



## 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 (EATR), effective marginal tax rates (EMTR), 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.<sup>1</sup> 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,

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<sup>1</sup> See Gutekunst, G., and R. Schwager, *Steuerbelastung von Unternehmen im Alpenraum*, Baden-Baden 2002.

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.

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 Massachusetts, 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 pensions* 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 <sup>*)</sup>	30.4	54	I Asti	31.8	91	D Ansbach	34.3	127	D Berlin	35.7
19	A Kärnten <sup>*)</sup>	30.4	54	I Belluno	31.8	91	D Lörrach	34.3	128	F Isère	35.7
19	A Niederösterreich <sup>*)</sup>	30.4	54	I Mantova	31.8	93	D Ludwigshafen	34.4	129	D Landau	35.8
19	A Oberösterreich <sup>*)</sup>	30.4	54	I Rovigo	31.8	94	D Ulm	34.4	130	D Würzburg	35.8
19	A Salzburg <sup>*)</sup>	30.4	54	I Trieste	31.8	95	F Meuse	34.4	131	D Stuttgart	35.8
19	A Steiermark <sup>*)</sup>	30.4	54	I Venezia	31.8	96	F Haut-Rhin	34.4	132	D Regensburg	35.9
19	A Tirol <sup>*)</sup>	30.4	61	F Paris	32.1	97	F Rhône	34.5	133	US Boston	36.0
19	A Vorarlberg <sup>*)</sup>	30.4	62	D Weilheim	32.9	98	D Traunstein	34.5	134	D Mainz	36.2
19	A Wien <sup>*)</sup>	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. <sup>\*)</sup> 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 Offenburg	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 <sup>1)</sup>	22.9	87	D Ludwigshafen	25.2	123	D Essen	28.0
15	I Udine	18.6	51	A Kärnten <sup>1)</sup>	22.9	88	D Ulm	25.2	124	D München	28.3
17	I Pordenone	18.7	51	A Niederösterreich <sup>1)</sup>	22.9	89	D Traunstein	25.3	125	D Frankfurt	28.4
17	I Verbano-Cusio-Ossola	18.7	51	A Oberösterreich <sup>1)</sup>	22.9	90	D Rastatt	25.4	126	F Moselle	31.7
19	I Brescia	18.8	51	A Salzburg <sup>1)</sup>	22.9	91	D Passau	25.4	127	F Ain	32.0
19	I Sondrio	18.8	51	A Steiermark <sup>1)</sup>	22.9	92	D Bayreuth	25.5	128	F Jura	32.1
21	I Bergamo	18.8	51	A Tirol <sup>1)</sup>	22.9	93	F Paris	25.5	129	F Haut-Saône	32.2
21	I Varese	18.8	51	A Vorarlberg <sup>1)</sup>	22.9	94	D Schweinfurt	25.5	130	F Drôme	32.3
23	I Bolzano	18.8	51	A Wien <sup>1)</sup>	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 Waldorf 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. <sup>1)</sup> 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

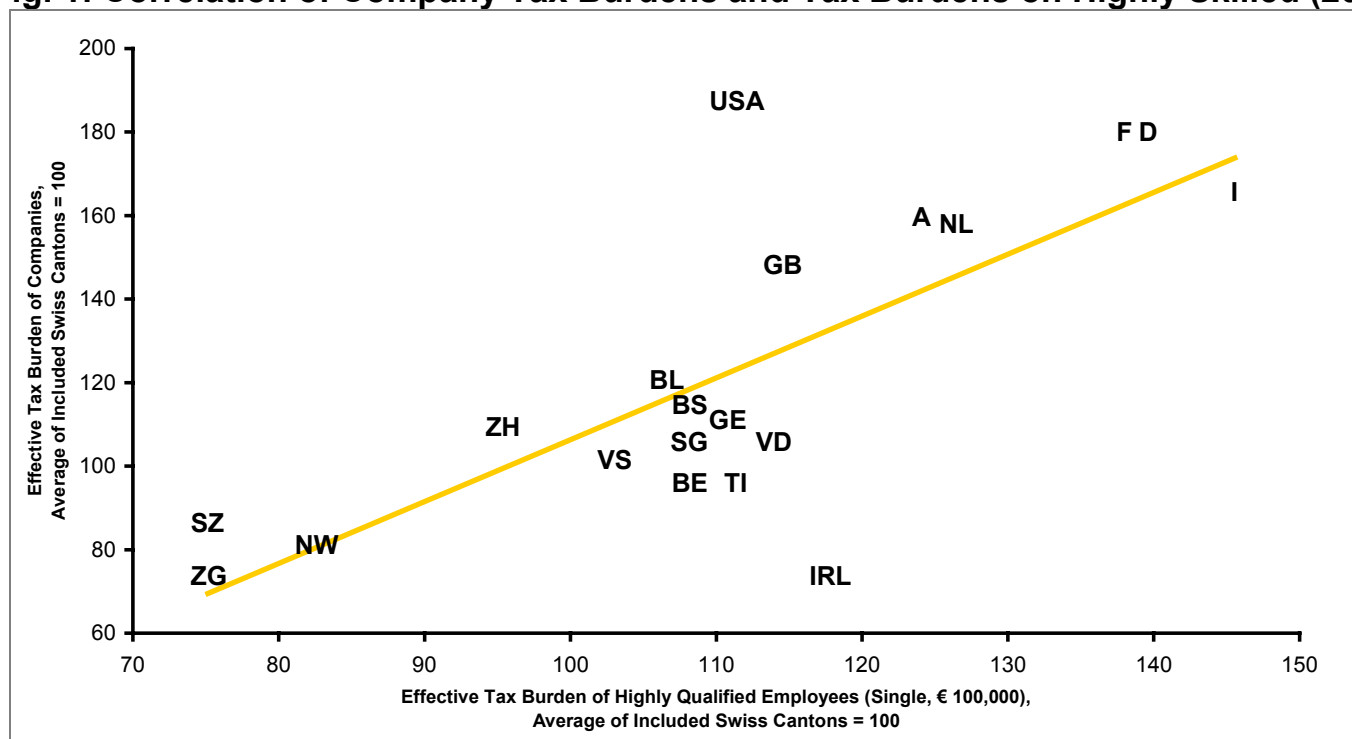
Remarks: The disposable income of € 100,000 and of € 200,000 is calculated with a compensation package of 75 per cent cash, 5 per cent perquisites, and 20 per cent old-age contributions. The disposable income of € 50,000 is calculated assuming a compensation structure of 75 per cent cash and 25 per cent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