**The IBC Taxation Index**

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**An International Comparison of the Effective Tax Burden
of Companies and on Highly Skilled Manpower**

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**Executive Summary**

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**Aim of the study and method applied**

Companies pay taxes on profits and capital. Also, under competitive labour markets for highly skilled employees, companies have to compensate these employees for international differences in labour tax burdens. Both elements thus constitute a tax burden on companies and influence the attractiveness of a particular region as a location for investment.

This study presents estimates of the effective level of taxation in 143 regions of eight European countries and the United States. It consists of two separate parts: The first part focuses on the taxation of profits and capital, whereas the second part considers the tax burden on highly skilled manpower. Although both parts rely on different models for estimating effective tax burdens, both models share the same spirit. The qualitative results of both parts can be compared, and common conclusions from both parts can be drawn.

The study was prepared for the **«IBC BAK International Benchmark Club»**®, which evaluates and compares economic performance and location factors across European regions. The headline figures of this Executive Summary represent the **IBC Taxation Index** (see Table 5). This Index will be updated regularly in the future so as to illustrate trends in the effective tax burdens of companies and on highly qualified employees.

The scope of the study is threefold:
− First, due to a great number of relevant tax rules, effective tax burdens may differ significantly from statutory tax burdens. Therefore, the analysis quantifies meaningful

estimates of effective tax burdens. These estimates take into account the most important rules of all the relevant taxes. For company taxation, these include the corporation tax with surcharges, other profit related taxes, real estate taxes, and specific taxes based on capital. For the taxation of highly skilled manpower, the study considers income taxes including surcharges, tax-like social security contributions as well as wage taxes paid by the company.

− Second, taxation is deemed to be an important location factor. In order to compare the attractiveness of different locations from a tax perspective, the study compares effective tax burdens inter-regionally and internationally.

− Third, an effective tax rate is always the result of each particular case. To identify the general context, and to find out the most relevant tax provisions in different economic constellations, the so-called tax drivers, the study examines the effect of important tax provisions on effective tax burdens.


**Company Taxation**

To quantify and compare effective company tax burdens, we calculate effective average tax rates (EATRs), effective marginal tax rates (EMTRs), and costs of capital based on the approach developed by Devereux and Griffith. This approach builds on and extends the approach by King and Fullerton, which has been applied for a previous study on company taxation presented at the International Benchmark Forum in 2001.[1] Despite its only recent introduction, the approach by Devereux and Griffith has already been used for a number of international tax burden comparisons, for example by the Bertelsmann-Stiftung, the European Commission, and the German Council of Economic Experts (*Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung*).

In the base case which defines the **IBC Taxation Index** for companies, the study assumes a corporation in the manufacturing sector which undertakes a particular mix of investments and uses a particular combination of sources of finance. The types of investment considered are intangibles, industrial buildings, machinery, financial assets, and inventories. The sources of finance are new equity capital, retained earnings, and debt. The parameters defining the base case are varied to check the sensitivity of the results.

The tax rates computed for each region comprise taxes levied at the national, the state and the municipal level. According to the structure of the International Benchmark Report, the study uses as geographical units all nine Austrian states, 19 French departments, 63 German labour office districts, 33 provinces of Northern Italy, four Dutch cities, twelve cantons in Switzerland, and one municipality of each Ireland, Massachusetts (United States), and the United Kingdom. In order to have a measure for the taxes levied by municipalities, in each of these geographical units one major city is chosen.

The study focuses on the effective tax burden at the corporate level, which is especially relevant for the choice of location of international corporations. Therefore, taxes on corporate income and capital are included. The calculations consider the statutory tax rates of these taxes as well as the interaction of different kinds of taxes and the most important rules for the definition of the tax base, e.g. differences in depreciation allowances and inventory valuation.

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[1] See Gutekunst, G., and R. Schwager, Steuerbelastung von Unternehmen im Alpenraum, Baden-Baden 2002.

The headline results are expressed by the EATR. EATRs indicate the effective tax burden on a very profitable investment; they are an important indicator for the attractiveness of a location for international companies.

The results indicate that there is considerable dispersion of the EATRs between the countries of the enlarged Alpine Space (see Table 1). The EATRs range over 23.5 percentage points, from 13.8 % in Zug, Switzerland, to 37.3 % in Frankfurt, Germany. Whereas Ireland and Switzerland display comparatively low effective tax burdens, locations in France, Germany, and the United States show the highest EATRs. This finding suggests that the attractiveness of particular locations from a tax perspective differs dramatically, with Switzerland and Ireland as especially attractive countries.

Statutory profit tax rates are found to be very important tax drivers for profitable investments. However, tax burdens always depend on the individual characteristics of each investment, thus special rules regarding the tax base or property taxes may be very relevant in particular cases. French corporations carry an extra tax burden in form of the *taxe professionnelle*, whereas Italian corporations take advantage of a comparatively favourable definition of the corporate tax base. Although the combined statutory profit tax rate in Italy (38.25 %) is significantly higher than the one in France (35.43 %), effective tax burdens are lower in Italy than in France. In Austria, corporations can take advantage of a dual income tax regime which provides a reduced tax rate on a part of the profits if equity is added to the company. Furthermore, an incremental investment tax credit (*Investitionszuwachsprämie*) is granted for additional investments. If Austrian companies can take full advantage of these measures, effective average tax burdens are reduced by about four percentage points.

The study examines not only the international variation of effective tax burdens, but also inter-regional differences within each country. There is great inter-regional variation among the assessed Swiss cantons, with the cantons of Zug and Schwyz ahead of the others. Whereas the EATR for Zug is 13.8 %, it is 22.8 % for Basel-Landschaft. Moderate inter-regional variation exists in Germany, where the levels of the trade tax (*Gewerbesteuer*) and the real estate tax (*Grundsteuer*) vary between municipalities. Effective tax burdens range from 32.9 % in Weilheim to 37.3 % in Frankfurt. A smaller degree of inter-regional variation is found in France (32.1 %, Paris, to 35.7 %, Isère). In Austria (30.4 %), Italy (31.6 % to 31.8 %), and the Netherlands (30.2 % to 30.3 %), inter-regional variation is not or almost not relevant, as regional and local governments do not have autonomy over important corporate taxes, or do not make use of it. In general, however, the study finds that – with the exception of Switzerland – national tax legislation dominates the size of effective tax burdens.

A second set of results is expressed by the EMTR. Although EMTRs are less relevant than EATRs for international location decisions, these figures provide some useful supplementary information on effective tax burdens of companies. In contrast to EATRs, EMTRs indicate the effective tax burden on an investment that is marginal in economic sense, i.e. an investment that earns a net present value of zero. Such an investment limits the profitable investment opportunities of a company. The lower the EMTR at the corporate level, the larger the theoretically optimal level of investment. Also, a firm that faces a lower EMTR on its investment is deemed to have a competitive advantage over its competitors who face greater EMTRs.

The dispersion of effective marginal tax rates between the assessed regions is even greater than the dispersion of effective average tax rates. It ranges over 33 percentage points from 3.3 % in Austria in the case where the incentives fully apply up to 36.2 % in Isère, France (see Table 2). These results suggest that the optimal level of investment and the competitiveness of companies located in different regions also differ dramatically from a tax perspective. The impact of local and regional taxes – which are property taxes in most cases – on the EMTRs generally is stronger than their impact on EATRs. There is also a strong impact of targeted measures like investment tax credits or the dual income tax. Therefore, Austrian companies that can take full advantage of such measures display a very low EMTR. On the other side, there is a disadvantage for companies which have to pay substantial non-profit taxes. Non-profit taxes weigh especially heavily on investments with a low rate of return. Consequently, the attractiveness of France as expressed by the EMTR is even lower than the one expressed by the EATR.

The **IBC Taxation Index** for companies presents effective tax burdens as of 2003. For all regions, measures of the effective tax burden have been calculated also for the tax rules as effective in 2001 and 2002. Between those countries that display comparatively high effective tax burdens, Germany has temporarily increased tax burdens in 2003, whereas France has reduced its tax burden in 2002, which closed the gap between both countries that previously existed. Also, there have been significant changes in the Italian tax system during that period. At the lower end of the scale, Ireland has slightly increased the tax burden for manufacturing companies, thereby closing the gap between Ireland and the most favourable Swiss location, the canton of Zug.

Sensitivity analyses have revealed some interesting mechanics of the impact of taxation on effective tax burdens. E.g., the impact of French non-profit taxes heavily depends on the relative importance of fixed assets in the investment mix. French regions significantly improve their position compared with German regions when corporations are considered which hardly rely on buildings and machinery, as it is the case e.g. in the service sector. However, although some notable changes in the rankings occur, these changes are not strong enough to fundamentally challenge the main conclusions from the base case. With respect to EMTRs, the impact of the economic assumptions on the ranking is stronger than with respect to EATRs: The weight of various tax drivers compared with the weight of the statutory profit tax rate increases. Particular tax rules, e.g. the generosity of depreciation allowances, play a more prominent role, and the particular features of each individual investment become more important in determining the most tax efficient location.

A supplementary part of the study also considers shareholder taxation, i.e. the personal income tax on dividends, interest payments, and capital gains on the disposal of shares, the surcharges on the personal income tax, and individual net wealth taxes on shareholding and lending. We assume that the owners of a company are domestic resident shareholders who reside at the location of the company. The scope of this investigation is to evaluate the impact of shareholder taxation on the effective tax burdens presented above. The estimates provide valuable insights into the distortionary effects of domestic personal tax systems, especially with respect to financing decisions. Their meaning for the attractiveness of a location for investment is very limited, however.

In that constellation, effective marginal tax burdens are much more important than effective average tax rates. Consequently, we focus on the calculation of effective marginal tax burdens, which we express in terms of the cost of capital and the EMTR. In this setting, costs

of capital are indicators for the optimal level of domestic investment and the competitiveness of companies. EMTRs indicate the proportion of the pre-tax rate of return of the marginal investment that is taken by taxation. They mix information on the distortion of investment and financing decisions and information on the distortion of the saving decision of households; therefore, they have to be interpreted with great care.

Our results suggest that effective tax burdens at the overall level heavily depend on the tax status of the relevant shareholder. Whereas for zero-rate shareholders there is often a bias in favour of debt financing, top-rate shareholders frequently prefer financing an investment with retained earnings. For zero-rate shareholders, the effective tax burden at the corporate level remains the single most important factor in determining the size of the tax burden. For top-rate shareholders, also the tax treatment of capital gains and interest payments is very important in our calculations.

For all types of shareholders, there is a considerable correlation between effective marginal tax rates at the corporate level and at the overall level. Although we cannot conclude straightforwardly from these results that locations that impose a low level of corporate taxes also impose a low level of personal taxes, we find that in most cases personal taxes on capital income at least do not compensate the tax burdens at the corporate level. However, there are substantial exceptions to this finding: Especially those Swiss cantons which impose relatively high top personal income tax and net wealth tax rates display comparatively low corporate-level EMTRs but high overall-level EMTRs in an international comparison.

## Taxation of Highly Skilled Manpower

The measurement of the tax burden on highly skilled manpower is a new research field. Due to a lack of established methods a completely new approach has been developed which allows to consider several components of the remuneration package, the family status, and varying levels of compensation. This concept parallels established methodologies for the quantification of company tax burdens by calculating the effective average tax rate (EATR) as an indicator of the tax burden. The basic idea of our approach is that employers compete for highly qualified employees and therefore have to compensate these for taxes on labour income and tax-like social security contributions. As a consequence, the tax burden of different regions is compared for a given *disposable income* after taxes which the employee can obtain at all locations.

The computer-based model determines the tax burden in two steps. At first the tax assessment of a typical qualified employee's income before taxes (the *total remuneration*) is conducted. If the resulting income after taxes falls short of (exceeds) the required disposable income, in a second step the assessment is repeated for a higher (lower) total remuneration. The model then iterates until the total remuneration necessary to obtain the predetermined disposable income is found. The effective average tax rate is calculated by dividing the difference between total remuneration and disposable income (the *tax wedge*) by the total remuneration. The EATR thus expresses how much the employer has to expend in addition to the predetermined disposable income. For example, if an employee with a disposable income of €100,000 faces an EATR of 25 % this means that the tax wedge (€33,333) amounts to a quarter of the total remuneration (€133,333).

Taxes in this context are all income taxes including surcharges and state and municipality taxes, as well as payroll taxes paid by the company. Social security contributions are part of the tax burden inasmuch as the employee does not earn a specific, individual benefit by paying them. According to the basic idea of competition, there is little risk of unemployment for the kind of qualified employees considered here. Hence contributions to unemployment insurance, and by a similar reasoning also contributions to accident insurance, are defined as taxes. Health premiums, on the other hand, are not considered to be taxes since they are deemed to provide a genuine insurance.

Contributions to public pension schemes are considered to be partly taxes. The first pillar of old-age insurance is usually organised as a pay as you go system involving redistribution between generations and between high and low earning workers. Inasmuch as contribution payments do not result in actuarially fair pension entitlements, they constitute an implicit tax rather than an insurance premium. To account for this implicit tax, entitlements earned by the highly qualified employee are computed according to the legislation currently in force and offset against contributions.

Our model distinguishes between four kinds of compensation: (1) cash compensation, (2) contributions to old-age provisions, (3) stock options and (4) perquisites. These components are taxable in different periods. Cash compensation and perquisites are taxable income in the year of payment whereas stock options are either taxable when the options are granted or when they are exercised. Contributions to old-age provisions are either excluded from taxable income and thus pension benefits are subject to taxation, or contributions are paid out of taxed income implying that pensions are non-taxable income during retirement. Our model explicitly deals with the timing of tax and pension payments by using an intertemporal approach.

Geographically, the study covers twelve Swiss cantons, Austria, France, Germany, Ireland, Italy, the Netherlands, the United Kingdom, and the United States (Massachusetts). Currencies are converted with average nominal exchange rates of 2002. The effective average tax rates are calculated from the laws applying in 2002 and 2003.

The base case represents the **IBC Taxation Index** for highly skilled manpower. Here, we consider an employee's disposable income of € 100,000 that consists of 75 per cent cash compensation, 20 per cent old-age contributions, and 5 per cent perquisites. The employee is single and has no other income. The results show a threefold picture (see Table 3b): The Swiss cantons Schwyz and Zug have the lowest tax burden with EATRs of 25.7 per cent and 25.9 per cent, followed by the other cantons analysed, the United States, and the United Kingdom with EATRs between 28 per cent and 39 per cent. The highest tax burdens with effective tax rates between 40 per cent and 50 per cent occur in the other European countries considered, namely Ireland, Austria, the Netherlands, France, Germany, and Italy.

To illustrate these differences, it is instructive to translate back the EATRs into the total remuneration required in each location so as to provide the employee with a disposable income of € 100,000. To achieve this, a company has to spend € 134,574 in Schwyz, €161,740 in Massachussetts, and € 199,084 in Italy. Thus, taxes interfere heavily in the international competition for talent.

Reducing the disposable income to € 50,000 results in decreasing tax rates in almost all regions (see Table 3a). With more than 10 percentage points, the reduction is particularly

important in Switzerland and the Netherlands. This result illustrates the overall progressivity of the income tax and social security combined. The system becomes more progressive if tax rates rise steeply over the range of incomes considered, as in Switzerland, or if tax rates applying to low income brackets are very low, as in the Netherlands. On the other hand, ceilings on social security contributions reduce progressivity, as in Germany, Austria, and Italy.

Increasing the disposable income to €200,000 results in relatively strong increases in the EATRs in Switzerland (see Table 3c). This is due to the fact that, except in the case of unemployment insurance, there is no income ceiling in the Swiss social security system. Contributions still have to be paid on high income brackets. While Swiss cantons have the lowest effective tax burden among all countries analysed for low disposable incomes, Switzerland in part loses this top position once one moves to very high disposable incomes. In this respect, the United States, the United Kingdom, Ireland, and Austria compete successfully with Switzerland. In the United States, a highly qualified employee bears a lower effective average tax rate than in the cantons of Bern, Basel-Stadt, Basel-Landschaft, Genève, Ticino, Vaud. Austria ranks ahead of Genève, Ticino, and Vaud.

To analyse the taxation of *families* the effective average tax rates of an employee with a non-working spouse and two children have been calculated (see Table 4). All regions grant tax reliefs for families. On the one hand, families receive child benefits and/or tax credits. On the other hand, tax schedules differ depending on marital status and the number of children. Compared to other countries, families in Germany, Ireland, the USA, France, and Switzerland enjoy a particularly strong reduction of their tax burden relative to singles. In Italy, singles and families are taxed almost equally. A comparison of the effective tax rates for families at disposable incomes of €50,000 and €100,000 reveals that the tax advantage of families decreases with increasing income.

The *compensation structure* also influences the effective average tax rate. While increasing the share of old-age provision in the compensation package has only minor consequences for the EATR, in all countries except Germany and the Netherlands the effective tax burden decreases substantially if the employee is granted stock options.

*Public pension*s are responsible for a substantial part of the tax burden. To assess the quantitative importance of public pensions as a part of the overall tax burden, a simulation has been carried out assuming that contributions to the first pillar of old-age insurance yield a market rate of return. This results in a reduction in EATRs between 1.5 and 6.9 percentage points. The decrease is strongest in Italy, Ireland, and Germany. Thus, in these countries the pension system adds particularly to the overall tax burden on qualified manpower.

Sensitivity analyses show that the ranking of EATRs is quite robust to changes in specific assumptions of the model. In all cases Zug and Schwyz have the lowest tax rates, followed by Nidwalden, the remaining Swiss cantons, the United States and the United Kingdom. In the group of countries with high tax burdens, Ireland, Austria and the Netherlands frequently are the most attractive. Germany, Italy, and France change ranks among each other but remain at the high end of the scale.


**Overall Conclusions**

The **IBC Taxation Index** presents the headline figures of both parts of the study. A synthesis is provided in Figure 1. For the twelve Swiss cantons considered and the median locations of the other countries, this figure displays the EATR at the corporate level together with the EATR of a single-earner employee obtaining a disposable income of €100,000 in 2003. Due to a number of conceptual differences, we cannot compare the IBC-Taxation Index for companies with the IBC Taxation Index for highly qualified employees. Especially, both concepts of effective tax burdens do not permit straightforward conclusions on distributional issues. Nevertheless, we can compare the rankings and the relative differences in effective tax burdens between both studies.

For this purpose, we divide the effective tax burdens by the average of the included Swiss cantons. By definition, this average corresponds to an indexed effective tax burden of 100. We add a trend line which is based on the 20 observations included in order to illustrate the correlation between the tax burden on the production factor capital and on highly skilled employees. Table 5 finally compares the headline results of both studies.

It is striking that effective tax burdens appear to be closely correlated for most locations. This suggests that countries that impose large corporate tax burdens usually also impose large tax burdens on comparatively high personal incomes. A notable exception to these findings is the United States (Massachusetts). There, the tax burden on companies is among the highest of all regions considered, while qualified employees are taxed quite moderately. On the other hand, Ireland displays almost the lowest corporate tax burden of all regions together with a rather high tax burden on qualified employees. Despite these exceptions, however, from the point of view of a company, large corporate tax burdens usually are not compensated by small tax burdens on highly qualified employees, and vice versa. Therefore, those locations that already exhibit a competitive edge with respect to company taxation even improve their advantage when both types of taxes are considered.

**Headline Figures**

**Tab. 1: Company Taxation: Effective Average Tax Rates at the Corporate Level, 2003 (Base Case, %).**

| Rk | Region | | EATR | Rk | Region | | EATR | Rk | Region | | EATR | Rk | Region | | EATR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CH | Zug | 13.8 | 37 | I | Bolzano | 31.7 | 73 | D | Weißenburg i. Bayern | 33.9 | 109 | D | Heilbronn | 34.8 |
| 2 | IR | Dublin | 14.0 | 37 | I | Gorizia | 31.7 | 74 | F | Moselle | 34.1 | 110 | D | Hof | 34.8 |
| 3 | CH | Nidwalden | 15.4 | 37 | I | Trento | 31.7 | 75 | D | Waiblingen | 34.1 | 111 | D | Offenburg | 34.8 |
| 4 | CH | Schwyz | 16.5 | 37 | I | Vercelli | 31.7 | 76 | D | Weiden | 34.1 | 111 | D | Pforzheim | 34.8 |
| 5 | CH | Ticino | 18.5 | 37 | I | Vicenza | 31.7 | 77 | D | Schwandorf | 34.1 | 113 | F | Haute-Savoie | 34.9 |
| 6 | CH | Bern | 18.6 | 42 | I | Padova | 31.7 | 78 | D | Reutlingen | 34.1 | 114 | D | Aschaffenburg | 34.9 |
| 7 | CH | Valais | 19.7 | 43 | I | Biella | 31.7 | 79 | D | Aalen | 34.1 | 115 | F | Ardèche | 35.0 |
| 8 | CH | St. Gallen | 20.3 | 44 | I | Cremona | 31.8 | 80 | D | Deggendorf | 34.1 | 116 | F | Savoie | 35.0 |
| 9 | CH | Vaud | 20.5 | 44 | I | Cuneo | 31.8 | 81 | D | Donauwörth | 34.1 | 117 | D | Bamberg | 35.1 |
| 10 | CH | Zürich | 21.0 | 44 | I | Lodi | 31.8 | 82 | D | Nagold | 34.1 | 118 | D | Heidelberg | 35.1 |
| 11 | CH | Genève | 21.4 | 44 | I | Pavia | 31.8 | 82 | D | Vill.-Schwenningen | 34.1 | 119 | F | Meurthe-et-Moselle | 35.1 |
| 12 | CH | Basel-Stadt | 22.1 | 44 | I | Torino | 31.8 | 84 | F | Ain | 34.2 | 120 | D | Ingolstadt | 35.3 |
| 13 | CH | Basel-Landschaft | 22.8 | 44 | I | Treviso | 31.8 | 85 | F | Jura | 34.2 | 121 | D | Landshut | 35.3 |
| 14 | GB | London | 28.1 | 50 | I | Como | 31.8 | 86 | D | Göppingen | 34.2 | 122 | D | Rosenheim | 35.3 |
| 15 | NL | Amsterdam | 30.2 | 51 | I | Novara | 31.8 | 87 | F | Haut-Saône | 34.2 | 123 | D | Freiburg | 35.4 |
| 16 | NL | Utrecht | 30.2 | 51 | I | Verona | 31.8 | 88 | F | Drôme | 34.3 | 124 | F | Territoire-de-Belfort | 35.5 |
| 17 | NL | Den Haag | 30.3 | 53 | I | Lecco | 31.8 | 89 | D | Ludwigsburg | 34.3 | 125 | D | Karlsruhe | 35.5 |
| 18 | NL | Rotterdam | 30.3 | 54 | I | Alessandria | 31.8 | 90 | D | Konstanz | 34.3 | 126 | D | Mannheim | 35.7 |
| 19 | A | Burgenland *) | 30.4 | 54 | I | Asti | 31.8 | 91 | D | Ansbach | 34.3 | 127 | D | Berlin | 35.7 |
| 19 | A | Kärnten *) | 30.4 | 54 | I | Belluno | 31.8 | 91 | D | Lörrach | 34.3 | 128 | F | Isère | 35.7 |
| 19 | A | Niederösterreich *) | 30.4 | 54 | I | Mantova | 31.8 | 93 | D | Ludwigshafen | 34.4 | 129 | D | Landau | 35.8 |
| 19 | A | Oberösterreich *) | 30.4 | 54 | I | Rovigo | 31.8 | 94 | D | Ulm | 34.4 | 130 | D | Würzburg | 35.8 |
| 19 | A | Salzburg *) | 30.4 | 54 | I | Trieste | 31.8 | 95 | F | Meuse | 34.4 | 131 | D | Stuttgart | 35.8 |
| 19 | A | Steiermark *) | 30.4 | 54 | I | Venezia | 31.8 | 96 | F | Haut-Rhin | 34.4 | 132 | D | Regensburg | 35.9 |
| 19 | A | Tirol *) | 30.4 | 61 | F | Paris | 32.1 | 97 | F | Rhône | 34.5 | 133 | US | Boston | 36.0 |
| 19 | A | Vorarlberg *) | 30.4 | 62 | D | Weilheim | 32.9 | 98 | D | Traunstein | 34.5 | 134 | D | Mainz | 36.2 |
| 19 | A | Wien *) | 30.4 | 63 | D | Coburg | 32.9 | 99 | F | Doubs | 34.5 | 134 | D | Offenbach | 36.2 |
| 28 | I | Valle d'Aosta | 31.6 | 64 | D | Walldorf b. Heidelberg | 33.1 | 100 | D | Rastatt | 34.6 | 136 | D | Augsburg | 36.3 |
| 29 | I | Milano | 31.7 | 65 | D | Landkreis Mannheim | 33.6 | 101 | F | Bas-Rhin | 34.6 | 137 | D | Nürnberg | 36.4 |
| 29 | I | Udine | 31.7 | 66 | D | Tauberbischofsheim | 33.6 | 102 | D | Passau | 34.6 | 138 | D | Köln | 36.5 |
| 31 | I | Pordenone | 31.7 | 67 | D | Memmingen | 33.6 | 103 | D | Bayreuth | 34.6 | 139 | D | Düsseldorf | 36.6 |
| 31 | I | Verb.-Cusio-Ossola | 31.7 | 67 | D | Pfarrkirchen | 33.6 | 104 | D | Schweinfurt | 34.6 | 140 | D | Hamburg | 36.9 |
| 33 | I | Brescia | 31.7 | 69 | D | Ravensburg | 33.6 | 105 | D | Schwäbisch-Hall | 34.7 | 141 | D | Essen | 36.9 |
| 33 | I | Sondrio | 31.7 | 70 | D | Rottweil | 33.8 | 106 | F | Vosges | 34.8 | 142 | D | München | 37.3 |
| 35 | I | Bergamo | 31.7 | 71 | D | Kempten | 33.8 | 107 | F | Loire | 34.8 | 143 | D | Frankfurt | 37.3 |
| 35 | I | Varese | 31.7 | 72 | D | Balingen | 33.9 | 108 | D | Freising | 34.8 | | | | |

Remarks: Rk = Rank; EATR = Effective Average Tax Rate; A = Austria; CH = Switzerland; D = Germany; F = France; GB = United Kingdom; I = Italy; IR = Ireland; NL := the Netherlands; US = United States. *) For Austrian corporations that can take maximum advantage of the dual income tax system and the incremental investment tax credit, the EATR reduces to 26.1 per cent.

Source: ZEW/BAK.

**Tab. 2: Company Taxation: Effective Marginal Tax Rates at the Corporate Level, 2003 (Base Case, %).**

| Rk | | Region | EMTR | Rk | | Region | EMTR | Rk | | Region | EMTR | Rk | | Region | EMTR |
|----|----|--------|------|----|----|--------|------|----|----|--------|------|-----|----|--------|------|
| 1 | CH | St. Gallen | 6.9 | 37 | I | Novara | 19.0 | 73 | D | Waiblingen | 24.8 | 109 | D | Freiburg | 26.4 |
| 2 | CH | Zug | 7.1 | 37 | I | Verona | 19.0 | 74 | D | Weiden | 24.9 | 110 | D | Mannheim | 26.6 |
| 3 | CH | Nidwalden | 9.0 | 39 | I | Lecco | 19.0 | 75 | D | Schwandorf | 24.9 | 111 | D | Landau | 26.6 |
| 4 | CH | Bern | 10.6 | 40 | I | Alessandria | 19.0 | 76 | D | Reutlingen | 24.9 | 112 | D | Würzburg | 26.7 |
| 5 | CH | Schwyz | 10.6 | 40 | I | Asti | 19.0 | 77 | D | Aalen | 24.9 | 113 | D | Stuttgart | 26.7 |
| 6 | IR | Dublin | 11.9 | 40 | I | Belluno | 19.0 | 78 | D | Deggendorf | 24.9 | 114 | D | Regensburg | 26.7 |
| 7 | CH | Ticino | 12.2 | 40 | I | Mantova | 19.0 | 79 | D | Donauwörth | 24.9 | 115 | D | Berlin | 27.0 |
| 8 | CH | Vaud | 13.1 | 40 | I | Rovigo | 19.0 | 80 | D | Nagold | 25.0 | 116 | D | Mainz | 27.1 |
| 9 | CH | Zürich | 13.6 | 40 | I | Trieste | 19.0 | 80 | D | Vill.-Schwenningen | 25.0 | 116 | D | Offenbach | 27.1 |
| 10 | CH | Genève | 14.5 | 40 | I | Venezia | 19.0 | 82 | D | Ludwigsburg | 25.1 | 118 | D | Augsburg | 27.2 |
| 11 | CH | Valais | 14.7 | 47 | NL | Amsterdam | 20.8 | 83 | D | Göppingen | 25.1 | 119 | D | Nürnberg | 27.3 |
| 12 | CH | Basel-Stadt | 15.6 | 48 | NL | Utrecht | 21.1 | 84 | D | Konstanz | 25.1 | 120 | D | Köln | 27.6 |
| 13 | CH | Basel-Landschaft | 16.3 | 49 | NL | Den Haag | 21.1 | 85 | D | Ansbach | 25.1 | 121 | D | Düsseldorf | 27.6 |
| 14 | I | Valle d'Aosta | 18.4 | 50 | NL | Rotterdam | 21.4 | 85 | D | Lörrach | 25.1 | 122 | D | Hamburg | 28.0 |
| 15 | I | Milano | 18.6 | 51 | A | Burgenland *) | 22.9 | 87 | D | Ludwigshafen | 25.2 | 123 | D | Essen | 28.0 |
| 15 | I | Udine | 18.6 | 51 | A | Kärnten *) | 22.9 | 88 | D | Ulm | 25.2 | 124 | D | München | 28.3 |
| 17 | I | Pordenone | 18.7 | 51 | A | Niederösterreich *) | 22.9 | 89 | D | Traunstein | 25.3 | 125 | D | Frankfurt | 28.4 |
| 17 | I | Verbano-Cusio-Ossola | 18.7 | 51 | A | Oberösterreich *) | 22.9 | 90 | D | Rastatt | 25.4 | 126 | F | Moselle | 31.7 |
| 19 | I | Brescia | 18.8 | 51 | A | Salzburg *) | 22.9 | 91 | D | Passau | 25.4 | 127 | F | Ain | 32.0 |
| 19 | I | Sondrio | 18.8 | 51 | A | Steiermark *) | 22.9 | 92 | D | Bayreuth | 25.5 | 128 | F | Jura | 32.1 |
| 21 | I | Bergamo | 18.8 | 51 | A | Tirol *) | 22.9 | 93 | F | Paris | 25.5 | 129 | F | Haut-Saône | 32.2 |
| 21 | I | Varese | 18.8 | 51 | A | Vorarlberg *) | 22.9 | 94 | D | Schweinfurt | 25.5 | 130 | F | Drôme | 32.3 |
| 23 | I | Bolzano | 18.8 | 51 | A | Wien *) | 22.9 | 95 | D | Schwäbisch-Hall | 25.6 | 131 | F | Meuse | 32.6 |
| 23 | I | Gorizia | 18.8 | 60 | D | Weilheim | 23.6 | 96 | D | Freising | 25.6 | 132 | F | Haut-Rhin | 32.7 |
| 23 | I | Trento | 18.8 | 61 | D | Coburg | 23.7 | 97 | D | Aschaffenburg | 25.7 | 133 | F | Rhône | 32.8 |
| 23 | I | Vercelli | 18.8 | 62 | D | Walldorf b. Heidelberg | 23.7 | 98 | D | Heilbronn | 25.7 | 134 | F | Doubs | 32.9 |
| 23 | I | Vicenza | 18.8 | 63 | GB | London | 24.2 | 99 | D | Hof | 25.7 | 135 | F | Bas-Rhin | 33.2 |
| 28 | I | Padova | 18.9 | 64 | D | Landkreis Mannheim | 24.3 | 100 | D | Offenburg | 25.8 | 136 | F | Vosges | 33.7 |
| 29 | I | Biella | 18.9 | 65 | D | Tauberbischofsheim | 24.3 | 100 | D | Pforzheim | 25.8 | 137 | F | Loire | 33.7 |
| 30 | I | Cremona | 18.9 | 66 | D | Memmingen | 24.4 | 102 | US | Boston | 25.8 | 138 | F | Haute-Savoie | 33.9 |
| 30 | I | Cuneo | 18.9 | 67 | D | Pfarrkirchen | 24.4 | 103 | D | Bamberg | 26.0 | 139 | F | Ardèche | 34.3 |
| 30 | I | Lodi | 18.9 | 68 | D | Ravensburg | 24.5 | 104 | D | Heidelberg | 26.0 | 140 | F | Savoie | 34.4 |
| 30 | I | Pavia | 18.9 | 69 | D | Kempten | 24.6 | 105 | D | Ingolstadt | 26.1 | 141 | F | Meurthe-et-Moselle | 34.7 |
| 30 | I | Torino | 18.9 | 70 | D | Balingen | 24.7 | 106 | D | Landshut | 26.2 | 142 | F | Territoire-de-Belfort | 35.7 |
| 30 | I | Treviso | 18.9 | 71 | D | Rottweil | 24.7 | 107 | D | Rosenheim | 26.3 | 143 | F | Isère | 36.2 |
| 36 | I | Como | 19.0 | 72 | D | Weißenburg i. Bayern | 24.7 | 108 | D | Karlsruhe | 26.4 | | | | |

Remarks: Rk = Rank; EMTR = Effective Marginal Tax Rate; A = Austria; CH = Switzerland; D = Germany; F = France; GB = United Kingdom; I = Italy; IR = Ireland; NL := the Netherlands; US = United States. *) For Austrian corporations that can take maximum advantage of the dual income tax system and the incremental investment tax credit, the EMTR reduces to 3.3 per cent.

Source: ZEW/BAK.

**Tab. 3: Taxation on Manpower: Effective Average Tax Rates 2003 for singles in %.**

| | (a) disposable income of €50.000 | | | (b) disposable income of €100.000 | | | (c) disposable income of €200.000 | | |
|---|---|---|---|---|---|---|---|---|---|
| Rk | Region | | EATR | Rk | Region | | EATR | Rk | Region | | EATR |
| 1 | ZG | CH Zug | 20.6 | 1 | SZ | CH Schwyz | 25.7 | 1 | ZG | CH Zug | 29.3 |
| 2 | SZ | CH Schwyz | 20.9 | 2 | ZG | CH Zug | 25.9 | 2 | SZ | CH Schwyz | 29.4 |
| 3 | NW | CH Nidwalden | 23.9 | 3 | NW | CH Nidwalden | 28.3 | 3 | NW | CH Nidwalden | 32.0 |
| 4 | ZH | CH Zürich | 25.3 | 4 | ZH | CH Zürich | 32.6 | 4 | VS | CH Valais | 39.1 |
| 5 | VS | CH Valais | 27.5 | 5 | VS | CH Valais | 35.4 | 5 | ZH | CH Zürich | 40.3 |
| 6 | BL | CH Basel-Landschaft | 29.3 | 6 | BL | CH Basel-Landschaft | 36.6 | 6 | SG | CH St. Gallen | 40.5 |
| 7 | SG | CH St. Gallen | 30.1 | 7 | SG | CH St. Gallen | 36.8 | 7 | USA | United States | 42.0 |
| 8 | BE | CH Bern | 30.5 | 8 | BE | CH Bern | 36.8 | 8 | BE | CH Bern | 42.4 |
| 9 | NL | The Netherlands | 30.9 | 9 | BS | CH Basel-Stadt | 36.9 | 9 | BS | CH Basel-Stadt | 42.4 |
| 10 | TI | CH Ticino | 31.0 | 10 | GE | CH Genève | 37.9 | 10 | GB | United Kingdom | 42.6 |
| 11 | BS | CH Basel-Stadt | 31.0 | 11 | TI | CH Ticino | 38.2 | 11 | BL | CH Basel-Landschaft | 42.7 |
| 12 | GE | CH Genève | 31.5 | 12 | USA | United States | 38.2 | 12 | A | Austria | 43.1 |
| 13 | VD | CH Vaud | 31.9 | 13 | GB | United Kingdom | 39.2 | 13 | IRL | Ireland | 43.5 |
| 14 | GB | United Kingdom | 33.5 | 14 | VD | CH Vaud | 39.3 | 14 | GE | CH Genève | 43.8 |
| 15 | USA | United States | 34.2 | 15 | IRL | Ireland | 40.3 | 15 | TI | CH Ticino | 44.0 |
| 16 | IRL | Ireland | 35.5 | 16 | A | Austria | 41.7 | 16 | VD | CH Vaud | 45.4 |
| 17 | A | Austria | 38.5 | 17 | NL | The Netherlands | 42.9 | 17 | NL | The Netherlands | 47.3 |
| 18 | F | France | 42.4 | 18 | F | France | 47.3 | 18 | D | Germany | 48.8 |
| 19 | D | Germany | 46.5 | 19 | D | Germany | 47.6 | 19 | F | France | 50.7 |
| 20 | I | Italy | 50.6 | 20 | I | Italy | 49.8 | 20 | I | Italy | 51.5 |

Remarks: The disposable income of €100,000 and of €200,000 is calculated with a compensation package of 75 per cent cash, 5 per cent perquisites, and 20 per cent old-age contributions. The disposable income of €50,000 is calculated assuming a compensation structure of 75 per cent cash and 25 per cent old-age contributions.                Source: ZEW/BAK.

## Tab. 4: Taxation on Manpower: Effective Average Tax Rates 2003 for families in %.

| (a) disposable income of €50.000 | | | | (b) disposable income of €100.000 | | | | (c) disposable income of €200.000 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rk | | Region | EATR | Rk | | Region | EATR | Rk | | Region | EATR |
| 1 | ZG | CH Zug | 14.6 | 1 | ZG | CH Zug | 20.9 | 1 | ZG | CH Zug | 28.0 |
| 2 | SZ | CH Schwyz | 16.4 | 2 | SZ | CH Schwyz | 22.0 | 2 | SZ | CH Schwyz | 28.0 |
| 3 | NW | CH Nidwalden | 18.6 | 3 | NW | CH Nidwalden | 25.0 | 3 | NW | CH Nidwalden | 30.8 |
| 4 | ZH | CH Zürich | 19.1 | 4 | ZH | CH Zürich | 26.7 | 4 | ZH | CH Zürich | 36.4 |
| 5 | TI | CH Ticino | 20.7 | 5 | SG | CH St. Gallen | 30.2 | 5 | VS | CH Valais | 37.4 |
| 6 | VS | CH Valais | 20.9 | 6 | USA | United States | 31.3 | 6 | USA | United States | 37.9 |
| 7 | USA | United States | 21.1 | 7 | BL | CH Basel-Landschaft | 31.3 | 7 | SG | CH St. Gallen | 38.4 |
| 8 | SG | CH St. Gallen | 21.3 | 8 | VD | CH Vaud | 31.4 | 8 | BS | CH Basel-Stadt | 39.1 |
| 9 | NL | The Netherlands | 22.6 | 9 | VS | CH Valais | 31.5 | 9 | BL | CH Basel-Landschaft | 39.2 |
| 10 | BS | CH Basel-Stadt | 22.6 | 10 | BE | CH Bern | 31.9 | 10 | BE | CH Bern | 39.8 |
| 11 | BL | CH Basel-Landschaft | 22.6 | 11 | TI | CH Ticino | 32.0 | 11 | VD | CH Vaud | 41.2 |
| 12 | IRL | Ireland | 23.5 | 12 | BS | CH Basel-Stadt | 32.1 | 12 | A | Austria | 41.5 |
| 13 | GE | CH Genève | 23.5 | 13 | GE | CH Genève | 33.9 | 13 | TI | CH Ticino | 41.5 |
| 14 | BE | CH Bern | 24.4 | 14 | D | Germany | 35.2 | 14 | IRL | Ireland | 41.6 |
| 15 | VD | CH Vaud | 25.6 | 15 | IRL | Ireland | 35.8 | 15 | GB | United Kingdom | 41.8 |
| 16 | GB | United Kingdom | 27.6 | 16 | GB | United Kingdom | 37.4 | 16 | GE | CH Genève | 42.1 |
| 17 | D | Germany | 27.9 | 17 | A | Austria | 38.2 | 17 | D | Germany | 43.4 |
| 18 | A | Austria | 30.9 | 18 | F | France | 39.4 | 18 | NL | The Netherlands | 46.2 |
| 19 | F | France | 33.0 | 19 | NL | The Netherlands | 40.2 | 19 | F | France | 46.5 |
| 20 | I | Italy | 49.4 | 20 | I | Italy | 49.2 | 20 | I | Italy | 51.2 |

Remarks: The disposable income of €100,000 and of €200,000 is calculated with a compensation package of 75 per cent cash, 5 per cent perquisites, and 20 per cent old-age contributions. The disposable income of €50,000 is calculated assuming a compensation structure of 75 per cent cash and 25 per cent old-age contributions.                                    Source: ZEW/BAK.

**Fig. 1: Correlation of Company Tax Burdens and Tax Burdens on Highly Skilled (2003).**
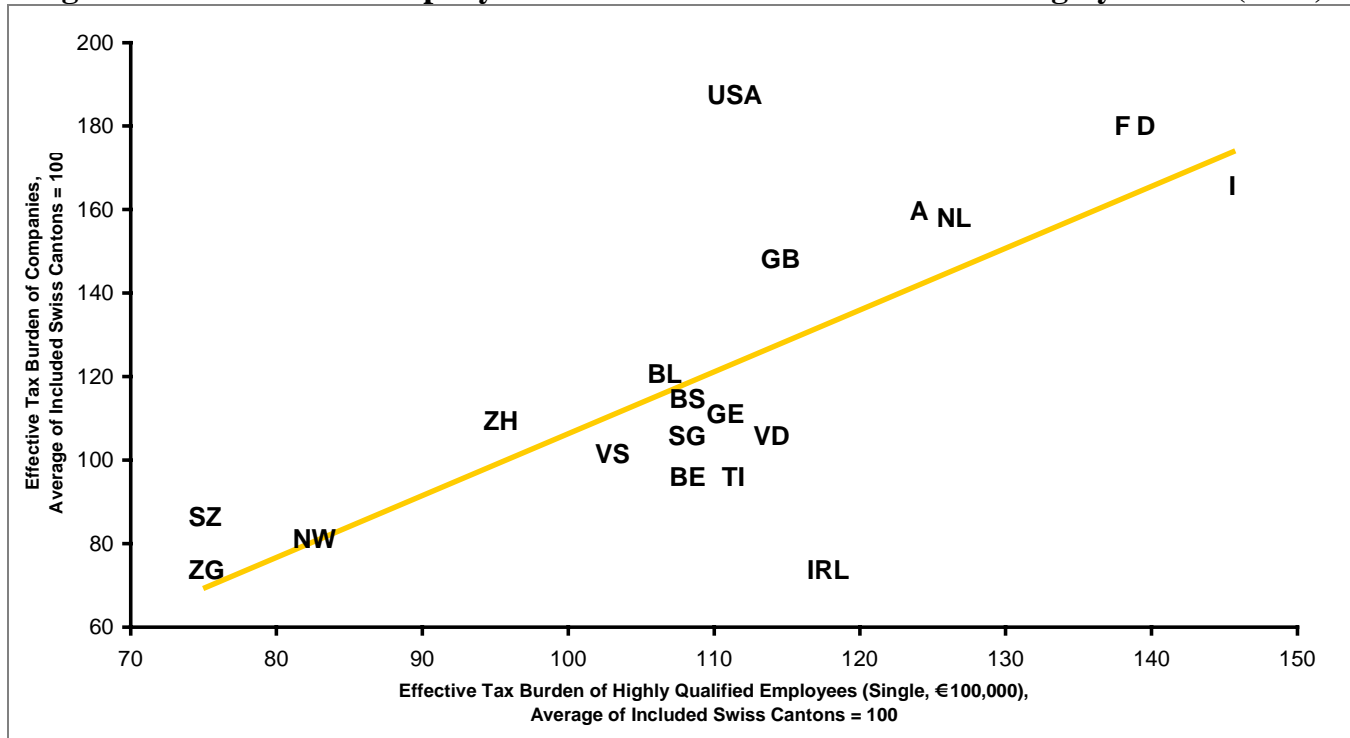


| % of Average of Included Swiss Cantons | SZ | ZG | NW | ZH | VS | BL | SG | BE | BS | GE | TI | USA | GB | VD | IRL | A | NL | F | D | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Effective Tax Burden on Highly Skilled Manpower | 75.1 | 75.7 | 82.8 | 95.2 | 103.6 | 106.9 | 107.5 | 107.8 | 108.0 | 110.9 | 111.6 | 111.6 | 114.7 | 114.9 | 117.8 | 122.0 | 125.5 | 138.2 | 139.3 | 145.6 |
| Effective Tax Burden on Companies | 85.9 | 71.8 | 80.2 | 109.6 | 102.5 | 118.9 | 105.5 | 96.6 | 115.0 | 111.4 | 96.0 | 187.3 | 146.3 | 106.7 | 72.9 | 158.2 | 157.4 | 179.5 | 180.1 | 165.5 |

Remarks: BE = Bern , SZ = Schwyz, TI = Ticino, ZG = Zug, ZH = Zürich, CH = remaining Swiss cantons: BL = Basel-Landschaft, BS = Basel Stadt, GE = Genève, SG = St. Gallen, VD = Vaud, VS = Valais;  for countries that demonstrate regional variation in company tax burdens, the median value has been chosen; the straight line indicates the trend line, which has been calculated from the single results.

Source: ZEW/BAK.

**Tab. 5: IBC Taxation Index 2003**

|  | Companies | | Highly Skilled Manpower | |
|---|---|---|---|---|
|  | EATR | Rank | EATR | Rank |
| CH-Zug | 13.8 % | 1 | 25.9 % | 2 |
| Ireland | 14.0 % | 2 | 40.3 % | 15 |
| CH-Nidwalden | 15.4 % | 3 | 28.3 % | 3 |
| CH-Schwyz | 16.5 % | 4 | 25.7 % | 1 |
| CH-Tessin | 18.5 % | 5 | 38.2 % | 11 |
| CH-Bern | 18.6 % | 6 | 36.8 % | 8 |
| CH-Valais | 19.7 % | 7 | 35.4 % | 5 |
| CH-St. Gallen | 20.3 % | 8 | 36.8 % | 7 |
| CH-Vaud | 20.5 % | 9 | 39.3 % | 14 |
| CH-Zürich | 21.0 % | 10 | 32.6 % | 4 |
| CH-Genève | 21.4 % | 11 | 37.9 % | 10 |
| CH-Basel-Stadt | 22.1 % | 12 | 36.9 % | 9 |
| CH-Basel-Land | 22.8 % | 13 | 36.6 % | 6 |
| United Kingdom | 28.1 % | 14 | 39.2 % | 13 |
| The Netherlands | 30.2 % | 15 | 42.9 % | 17 |
| Austria | 30.4 % | 16 | 41.7 % | 16 |
| Italy | 31.7 % | 17 | 49.8 % | 20 |
| France | 34.5 % | 18 | 47.3 % | 18 |
| Germany | 34.6 % | 19 | 47.6 % | 19 |
| USA | 36.0 % | 20 | 38.2 % | 12 |

Source: ZEW/BAK