reliefs since they apply to all wage earners and relate to compulsory payments to general government.

- Non-standard tax reliefs: These are reliefs which are wholly determined by reference to actual expenses incurred. They are neither fixed amounts nor fixed percentages of income. Examples of non-standard tax reliefs include reliefs for interest on qualifying loans (e.g. for the purchase of a house), private insurance premiums, contributions to private pension schemes, and charitable donations. These are not taken into account in calculating the tax position of employees.

4. TAX-BURDEN TRENDS

During this period (2000-2007), income tax schedules have tended to become less progressive with fewer tax brackets and reduced tax-rate differences between the bottom and top tax brackets. Out of the 30 OECD countries, only three have increased the number of tax rates (**Canada, Portugal, United States**) and five others use the same tax rates as in the year 2000 (**Japan, New Zealand, Poland, Sweden, United Kingdom**). Two countries operate single ("flat") rate tax schedules in 2006 (**Iceland, Slovak Republic**).

In a few countries, there has been a move away from tax allowances or deductions, which mainly benefit higher-income groups, towards tax credits, which tend to be more beneficial to low-income taxpayers (**Czech Republic, Netherlands, and Sweden**). Similarly, a number of countries have introduced employment-conditional benefits or tax credits (**Belgium, Denmark, Finland, France, Hungary, Netherlands, and New Zealand**) or made existing measures more generous (**United Kingdom**). Most of these new or additional in-work benefits were targeted at families with children. Other types of family benefits also saw increases in most countries. Yet, relative to earnings levels, benefit levels declined in **Finland, Iceland, Italy, Norway, Portugal** and the **Slovak Republic**. Trends in social contribution rates were less clear-cut. In most countries, employees paid roughly the same rates in both years although contribution rates increased in **Germany**, **Korea**, **Poland**, the **Slovak Republic**, **Turkey** and the **United Kingdom**. Employer contribution or payroll tax rates remained unchanged or declined in most countries. However higher rates or changes to the structure of contribution schedules resulted in higher employer contributions or payroll taxes in a minority of countries, including **France**, **Japan**, the **Netherlands** and **Turkey**.

4.1 A note to historical trends in OECD countries

The OECD average tax wedge[3], the income tax burden and the net tax burden (personal income tax plus social security contributions less cash benefits) have all tended to decline when one compares the levels in 2007 with those in 2000 for all of the family types. The reductions over the period in the OECD average have been 1.2 percentage point or less except for married couples where the principal earns the average wage and the spouse earns one-third of the average wage (a reduction in the tax wedge of 1.4 percentage points) and single parents (a reduction in the tax wedge of 1.9 percentage points). The reductions in the EU-15 and EU-19 averages have been larger for all family-types.

In terms of the OECD <u>average tax wedge</u>, it has declined anywhere from 0.2 percentage points (for single average workers earning the average wage level) to a reduction of 1.9 percentage points (for single parents at two-thirds of the average wage level).

The change in the OECD <u>net average tax burden</u> ranges from +0.04 percentage points (for single average workers earning the average wage level) to –1.6 percentage points (for single parents earning two-thirds of the average wage level).

The OECD average personal <u>income tax burden</u> has declined for all family types in the period considered. The reduction ranges from 0.2 percentage point (for single average

[3] The tax wedges measure the difference between labour costs to the employer and the net take-home pay of the employee.

workers at the average wage level) to 1 percentage point (for married couples where the principal earns the average wage and the spouse earns one-third of the average wage level).

4.2 Tax wedge

Focusing on the overall (average) tax wedge, countries where there have been the most significant changes should be mentioned. The most significant reductions for at least one family-type, exceeding five percentage points, can be observed in eight OECD member countries – Australia, Hungary, Iceland, Ireland, the Netherlands, New Zealand, the Slovak Republic and Sweden.

The largest decline is observed in **Ireland** where single parents have benefited from a reduction in the wedge of 34.9 percentage points. In this particular case, all family types enjoyed a significant reduction in the wedge (only lower than five per cent (–3.1 percentage points) in the case of single workers earning two-thirds of the average wage level), ranging from a decline of 6.3 percentage points (single worker earning five-thirds of the average wage level) to 34.9 percentage points (single parent).

In **New Zealand** married couples earning the average wage level and single parents at two-thirds of the average wage level enjoyed a reduction of more than ten percentage points in the wedge.

The reductions observed in Australia, Hungary, Iceland, the Netherlands, the Slovak Republic and Sweden have been focused in nature as well. In **Australia**, single parents earning two-thirds of the average wage level (–5.4 percentage points), single workers at five-thirds of the average wage level (–5.6 percentage points) and one-earner married couples (–7.6 percentage points) have enjoyed the most significant reductions. In **Hungary**, single parents and single workers earning two-thirds of the average wage level are the families that have most benefited from the reduction in the tax wedge (–5.1 and –5.4 percentage points respectively). In **Sweden**, the tax wedge has been reduced by about 5 per cent for all family types except for single workers at five-thirds of the average wage level (–2.6 percentage points). In the **Slovak Republic**, the tax wedge for married couples at the average wage level and at four-thirds of the average wage level decreased by 6.2 and 5.6 percentage points respectively.

It is interesting to note that in **Iceland** single average workers earning five-thirds of the average wage level enjoyed the largest reduction in the tax wedge (–5.9 percentage points), while for single parents the tax burden increased 10.9 percentage points. Also, in the **Netherlands**, while the most significant reductions have affected single parents (–6.1 percentage points), the highest increase in tax wedge has affected one-earner married couples (7 percentage points).

The tax wedge has decreased for all family types in twelve of the OECD member countries (Australia, Belgium, Canada, Denmark, Finland, Hungary, Ireland, Luxembourg, the Slovak Republic, Sweden, Switzerland and the United States) while it has increased across all family types in seven countries (Austria, Greece, Japan, Korea, Mexico, Turkey and the United Kingdom).

4. 3 Personal average tax rate

Over the time period in question, the personal income tax burden has decreased for all family types in eight of the OECD member countries: Belgium, Canada, Denmark, Finland, Ireland, Poland, Sweden and the United States. The most significant reductions affecting all of the family types are noted in **Ireland** with a range of –8 percentage points (single workers at two-thirds of the average wage level and two-earning married couples with and without children where the spouse is earning one-third of the average wage level) to –2.2 percentage points (single parents earning two-thirds of the average wage level). In **Sweden**, the personal income tax burden has decreased more than five percentage points for all family types except for single workers at five-thirds of the average wage level (–3 percentage points).

There are seven other OECD member countries with reductions in the personal income tax exceeding five percentage points in some family types: Australia (–5.7 percentage points for single workers at five-thirds of the average wage level), Canada (–5.6 percentage points for single parents and –5.9 percentage points for one-earner married couples), the Czech Republic (–5.9 for one-earner married couples), Hungary (–7.6 for single workers at two-thirds of the average wage level), Iceland (–6.6 for single workers earning five-thirds of the average wage level), Poland (–5.3 percentage points for married couples where the spouse is earning one-third of the average wage level) and the Slovak Republic (–5.8 for single parents at two-thirds of the average wage level and –8.3 for one-earner married couples at the average wage level).

At the other extreme, the personal income tax burden has increased across all family types in six OECD member countries: Austria, Greece, Korea, Mexico, New Zealand and Japan, although the changes in Japan have been small (0.3-1.7 percentage points).

4.4 Net personal average tax rate

Turning to the *net* tax burden, which takes into account personal income taxes and employee social security contributions as well as cash benefits, one can observe that with the exception of Australia, Ireland and Sweden, the most significant reductions in the income tax burden have been diminished by increases in employee social security contributions and/or reductions in cash benefits. In the case of Australia, Ireland, the Netherlands and New Zealand, the changes to employee social security contributions and/or cash benefits have led to further gains over the time period in question particularly for single parents and one-earner couples.

The reduction in the net tax burden, with respect to 2000, exceeded five percentage points for single parents in Australia (–5.3 percentage points), the Netherlands (–7 percentage points) and New Zealand (–12.3 percentage points) and for one-earner married couples in Australia (–7.8 percentage points) and New Zealand (–10.8 percentage points). Additionally, in this period the tax burden decreased 7.2 percentage points for two-earner married couples where the spouse is earning one-third of the average wage level in New Zealand. The net tax burden decreased in Iceland by 6.6 percentage points and in Australia by 5.7 percentage points for single workers earning five-thirds of the average wage level. In the case of **Ireland**, the net tax burden has decreased across all family types, the savings being particularly significant for families. The reductions range from –5.3 percentage points for single workers at two-thirds of the average wage level to –40.9 percentage points for single parents. Also in **Sweden**, the net tax burden has decreased by more than 5 percentage points for all family types except for single workers at five-thirds of the average wage level (–3.2 percentage points).

Additionally, between 2000 and 2007, eight OECD countries experienced a reduction of the net personal income tax for all family types: Australia, Canada, Denmark, Finland, Ireland, Luxembourg, Sweden and the United States.

During the period considered, five OECD countries show an increase exceeding five percentage points in the net tax burden for one or more family types: Iceland (single parents: +10.8 percentage points; one-earning married couples: +6.5 percentage points; two-earning married couples where the spouse earns one-third of the average wage level: +5.4 percentage points), the Slovak Republic and Austria (single parents: respectively +6.6 and +5.3 percentage points) and Turkey (single workers earning five-thirds of the average wage level: +5.4 percentage points).

4.5 Progressivity

The degree of progressivity of the personal income tax system can also be assessed by comparing the burden faced by single persons earning two-thirds of the average wage with the burden faced by their counterparts earning five-thirds of the average wage. For all OECD countries and for all years the lower paid worker always pays a lower percentage of income in personal income tax than the higher paid worker.

By comparing the situation in 2000 versus the one in 2007, one can assess whether there has been any change in this measure of progressivity. On average, the progressivity of the personal income taxes has not changed in OECD countries. On average, the single worker earning two-thirds of the average wage level paid 48 per cent in 2000 and 2007 of the tax burden of the worker earning five-thirds of the average wage level.

When one compares the situation in each OECD country, one observes that personal income taxes have become more progressive in sixteen countries, although none more so than in Ireland, where the burden of the lower paid worker in 2000 was about two-fifths of the higher paid worker while in 2007 the burden of the lower paid worker represents only about 15 per cent of that for the higher paid worker.

Personal income taxes have become slightly less progressive (using this measure) in thirteen OECD countries: Australia, Austria, France, Germany, Greece, Iceland, Korea, Mexico, Norway, Spain, Switzerland, Turkey and the United States.

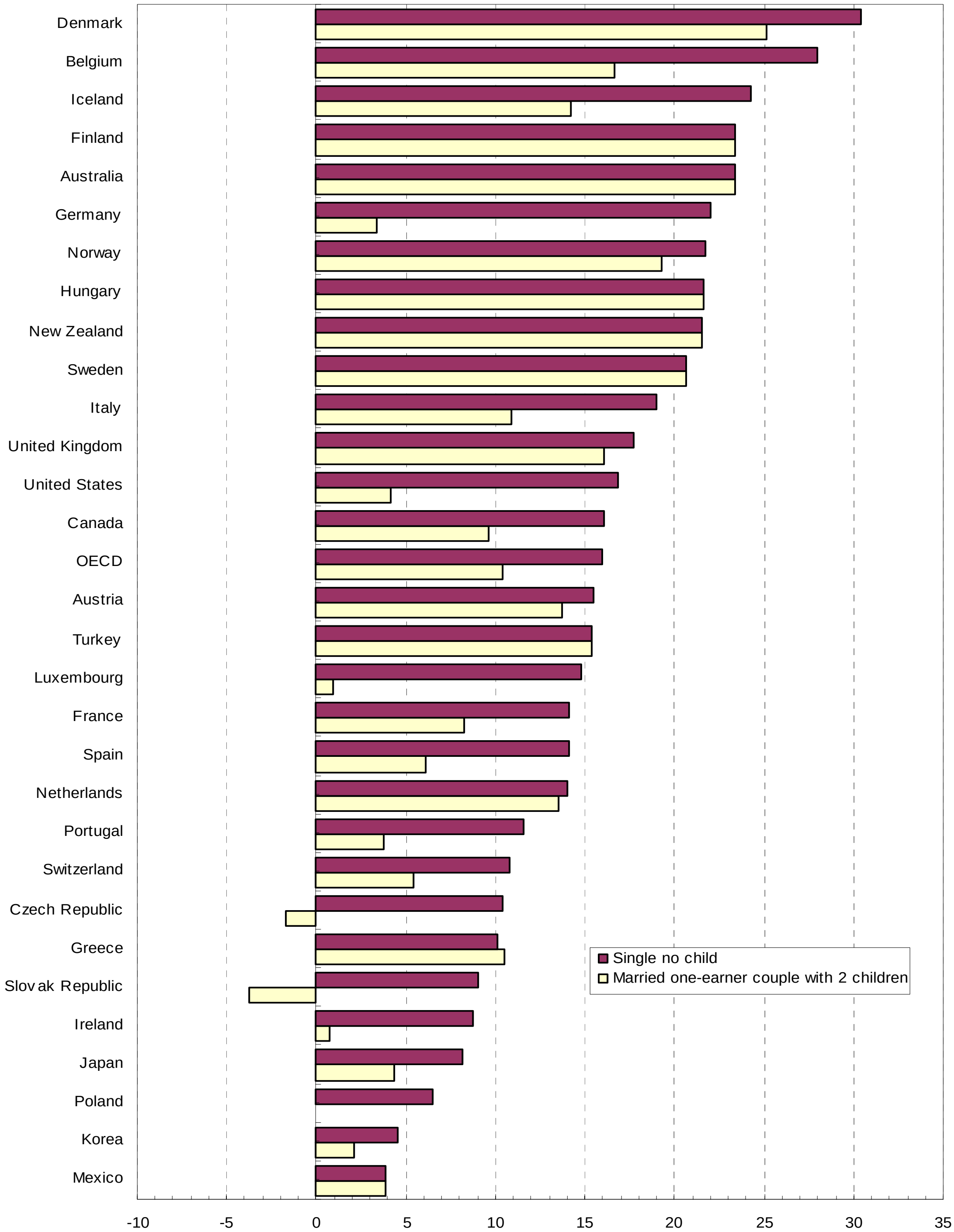
4.6 Families

One can compare the tax burdens faced by a one-earner married couple at the average wage with two children and the single worker at the same income level without children. Focusing on the net tax burden (personal income tax plus employee social security contributions less cash benefits), one observes that the OECD average fiscal savings (the difference between the personal tax of a single worker and that of a married one-earner couple) enjoyed by a one-earner married couple relative to a single worker at the average wage have slightly increased between 2000 and 2007 (+1 percentage points).

The savings for the one-earner married couple have increased in 16 countries and declined in 12 others. In two countries, the fiscal savings have increased by more than 5 percentage points: in Ireland (increasing 11 percentage points from 14.9 to 25.9 per cent of income) and New Zealand (increasing 12.9 percentage points from 5.8 to 18.7 per cent of income).

5. RESULTS AT SELECTED GROUPS OF TAXPAYERS

Figure 1: ***Income tax, by family type, as % of gross wage earning, 2007***



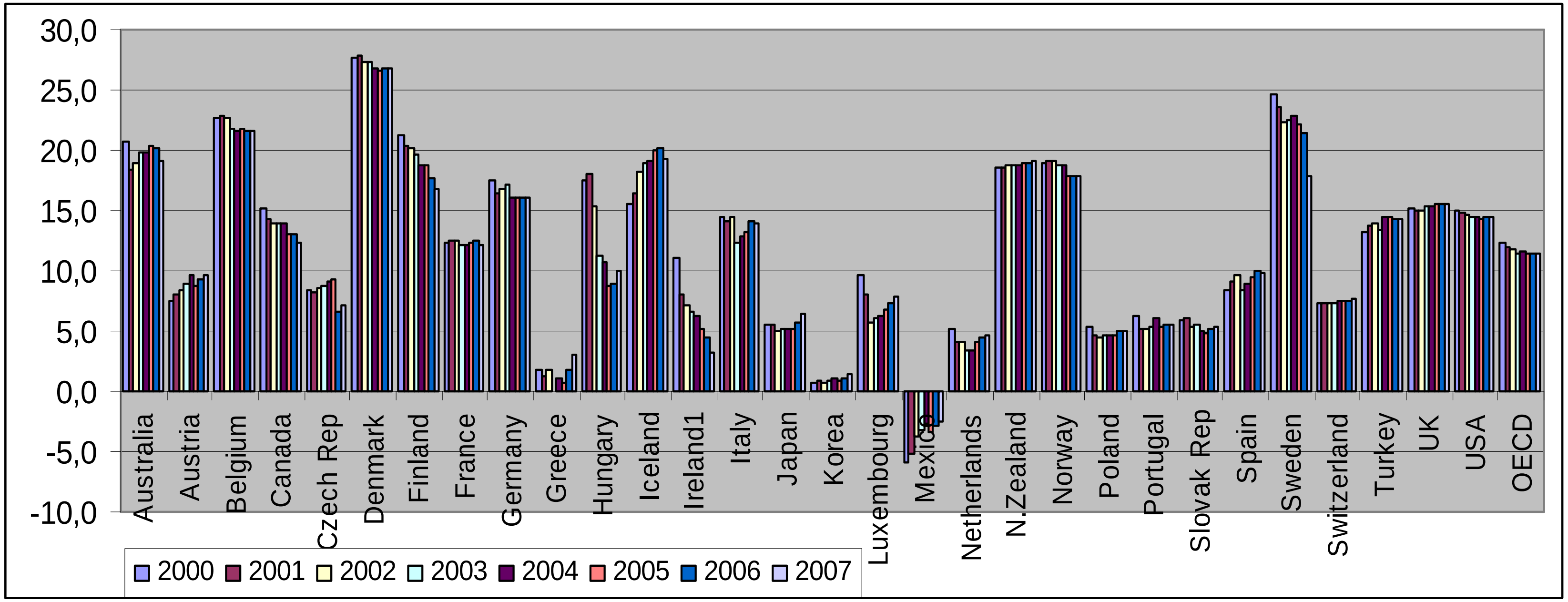
Source: OECD Taxing Wages (2008).

The figure is focused at taxpayers with 100 % of average earnings. In 2007 the income tax (as % of gross wage earnings) is highest in Denmark at the single person without children as well as at married one-earner couple with 2 children; then in Belgium.

The lowest income tax (as % of gross wage earnings) is in Mexico (at a single person without children) and in the Slovak Republic (at married one-earner couple with 2 children).

Graphs 2, 3 and 4 are focused on the evolution of the tax burden at a single person without children at 67 %, 100 % and 167 % of average earnings.

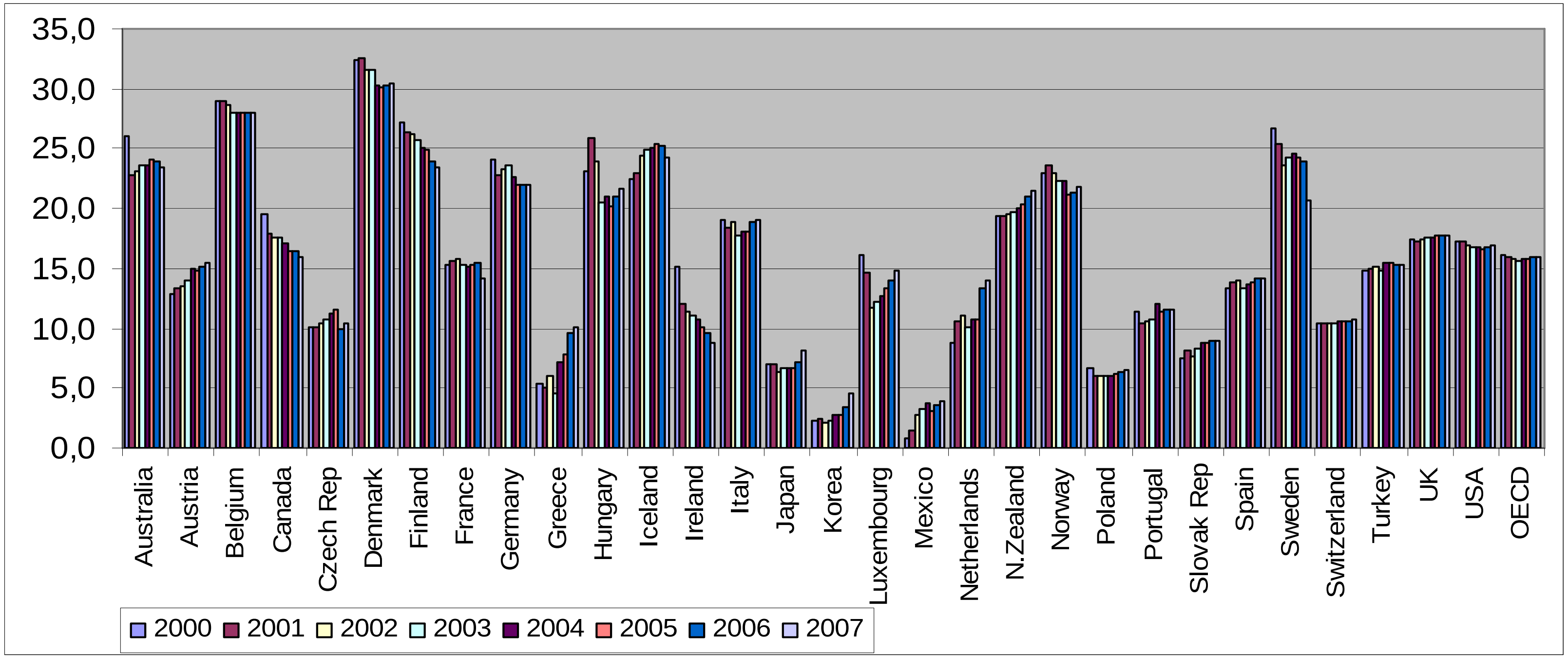
Graph 2: ***Evolution of the tax burden - Single person without children at 67 % of average earnings (income tax as a % of gross wage earnings)***



Source: own work based on OECD database, 2009.

Generally the highest tax burden is in Denmark in the whole period 2000-2007, then in Sweden and in Belgium. The lowest tax burden for a single person without children at 67 % of average earnings is in Mexico.

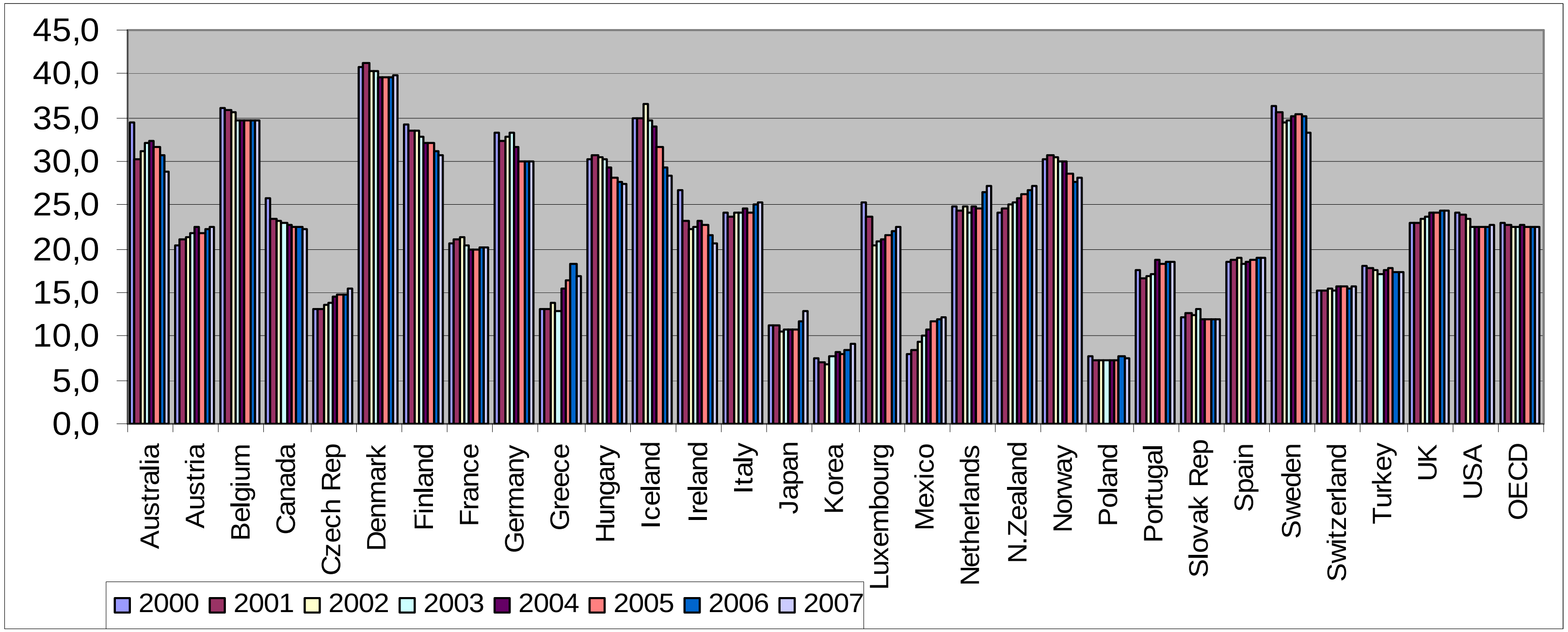
Graph 3: ***Evolution of the tax burden - Single person without children at 100 % of average earnings (income tax as a % of gross wage earnings)***



Source: own work based on OECD database, 2009.

The tax burden at a single person without children at 100 % of average earnings is generally higher then at a single person without children at 67 % of average earnings. The highest tax burden is still in Denmark, the second highest tax burden is in Belgium, the third is in Finland. The lowest tax burden is in Mexico (2.8 % on average) and Korea (2.83 % on average).

Graph 4: ***Evolution of the tax burden - Single person without children at 167 % of average earnings (income tax as a % of gross wage earnings)***



Source: own work based on OECD database, 2009.

The tax burden at a single person without children at 167 % of average earnings is higher then the tax burden at a single person without children at 67 % and 100 % of average earnings.

The highest tax burden is at all analysed earnings at a single person without children in Denmark, the second highest tax burden is at a single person without children at 167 % of average earnings in Belgium (35.1 % on average) and in Sweden (35.0 % on average).

The lowest tax burden is not in Mexico as at a single person without children at 67 % and 100 % of average earnings, but in Poland (7.45 % on average).

6. CONCLUSIONS

On average across the OECD, tax wedges at most earnings levels have declined somewhat during the 2000-2007 period. The policies adopted in different countries, and their effects on after-tax incomes and labour costs, have differed markedly however. While most countries have implemented tax-cutting measures, such as lowering tax rates or making tax concessions more generous, these initiatives have not always led to the significant tax-burden decreases one might expect.

Where the effect of measures aimed at reducing tax burdens was limited, the main reason was a lack of regular adjustments of tax policy parameters to higher earnings levels. In many OECD countries, average full-time earnings have increased considerably over the period. With progressive tax systems in place, higher earnings usually translate into higher tax burdens (fiscal drag). Unless tax systems are adjusted to compensate these effects, the evolution of earnings levels can have substantial effects on the tax burdens employees face. Without counter-balancing policy measures, the combination of inflation and real earnings growth would have led to significant tax-wedge increases in almost all OECD countries. The fiscal drag effect is especially strong where tax systems are particularly progressive or where earnings growth has been above-average (*e.g.* Greece, Iceland, Korea, and Mexico).

As a result of generous targeted tax cuts or benefit increases, families with children in a number of countries, including Australia, Ireland and New Zealand, tend to be better off, with lower tax burdens and more net income to spend in 2006 than six years earlier. Benefits and tax reliefs also represent significant proportions of the incomes available to families with children in other countries.

Across the OECD, tax-burden changes have tended to favour low-wage earners. But in a significant minority of countries, tax reforms have mainly benefited higher-income groups. Like families with children, low-wage earners also benefit from targeted tax concessions in a large number of OECD countries. Where such tax reliefs exist, fiscal drag can erode their value over time and, as a result, have particularly strong effects on low-wage earners.

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