Research Report

Economic impact of regulation in the field of liberal professions in different Member States

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IHS Director: Bernhard Felderer

IHS

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Regulation of Professional Services

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Final Report – Part 1

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* (Case Studies: Germany, France)

**The contents of the study do not necessarily reflect the opinion or position of the European Commission.

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Part 1 - Main Report

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Executive Summary

This study presents a comparison of the legislation, regulations and codes of practice governing the practice of a range of professional services across member states of the European Union. The professions covered by the study are legal services (lawyers and notaries), accountancy services (accountants, auditors and tax advisers), technical services (architects and consulting engineers) as well as pharmacy services (community pharmacists).

While there is a body of theory concerning regulation, in particular concerning the self-regulation of liberal professions, most comparative empirical studies of outcomes have been carried out in the context of state comparisons in the USA. We distinguish between theories that give answers to the question 'why regulation of professional services (at all)?' and those that offer answers the question 'why is there often too high a degree of regulation?' This distinction is made because a specific regulatory base exists for all the four professional services fields in all member states, but the range of regulatory scope and intensity varies considerably throughout the Union.

This fact gives rise to the basic research questions posed in the study, namely whether, to what extent, and in which areas, regulation differs between countries, and in particular to identify the economic effects of different degrees of regulation in member states. The approach used in the study is comparative, and draws on as much information about the liberal professions in member states as exists and has been made available for the study. No adequate knowledge base of regulations or outcomes was previously in existence, so questionnaires were sent to professional bodies in each of the fields covered in all member states, and additionally to European professional umbrella organisations, as well as to some relevant Government departments. The questionnaires sought details of market entry and conduct regulation, recent changes in regulations, and basic economic data of the market for each profession. In addition, detailed accounts of the regulatory features and economic outcomes of specific professions in specific member states are contained in the 17 case studies in Part Two of the report.

Comparative analysis requires comparable data: regarding regulation, this was achieved by our development of special regulation indices; regarding market outcomes, the main source of data was obtained from Eurostat and, where compatible, from member states' statistical offices. The data is usually restricted to volumes of business and employment (of professionals and generally). Further relevant economic data would have included prices, costs, and earnings. Obtaining such data for even one country on these variables is fraught with difficulties, including non-availability as a time-series (or in most cases, at all) and non-

disclosure policies. Nevertheless, the study has been able to demonstrate the existence of trends from the data at the level available.

The study of professional regulatory systems in member states differentiates between two large groups of regulations: regulations on market entry and regulations on "market behaviour" or conduct. Typical *market entry regulations* are qualification requirements (formal certificates of qualifications – i.e. university degrees, length of practice and/or professional examinations), registration or membership in a professional body, rules on areas of reserved practice (i.e. exclusive rights for one – or sometimes more – professions to offer specific services or goods on the market), and in some cases economic needs tests. Typical *conduct regulations* are regulation of prices and fees (fixed prices, minimum and/or maximum prices etc.), regulation of advertising and marketing, regulation of location and diversification (geographical restrictions on offering services, restrictions on establishing branch offices), restrictions on interprofessional co-operation or e.g. restrictions on forms of business (e.g. whether incorporation is allowed and under what preconditions).

To simplify the rather complex picture of different forms of regulations on different professions in different countries, a regulation index each for market entry and for market conduct has been computed for each profession/professional group and member state. Subsequently the respective indices for market-entry and market-conduct were combined into an overall regulation index for each profession/professional group. The table below shows figures for the overall regulation indices, for all the professions/professional fields where one has been calculated (N.B. excluding notaries).

The higher the degree of regulation (intensity), the higher the respective figure (within a range from 0 to 12). All the regulation indices with a value of 5 or higher are shown in black boxes, indices between 2.5 and 4.9 are in grey boxes, and. those below 2,5 have a white background.

Countries with a high degree of regulation intensity for all professions are Austria, Italy, Luxembourg and, with some exceptions in the field of technical services, Germany as well as France (and possibly Greece). Belgium, Spain (and possibly Portugal) appear to be in the medium category, whereas UK, Sweden (with the exception of pharmacists), the Netherlands, Ireland, Finland and Denmark (the latter again with the exception of pharmacists) show rather liberal regulatory regimes (at least from a *comparative* point of view within the EU).

Total IHS regulation indices for different professions

	Accountants	Legal	Architects	Engineers	Pharmacists
Austria	6.2	7.3	5.1	5	7.3
Belgium	6.3	4.6	3.9	1.2	5.4
Denmark	2.8	3.0	0	0	5.9
Finland	3.5	0.3	1.4	1.3	7.0
France	5.8	6.6	3.1	0	7.3
Germany	6.1	6.5	4.5	7.4	5.7
Greece	5.1	9.5	n.a.	n.a.	8.9
Ireland	3.0	4.5	0	0	2.7
Italy	5.1	6.4	6.2	6.4	8.4
Luxembourg	5	6.6	5.3	5.3	7.9
Netherlands	4.5	3.9	0	1.5	3.0
Portugal	n.a.	5.7	2.8	n.a.	8
Spain	3.4	6.5	4.0	3.2	7.5
Sweden	3.3	2.4	0	0	12
UK	3.0	4.0	0	0	4.1

With regard to the various professional fields the most extensive/restrictive regulation can be found in regards of *pharmacies/pharmacists*. Only Ireland, the Netherlands and the UK show comparatively low regulation indices. In *architectural* and especially in *engineering services* the situation is rather bi-polar: in respect of market entry some countries show rather restrictive licensing models (especially Austria, Germany, Italy, Luxembourg), in others certification without or with only very limited exclusive tasks reserved to the professions is the standard model (e.g. Sweden, UK, The Netherlands, Finland, Denmark). The conduct regulations for architects and engineers are – compared to those of other professional groups – rather less restrictive in most of the countries. This applies even in those cases where high levels of regulation on market entry exist. In *legal services* (lawyers) one can observe all degrees of market entry regulation. The same is true for conduct regulation. This leads to a high level of diversification in the overall regulation indices: from very low (Sweden, Finland) to very high (Greece, Austria, France, Spain, Germany and others). For *accountancy services* market entry in all countries exhibits some type of licensing model, but the scope of exclusive rights to offer services varies considerably. The same is true – albeit to a lesser degree – regarding qualification requirements. Together with variations in the degree of conduct regulation this leads to a rather high intensity of regulation in e.g. Belgium, Austria, Germany, Italy, France, Greece and Luxembourg. In all the other countries regulation lies in the medium category. Interestingly it appears that a high degree of regulation in accounting professions very often goes hand-in-hand with similar structures in the field of legal professions (lawyers).

In addition to the general overview of the regulatory systems of liberal professions in all member states of the European Union, the study also provides detailed case studies for

each profession. These include a mix of countries with low and high levels of regulation. The subset of member states includes: for legal services (lawyers, notaries): - Denmark, UK/England and Wales, Italy, Germany, and France; for accountancy services (accountants, auditors and tax advisers) - Italy, Netherlands, Germany, France; for technical services (architects and consulting engineers) - Austria, Finland, France, Spain; and for pharmacy services (community pharmacists) - Ireland, Portugal, Sweden, Germany.

The case studies aim not only to analyse the functionality of different types of regulatory regimes, but also to detect and comment on trends in regulatory reform. What is evident in this respect is a high degree of "system-stability". In this context we did not find any complete system change (from a licensing model to certification model or in the other direction) and it only rarely occurs that exclusive tasks reserved to one or more professions are opened to other service providers. However, frequent changes in the regulatory framework can be observed in the field of conduct regulations. These changes in almost all cases have taken the form of liberalisation (e.g. in respect of price regulation, advertising, form of firm, inter-professional co-operation). Such liberalisation is *seldom* accompanied by the introduction of tighter regulation in the field of market entry. Apart from traditional, somewhat 'defensive' forms of regulation (on market entry and conduct) in some (but not all) countries, there is a trend to more pro-active forms of consumer protection and quality management, which implies a lower degree of anti-competitive effects. For several professions in several countries in recent years, for example, professional indemnity insurance has been made obligatory (or, if already in existence, broadened). Other examples are the introduction of obligatory continuing education, facilities for specialisation, or in some cases, specific voluntary certification and/or benchmarking systems.

The report also provides a benchmarking analysis of the professional services. Tables of distribution of key ratios (by country and by profession) professional density (per million of population), sector turnover per capita in the population and per person active in the branch (adjusted by prices and level of GDP) are evaluated to identify high, medium and low levels of relative performance. The performance levels in terms of outcomes are set against the degree of regulation in each country and professional field, as determined by the regulation indices. Some general trends have been indicated by the benchmarking and analysis of the legal, accounting, technical and pharmacy professional services, summarised as follows:

- Relatively high volumes of turnover from revenues (fees) compared to the number of practising professionals in countries with high degrees of regulation (conduct and entry). A connection may be surmised between volume of business per professional and excess profit (compared with the outcome under less restricted competition), albeit indirectly, in the absence of specific profit data. It seems unlikely that this effect is due to differing technologies, or other factors that would engender productivity advantages.

- Lower volumes of turnover from revenues (fees) - *only in proportional relation to* the number of practising professionals - in countries with low degrees of regulation (conduct and entry). This finding applies indeed also to professions and countries where the overall level of business is in fact higher. That is, we may surmise that low regulation is not a hindrance, but rather a spur, to wealth creation.

- A tendency towards market 'shake-out' in professions and countries with a low level of regulation, allowing the formation of larger enterprise units. In the professions studied this effect is not associated with a higher than usual level of business (volume per capita), and high market concentration, except in accountancy services.

- A negative correlation between degree of regulation and productivity for the case of legal, accounting and technical services. Since the measure of volume factors out differences in price levels and overall output levels of the economies, and since neither technological differences between countries nor lower employment levels are apparently the decisive source of higher productivity here, the correlation may also indicate a shortfall in potential output among highly regulated countries and professions.

It should be borne in mind that such effects as described above are not necessarily an automatic result of regulation. However the existence of certain types of restrictive anti-competitive regulation undoubtedly lends credence to the view that such regulatory structures can, and in many cases are, used by the professions to obtain economic results that are in their favour, but contrary to the needs of, and against the interests of consumers as a whole.

These empirical findings point in the direction of effects predicted by the 'private interest' theories of regulation, particularly in those aspects that are termed by economists as being 'rent-seeking'. Whereas more detailed economic analysis would be needed to measure the strength of these effects, and establish statistical significance - the data for such an analysis simply is not available at this juncture – we may at least regard these effects as more than working hypotheses.

We are unable, from the data, to estimate the impact of the differences between regulatory regimes on the quality of services provided for consumers in detail, but there have been no apparent signs of market breakdown in those member states which we have shown to be less regulated. There is thus no basis for questioning the high quality and essential values of existing professional services, *regardless* of the presence of high or low levels of regulation.

Nevertheless, assuming a reasonable homogeneity of quality in the services we have studied and recent trends towards liberalisation notwithstanding, the available empirical evidence points in the direction of regulatory induced suboptimal outcomes from the point of

view of the whole economy (and from the viewpoint of consumers in particular) being present to varying degrees in legal, accounting, technical and pharmacy fields in many member states of the European Union, particularly in those countries with restrictively regulated professional services.

We are led by this study to the overall conclusion that the lower regulation strategies which work in one Member State might be made to work in another, without decreasing the quality of professional services, and for the ultimate benefit of the consumer.

1. Introduction and Background

Professional services, such as legal services, accountancy services, technical services and pharmacy services are distinguishable from the general category of services in the economy, even from the more apposite category of business services, to which the first three mentioned belong. The distinction rests primarily on the historical development of the occupations at the heart of these services. These came to be known as 'liberal professions', with whom particular groups of individuals are identified as practitioners. Indeed, one may often refer to 'members' of a liberal profession, due to their qualification, and acceptance by a recognised professional body, drawing a clear distinction with other non-members.

Within each field of professional services there may be several liberal professions. In this study, legal services comprise lawyers and notaries, 'accountancy' includes auditors and (sometimes) tax advisors as well as accountants, technical services are those of architects and consulting engineers, and pharmacy services refers to the activities of dispensing chemists (and thereby excludes clinical pharmacists).

Each of the professions has a long tradition particular to each member state. Separate historical development of professions within each field (legal, accounting, technical, and pharmacy services) have produced different characteristics in respect of form and organisation of the profession. Arguably, however, allowing for such variances, each profession performs a similar basic function in the society of each country. Nonetheless, it is the differences between member states in the regulation of the profession (professional field) and in economic outcomes that is the theme of this report.

In spite of the supposed and existing 'special' character of liberal professions, in respect of their relationship with clients, and responsibilities *vis a vis* the system of law, and/or governments, the approach taken here is primarily to regard the professions in their role as actors – in equal treatment along with other branches - in the wider economy of each member state, and also, of course, of that of the European Union. Such an approach can be found in a wide range of economic literature, more recently in the field of 'law and economics'. This theoretical (and empirical) background is summarised in the report, and the results of our own empirical findings are set against this body of knowledge.

The term 'economic' here includes not only those aspects for which quantitative data can be collected, but also the set of organisational rules, that is to say, regulations, by which the economic activity of the liberal professions are bound. The first section of the report is devoted to establishing a consistent framework for analysis of these regulations. A classification scheme is constructed which enables a concise overview of the regulatory structure, and delivers a 'compendium' of the state of present regulation, in member states.

Going one step further, we introduce an Index of Regulation for each Profession/Professional field, in order to be able to benchmark the degree of economic restrictions applying to each of the four professional areas separately.

More detailed information about particular professional services, and the individual professions, in a limited number of countries is presented in case studies, along with a closer look at economic characteristics of each branch. The subset of member states was chosen in order to cover a spectrum of regulation-system types. As such, although the details in case studies are specific to the countries involved, certain insights may be gained that may be relevant to other member states, not treated here in depth, but whose regulation of professional services is similar.

Economic statistics are available, albeit for a limited range of characteristics, for nearly all member states in each professional field. These are examined comparatively across member states, and the results are evaluated with respect to knowledge about degree of regulation, as summarised succinctly by the regulation indices.

Regulations represent, in general, restrictions to competition between professionals and their enterprises. This is not in itself necessarily a value judgement. The relevant question to be answered is always whether the advantages of overall 'mix of regulation' (economic or otherwise) outweigh the disadvantages (economic or otherwise) or not. By comparing member states, we are able to make observations based on information about their peers. It is not necessary, in this approach, to posit questions regarding further novel steps towards reducing (the mix of) regulation - it suffices to compare the existing regimes.

For that reason, we do not need to address, in this study at least, factors outwith the known spectrum of professional regulation in the EU, which might impinge on those aspects of regulation that are sometimes claimed as being unique to a profession. That is to say, we take the standpoint that each profession studied in this report shares the same 'core values' in every member state, regardless of whether they exhibit greater or lesser degree of regulation. Notwithstanding an awareness that particular regulations should not be taken in isolation, but regarded as an entire set applying in a particular country, it is thus feasible and desirable to examine the regulation mixes while attempting to answer two basic questions:

- do lesser degrees of regulation (that lead to more competition) exist in other member states (peers)?, and
- are the outcomes in such peer member states at least as, or even more, favourable than in member states where the respective professional is more restrictively regulated?

This is the essence of the comparative benchmarking approach of this study.

1.1 Range of Professions/Professional Services in the Study

The Institute of Advanced Studies (IHS) carried out a study in 2002 for the European Commission, Directorate-General for Competition[1], into the regulatory structure and economic impact of various Professional Services / Liberal Professions. The professions covered at present are all those belonging to Legal Services, Accountancy Services, Technical Services, and Pharmacy Services.

The professions that are included in these four areas of professional services are:

Legal Services – Lawyers and Notaries

Accountancy Services **–** Accountants, Auditors and Tax Advisers[2]

Technical Services – Architects and Consulting Engineers

Pharmacy Services – Pharmacists in retail business.

A knowledge base of types of regulation has been constructed encompassing (as far as possible) all 15 member states of the EU at present.

Similar types of regulation – in terms of their economic impact - have been grouped together to form a basis for classifying the extent and type of regulation in each member state.

A note on terminology: at various parts of the study we refer to the 'number of professionals' or 'number of practising professionals' in particular professional services. These terms refer to individuals who hold the appropriate professional qualifications in a member state and are thus authorised to participate freely in all aspects the profession. Thus, individuals with the equivalent of 'trainee' status may indeed already be highly qualified and practising professionally, but are not included within our narrow definition, if for example, they are not free to establish a firm in their own name. A measure of individual 'professionalism' may not be construed through this usage. This terminology has been chosen ahead of 'members', in the sense of 'members of the profession', on account of confusion with membership of a professional association or chamber etc., which may or may not be mandatory, or because there may be a plurality of possible 'memberships'. Specific definitions for each profession are given in Chapter 4.

1.1.1 Member states selected for Case Studies

It was necessary to choose a subset of countries for which to carry out more detailed analysis – comprehensive coverage of all member states at this stage was not feasible.

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[1] Contract No. COMP/2002/D3/S12.334490.

[2] in those member states where tax advising is a liberal profession.

Therefore it was decided that the widest coverage could be obtained by examining a different set of countries for each of the four different professional fields. The following criteria were taken into account in making the choice: 1. geographical balance; 2. balance between countries which have more and less liberal regimes in professional services (on the basis of prior knowledge); 3. size of countries; 4. availability of information.

The following member states were selected for case studies in the respective fields of professional services:

Legal Services:

– Denmark, Germany, UK/England and Wales, Italy, France

Accountancy Services:

– Italy, Netherlands, Germany, France

Technical Services:

– Austria, Finland, France, Spain

Pharmacy Services:

– Ireland, Portugal, Sweden, Germany

representing a total of 17 case studies altogether at the level of professional field, and approximately double that number at the level of liberal profession (as referred to above).

1.2 Outline of the Methodology

In order to satisfy the aim of providing an up-to-date comparative analysis of the regulatory framework for each of the professions / professional services in all 15 EU member states, a survey questionnaire was used. By this means it was intended to acquire authoritative information and data at source, i.e. from professional bodies, to augment knowledge gathered from other sources, such as published reports, previous studies etc.

Secondly, the availability of data on the professional services from sources, independent of the professions themselves was investigated. The most suitable data for comparative purposes are those from statistics bureaux at the member state and European levels. Data available at this level is incomplete for countries and years since 1990, but sufficiently available for certain comparative purposes. Detailed data for each of the professions, or professional fields, was also gathered for those countries selected for case studies. This data is perforce not structurable on a common, directly comparable, basis, but nevertheless contributes to an overall view of the outcomes in different countries.

1.2.1 Survey Questionnaire

Nearly 300 organisations (i.e. professional bodies, European umbrella organisations and relevant government Ministries) were sent a questionnaire. Over 100 specific professional bodies were considered as being essential for the purpose of obtaining a complete knowledge base of the regulatory structure in 15 member states

Return of Questionnaires:. Returns from professional bodies remained far below 100%: eventually about 75% of the questionnaires from the essential professional bodies were returned. Most returned questionnaires responded to the first part –on regulations, some responded to part 2 – recent changes in regulation, while the response to part 3 – economic data – was seldom answered. Some professional bodies showed a high degree of interest in the subject of the questionnaire. However many organisations failed to respond, despite repeated efforts being made to obtain returns. An overview of the return of questionnaires is presented in the annexes, along with a synopsis of the types of questions which elicited more or less response.

In view of the 'gaps' left by unanswered questionnaires – especially in countries, like Greece, where little or no previously published information on the regulation structure has been found to be available[3], inevitably there are a small number of countries and professions which remain outwith the range covered in the study.

1.2.2 Compilation and analysis

As mentioned in the introduction, the following tools and deliverables were developed:

- a compendium of regulations for each member state, covering market entry (including scope of activity) and conduct regulations, in the form of generalised tables
- indices of regulation (market entry, conduct, and combined) for several professions and each of the four professional fields
- case studies (see above)
- a comparative benchmarking and analysis of each of the four professional services in all member states[4] relating economic outcomes with the degree of regulation (as per indices).
- a review of the concurrence of empirical evidence with theoretical considerations.

[3] Correctly speaking, in English language.
[4] Subject to availability: the number of member states varies between 12 and 14.

1.2.3 Pharmacy Services – retail trade

Products sold by pharmacists in dispensing chemists are produced by major pharmaceutical companies (and others) and distributed world-wide. The nature of this mass retail market and details of differences in pharmaceutical prices in EU member states is discussed prior to the case studies on pharmacy services. The availability of previous research about prices/demand in this branch is a prerequisite for interpreting information on economic outcomes. In particular, we calculate a turnover share of total net turnover attributable to the level of dispensing pharmacies, in order to have an equivalent measure of output volume to the data used in legal, accountancy and technical professional services.

1.2.4 Alternative approaches

Other information than that presented here would be desirable for a complete picture of professional services /liberal professions. Unfortunately, the availability (in actual fact, lack of data) of data and information does not always match the resources of the study. Such areas are:

Trade in Professional Services: The level of trade in professional services available from the OECD database contains information on only 3 member states for both legal services and accounting services, only one of which belongs to the subset of member states selected for the case studies in these professions – an inadequate basis for comparison.

Price Comparisons of Professional Services: Comparison of fees and prices charged directly by professional services in different EU member states would be of great interest. The difficulties inherent in defining common and standard services on the one hand, and the relatively infrequent consumption of these services by individual consumers on the other hand (lack of mass market, except for pharmaceuticals), are among the reasons for the difficulty of obtaining useful information on this subject.

An extensive search for sources of secondary information, including consumers rights/protection associations in EU member states, yielded no results. Primary investigation (market research) of such differences would entail a level of effort beyond the resources of the current study.

Structure of the report

The report is divided into three parts: the main report, of which this is the introductory first chapter, a report on case studies of particular countries/professions, and annexes.

The next section of the main report, Chapter 2 contains, as a general background to this report, a review of literature relevant to our topic and a synopsis of arguments for and

against (different types of) regulation in the field of professional services that have been put forward by authors of various theoretical (and sometimes empirical) studies of the liberal professions/professional services.

In the following chapter 3 we present an overview of the regulatory framework in each of the liberal professions in the legal, accountancy, technical and pharmacy professional services – for all EU member states. A characterisation of regulatory regimes existing in the EU follows, and this enables us to compile a compendium of reference tables in which groups of countries with similar regulation structures may be identified. Further, we develop and introduce a scalar index of regulation for market entry regulation, conduct regulation, and combined, for each liberal profession and professional services field.

The case studies that are described in Part 2 of the report offer an in-depth account of regulation and economic characteristics of professions in several EU member states, for each of legal, accountancy, technical and pharmacy services. The insights gained from these case studies, additional to our assessment of the overall degree of regulation reported in Chapter 3, are summarised for each professional services field in the fourth chapter of the main report (Part 1) and recent trends in liberalisation in the liberal professions are also reviewed.

Chapter 5 (benchmarking and analysis) comprises an examination of basic data concerning the economic branches in which the four professional service fields in this study are located. Ratios of key economic variables may be viewed across member states, allowing a broad comparison of high, medium and low relative performance and identification of groups of countries with similar patterns of outcomes. We draw on the regulation indices already introduced in the third chapter in carrying out a cross-comparison of economic outcomes with the degree of existing regulation over a wide range of EU member states. Indications pointing to a possible relationship between regulation intensity and productivity are scrutinised in greater detail, by filtering out the effects of ‘localised’ country effects.

In the last section, Chapter 6 of the main report, we present a summary of the main findings. Conclusions are drawn from interpretation of the results against the background of ideas dealt with in the second chapter.

2. Regulation of professional services – Theory and Publications

Nearly all of the professions covered in this survey – lawyers, notaries, accountants, auditors, consulting engineers, architects, and non-clinical pharmacists – are subject to degrees of (self-)regulation to a greater or lesser extent. The 'self' in self-regulation is not used in the literal sense, but connotes some degree of collective restriction, other than constraints emanating from the government or state, to effect outcomes that would not be obtained by individual market behaviour alone.[1]

Although some aspects of self-regulation have their origins in spontaneous ordering from within a profession, more often it may be regarded as a deliberate delegation of the state's law-making powers to an agency, whose membership is composed of representatives of the profession themselves. Such arrangements are particularly in evidence in EU member states among lawyers', notaries', statutory auditors, and pharmacists' professions.

Licensing of professionals, based on laws and regulations strictly limiting the supply of services to authorised individuals, is a more stringent form of self-regulation than certification of members of a professional body, where the latter function is voluntary, and does not hinder access of non-certified individuals to the market.

There are two lines of argument followed by economists which follow from theories applicable to the professional services. These are often referred to in overall terms as being pro and contra higher degrees of regulation. Here we will rather distinguish between theories that answer the question 'why regulation of professional services (at all)?' and those that answer the question 'why is there too high a degree of regulation?', because (as was shown in previous chapters) many aspects of regulation can be, and have been in certain countries, reduced in degree, particularly in recent times. The reference to degrees of regulation rather than 'no regulation' versus 'regulation' indicates that there is usually a common denominator of regulated areas to be found in practice in the professional services. The denominator is, however, placed at a different point on the 'scale' of regulation, as is made transparent by the regulation indices developed for the professions and professional fields in part 3 of this study. In rough terms the denominator is traditionally lowest in the field of technical services, followed by accountancy, legal, and pharmacy. Even the denominator may be lowered in time, however, as has occurred recently in the pharmacy profession (see part 3).

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[1] Black (1996), Ogus (2000).

2.1 Answers to the question "Why regulate professional services?"

The starting point for the pro-regulation theories is the listing of those characteristics that apply to the markets for professional services, and which differentiate these markets from the economist's ideal conception of perfect competition. In the equilibrium predicted under unrestricted competition the welfare of producers (producer surplus) can not be increased without a detriment to consumer surplus, or vice-versa.[2] The extent to which familiar conditions leading to market failure may be present in liberal professions is discussed here briefly:

- Regarding the type of competition in professional services markets – traditionally there have been many small producers, and no a-priori grounds for expecting cartel formation or oligopolies (*prior* to the formation of self-regulating bodies), so that, despite the heterogeneous nature of services provided, and traditional localisation of providers, this is not of great concern.

- Regarding the provision of public goods – the professional competence of lawyers, accountants, engineers, pharmacists, etc. takes mostly the form of provision of information. Information generally satisfies conditions of non-rivalry and non-exclusivity, as it can in principle be supplied to third parties without incurring extra costs. Due perhaps to the relevance of particular information to the professional's clients (heterogeneity) this feature is also of lesser concern Nevertheless it is arguable that the proper functioning of the law and of the accounting system, and also of the health-care system, is an essential feature of the infrastructure of society and therefore constitutes to some degree a public good.

- Regarding externalities – a traditional concern in the professions is the effect that provision of low quality might have on third parties (as opposed to lower quality demanded by the market by being acceptable in relation to price). Not only, but especially in medical professions, are the negative consequences of poor advice potentially deleterious for other members of society than the client him/herself. This deficiency of the market may apply in particular in our study to pharmacists, engineers and notaries. The common existence of academic education, training periods and experience in the professional services are the first line of defence against such deleterious consequences. Immense importance in this connection must be attributed to the individual liabilities of the professions in private law.

[2] I.e. a Pareto-efficient situation.

- Regarding access to information concerning the characteristics and prices of services and goods being equal for consumers and producers – the markets for professional services exhibit perhaps their greatest potential problems. The problem of asymmetric information between the agent (lawyer, accountant, architect, pharmacist etc.) and the less-informed principal (the customer/client) is manifest. In addition, professional services are often regarded as being credence (or trust) goods, meaning that consumers may not be able to assess the quality of the service provided before purchasing, or even after consumption, due to the information/knowledge deficit, compounded by a probable lack of experience in making repeat purchases.

Two aspects of information asymmetry are considered as being potentially deleterious: first, an adverse selection resulting from declining quality of services. The argument runs that the opacity of the market services to customers could result in their only being prepared to pay an average price for an unknown (hence presumed average) quality, discouraging producers of higher quality services, who expect corresponding higher prices, to exit the supply side, thus reducing average quality supplied by those remaining in the market. The net effect would be a 'downwards spiral' of quality and prices. This argument is taken by analogy from the well-known discourse on sellers of used cars.[3]

Secondly, professionals are said to be faced with a moral hazard problem when their own income generating goals and practices run counter to the objectives of the client, and where the asymmetry of information on the price-quality relationship stands in the way of fair bargaining. In such a situation there is a risk that the professional over-supplies the service to the client, or supplies a higher quality than necessary satisfying the client's needs , so that higher prices are charged to the customer than he/she could have achieved were he/she fully informed. This line of argument is connected to the contention that many consumers are unable to make informed decisions and need to be protected against malpractice.

Such reasons, as discussed above, advanced in favour of regulation are known as public interest theories, as opposed to the private interest approaches, which may generally be regarded as contra-regulation.[4] Before turning to these latter, it is salient to point out some of the remedies that have traditionally been adopted in most countries, foremost being licensing and certification.

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[3] Akerlof (1970)

[4] Maks and Philipsen (2002)

Both licensing and certification are *ex-ante* quality control mechanisms, with licensing exerting a significantly higher degree of control. Licensing means that only professionals gaining the license may interact in the market for services. It is a barrier to entry. This barrier goes a stage, or more than one stage further than the quality instrument of academic study. As we will document later in this study, there is a wide range of restrictions to entry based on training periods, professional examinations, and years of experience.

The problem of information asymmetry has traditionally been used as a justification for various kinds of fee settings or price controls, whether implying, fixed minimum, maximum, or recommended tariffs. As we have seen, there has been a considerable degree of movement away from such restrictions in the professional services, in many, although by no means all member states.

Prohibitions on advertising have often been justified by professional bodies in the past as being inappropriate for the markets for experience goods (services). The lack of consumer information on quality could lead to a competition purely on price, leading to decrease in quality along the lines of the 'used car' argument cited above. Given the changes in technology in recent years, which have enabled the smallest of firms to publish openly, electronically, information designed to signal quality or reputation, it is not surprising that there has been a definite trend away from advertising bans.

Recent research[5] reports general evidence that restrictions on advertising of professional services increase the fees charged for professionals' services and that more advertising leads to lower fees. In fact, the weight of opinion in most societies and professions has probably now tipped the scales in favour of regarding liberalisation of advertising as being the cure for the 'remedy'.

2.2 Answers to the question "Why is there too much regulation of professional services?"

The theoretical arguments rehearsed in the previous section have the disadvantage of not providing a means to compute whether particular instruments of regulation would lead to a net gain in welfare, for producers and consumers, over the claimed loss in welfare, also known as market failure. Hence it is quite possible that the practices adopted by self-regulating professions result in regulatory failure – not regulatory failure in the technical sense of non-compliance with regulations, but in the economic sense of decreasing welfare by more than would be necessary to obtain otherwise acceptable market outcomes.

[5] Stephen and Love (1999).

Indeed theoretical private interest approaches postulate that professional bodies will advance their (members') interests beyond the minimum level required to the detriment of consumers – i.e. rent-seeking behaviour will occur. The term 'rent' is used in the sense of microeconomics to denote the difference between revenue and cost of producing services. The existence of competition dissipates rents in general market behaviour: on the other hand a decrease in levels of competition will lead to wealth transfer from consumers to producers.

Restrictions on using advertising and of the choice to set tariffs in order to attract customers are regarded as deleterious to the beneficial effects of competition for services. Restrictions on forms of association (lawyers with accountants, for example) are also seen as imposing a burden on consumers, who might otherwise benefit from economies of scope and 'one-stop shops'.

According to 'public choice' lines of argumentation[6] professional bodies are in a strong position to lobby governments in order to influence the outcomes of regulations and statutes. Since elected politicians seek re-election they have to address the attentions of influential interest groups, particularly those composed of important opinion leaders in society.

Even worse, from this perspective, self-regulation itself may represent the ultimate form of regulatory 'capture'[7], and professional bodies can in practice be acting the part of a legitimised cartel, with wide ability to determine or influence the regulatory framework to the main benefit of producers.

In particular professional bodies may exert excessive control over entry conditions to the profession. The preconditions for the most restrictive market entry regulations are given when the benefits are concentrated among a relatively small group of producers, when the costs of professional organisation are relatively low, and where costs are spread across a large population (which then meet with less organised opposition from consumers' groups).[8]

It has been argued, in contrast, that the specific knowledge[9] of professional bodies, especially concerning the risk of services being of poor quality, and their ability to react flexibly, will therefore lead to the costs of self-regulation being lower than the costs of governments themselves regulating, or setting up an independent body to carry out regulation. Be that as it may, it begs the question of just how much regulation is necessary, and in which areas of service provision.

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[6] Van den Bergh and Faure (1991).
[7] Kay (1998); Capture theory, Posner (1974).
[8] Stigler (1971) ; Peltzman (1976)
[9] Miller (1985).

Economic rents in the form of excess revenues will result, according to the 'private interest' theories, when the self-regulating higher professional body has a monopoly right over a professional service and does indeed exercise a restricting influence over entry to the profession. Such behaviour will artificially keep the supply of service providers below the level it would reach in an unrestricted situation. Not only will prices be higher, but the level of services produced will be below the potential of the market.

Most empirical studies in the legal field have been carried out in the USA. Three separate studies[10] undertaken at different periods find that lack of reciprocity between state bar associations (an entry restriction) leads to a lower lawyer density and higher lawyer incomes. There have been many studies of advertising restrictions. In general these show that advertising prohibitions raise fees charged for professional services and correspondingly, that the more advertising, the lower are fees.[11]

Arguably the strongest single measure that can affect outcomes in professional services markets is the existence of licensing requirements from self-regulating bodies. Not only entry is directly under licensing control, but the lobby effect of a licensed profession to influence conduct regulation is greatly increased. For this reason, private interest theories would expect more favourable outcomes (here, from a consumer's point of view) in professions following the certification model of self-organisation.

Many economists have preferred arrangements of certification to licensing systems because consumers are in the position of being able to orientate their market decisions by reference to certified producers, but may choose to purchase from non-certified practitioners, especially when lower quality needs are served by lower purchase price.[12] On the other hand, a study of pharmacies in Netherlands and Belgium warns of the deleterious effects caused by the costs of measures taken by the licensing body to increase quality (e.g. increased education) being passed on to customers in a higher mark-up, resulting in some customers refraining from buying medicines.[13]

While most studies of licensing have been carried out among states in the USA, a study of lawyers, architects, , physicians, and pharmacists in Belgium showed that higher degrees of licensing restrictiveness was related to higher prices and higher earnings.[14]

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[10] Holen (1965); Pashigian (1977), Kleiner, Gay and Green (1982)
[11] Stephen (2002).
[12] Svorny (1999)
[13] Faure, Maks and Philipsen (2001).
[14] Van den Bergh and Faure (1991)

Finally, the suggestion that formation of several self-regulating bodies, in competition with each other (for professional members) has been put forward: under conditions of competition, the economic rents will be dissipated or, at least, reduced[15]. Such a situation exists in practice in some member states, as we have seen, under models of certification, but not where self-regulation is conducted in a licensing mode.

2.3 Empirical Studies on liberal professions

The following specific references to published material on the liberal professions/professional services made here represent the most relevant and useful background to the subject matter extracted from the reviewed literature. The focus here is on recent empirical research.

In respect of empirical questions of regulation not much systematic research from an international comparative point of view has been done up to now. One of the most important publications in this respect is Herrmann (1996), who provides a detailed analysis for a large number of professions in several European countries. Some basic information can be found in IFB (1993), which gives an overview of the regulation on liberal professions in all Member States of the European Union at the beginning of the 1990s. OECD (1996) provides some useful information. However, most of it is in tabular form only.

A rather good source for information on accounting and legal professions is IBFD (2001). It provides some useful insights into both professional fields. However, much of the information given there is not up to date and the quality of information varies considerably from country to country. The same is true for the different articles on lawyers in different countries in Henssler/Nerlich (1994).

A subset of EU member states has been analysed in Felderer et al. (1998) for legal professional services and accountancy professional services, and in Felderer et al. (1999) for legal, accountancy and technical professions. Others, e.g. Gelking (1996): or Wein (1995) deal with specific professions and questions involving more abstract arguments concerning costs and benefits of regulations. One important book that combines empirical facts and theoretical insights has been published by Faure et al. (1993).

[15] Kay and Vickers (1990), Ogus (1995).

3. The Regulatory Framework of Liberal Professions in the European Union

Introduction and Methodological Background

This chapter gives an overview of the regulatory framework of the liberal professions that are the subject of the study. The information given here comes from different sources. These are:

- Questionnaires returned from professional bodies.
- Relevant literature (articles, books, reports).
- Texts of law.
- Other sources, like: homepages of professional organisations, other sources on the internet[1], individual members of the professions, additional information submitted by professional bodies and ministries with the questionnaires.

Regarding incompleteness: there are some professions in several countries for which we did not obtain a returned questionnaire. In these cases information was drawn from the relevant literature (if available) or the respective fields in tables etc. were left empty (if not available).

A "structure" for the regulatory systems of professional services

On beginning a description of regulatory systems we first have to distinguish between regulation in the wider sense and regulations in the narrow sense. Regulations – in the wider sense of the word – include rules that are applicable to all participants in the economy. Such rules are, for example, general regulations on consumer protection or the general labour law. Such regulations are not part of our analysis. Here we concentrate on regulations in the narrow sense, which are rules that are directly, and in most cases solely, applicable to the liberal professions or professional services.

In a first step one can differentiate in this respect between two large groups of regulations. These are:

- regulations on market entry
- and regulations on so-called "market behaviour" or conduct.

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[1] In addition to homepages of specific professional organisations, the following internet websites have been of great importance: *lawyers and notaries*: http://www.simons-law.com/e/index_e.htm, http://elixir.bham.ac.uk/menu/country/default.htm;
accountants: http://www.accaglobal.com/members/services/int_mobility/factsheets/;
architects and engineers: http://www.archieuro.archiworld.it/presae.htm.

Market entry regulations

There are different types of market entry regulations that can be distinguished.

In the field of *personal preconditions*: for a long time in many professions citizenship played an important role (this has changed in the meantime due to EU-legislation). Other personal preconditions to enter a market may for example be a minimum age or good personal reputation. Typically some negative conditions apply here, e.g. not having been convicted of a criminal offence.

Preconditions in the field of *Qualifications* are often formal certificates of qualifications (i.e. certificates on university degrees), respective practising or professional examinations.

Some *other preconditions* may encompass economic needs tests (i.e. ostensibly to answer the question of whether a new entrant is required), registration or membership in a professional body.

At the same time one or more areas of reserved practice for liberal professions very often exist. This means that there are exclusive rights for one (or sometimes more) professions to offer specific services or goods on the market.

These kinds of regulations lead – amongst other factors – to a certain degree of *potential competition* on a specific market, within the parameters set by the regulations. Together with the so-called market-behaviour or conduct regulations, described in the next paragraph, they influence the *actual degree of competition*.

Conduct regulations

Regulations on market behaviour take different forms of professional and standards quality controls. They influence price-, quality- and product-competition. Typical regulations on market-behaviour are:

- regulation of prices and fees (fixed prices, minimum and/or maximum prices etc.),
- regulation of advertising and marketing,
- regulation of location and diversification (geographical restrictions on offering services, restrictions on establishing branch offices),
- restrictions on interprofessional co-operation,

- restrictions on forms of business (e.g. whether incorporation is allowed and under what preconditions),
- other regulations (regulations on continuing education, rules on specialisation or a certain kind of indemnity insurance etc.).

Both forms of regulation (market entry and market behaviour regulation) may derive from different sources. It is not only the provisions of (EU member) state law that is relevant here, but also rules that are issued by professional bodies. In general the following types of regulations appear as most relevant:

- national state law
- regional state law,
- rules issued by compulsory professional bodies (licensing),
- rules issued by voluntary professional bodies (certification model)[2],
- regulations by the European Community (treaties, directives, decisions of the European Court of Justice).

Such regulations are issued and implemented under *different forms of professional organisation:*

- in models with licensing via state / public authorities,
- in models with licensing via professional bodies - often with compulsory membership in a professional association,
- in models with pure certification (no licensing).

In the second case the licensing may be implemented by only one professional body, or, as is apparent for some professions in some jurisdictions, there are alternative (and therefore to some extent competing) professional bodies.

In the last case, there often exist civil law professional bodies without compulsory licensing, and professionals do not have the exclusive right to offer one or different kinds of service. Also there is no market entry regulation in the narrow sense in this case - however it very often appears that there are some basic market-behaviour regulations.

The easiest distinction in this respect – apart from the question of whether there is any binding regulation at all – is the one between *self-regulation* and *regulation via the state/public authorities*. However, it occurs relatively often that a regulatory system is in fact

[2] The distinction between compulsory and voluntary professional bodies is not necessarily co-extensive with the distinction between licensing and certification. This is rue for example where membership to the professional body might be compulsory but it operates a certification system only. However, as to our knowledge, such a combination very rarely occurs, if at all.

a hybrid between these two categories. Elements of self-regulation are mixed with elements of regulation by the state. There may be for example a public regulator but with only residual regulatory authority, overseeing the practices of the self-regulatory agency. There are also cases where representatives of other (often partly self-regulated) professions are involved in the implementation of the rules of the profession (that is not their own profession). The latter form is called *interprofessional co-organisation*.

An overview of the regulatory framework: regulation tables and regulation indices

This chapter presents an overview of the regulatory systems of selected liberal professions in the EU. In a first step we provide *tables on different fields of regulation* and try to distinguish different regulatory groups of countries. In a second step, several *regulation indices* for each profession are constructed: for each profession there is an index for market-entry, one for conduct and an overall index. These indices, together with several quantitative figures on market-outcomes, will be used later on to analyse the overall regulatory and market situation for our selected liberal professions in the member states of the European Union.

The regulatory systems of liberal professions very often appear to be rather complicated and detailed knowledge often is necessary for a right interpretation of the one or other rule. For this reason our main source for the *regulation tables* provided below is our questionnaire, which has been sent to all the relevant professional bodies in the EU as well as to all the relevant ministries. This questionnaire includes all the regulatory instruments mentioned above. At the same time, we asked for the vital organisational and institutional characteristics of the respective regulatory systems.

In most cases the information given in the regulation tables directly mirrors the information given in the questionnaires. Unfortunately

- not all relevant professional bodies and ministries replied to the questionnaire
- not all returned questionnaires have been filled in completely,
- and not all information given in the questionnaires turned out to be clear and correct.

For that reason, some of the information provided in the following regulation tables has been extracted from

- relevant literature,
- texts of law and
- other relevant sources (see above).

The fields for which information is insecure have been marked with a question mark. Professions for which we do not have a filled in questionnaire at the time of writing are marked in italics and some fields remain free (“n.a.”).

To obtain a better impression from an internationally comparative point of view we introduce the following simple colour-code for the analysis of *market entry*:

	High regulation
	Medium regulation
	Low regulation
	No such profession (in the form of lib. prof.)
white + italic	Not enough information

lib. prof. = liberal profession

In a first step – concerning market-entry, the countries are respectively assigned to one or the other colour-coded group mainly in respect of the exclusive rights of the relevant profession(s). A market entry index is calculated for each profession in each country, whereby the outcomes of index-calculation fit the colour-coding quite closely.

The colour code concerning conduct regulation is as follows:

	regulation
	no regulation
n.a.	not enough information

Additionally here the relevant fields are marked with Y (“yes”) and N (“no”). This means that regulation applies/does not apply in the relevant field. In some cases “Y” and “N” are set in brackets. This is the case, when the relevant regulation only applies under specific circumstances etc. (see for further explanation section 3.1.2 below).

Our methodology on “*regulation indices*” is developed to facilitate comparison among the four professions covered by this report as well as, saliently, across member states’ economies as well. The respective overall index score reflects the number of restrictions that are applied and the relative importance of those restrictions. The higher the respective index score, the more restrictive the regulation system for that profession. We construct three types of indices:

- one for market-entry
- one for conduct, and
- an overall index.

Within each regulation category, a score is assigned to the particular form of regulation. The score for market entry and conduct ranges from 0 as least restrictive to 6 as most restrictive. The score for the overall index ranges from 0 to 12 (the sum of the market entry and the conduct index). Each regulation category receives a weighting that indicates the relative (assumed) importance of that category in respect of market outcomes. The higher the

weighting, the more important a regulation category is considered to be, relative to other regulation categories.

The use of weights for different categories of regulation is, in the last instance, necessarily subjective. This is a general feature of index construction, not singular to this case. Nevertheless, indices are widely used in different fields of social sciences. For example, in the field of industrial relations and wage setting alone, over 30 different indices exist, all showing some differences in the categories included, their weighting and, alongside with this, outcomes (see for a discussion: Kenworthy 2001).

A possible orientation for our purpose is a study done by Nguyen-Hong (2000)[3]. To the best of our knowledge up to now this is the only existing attempt to construct an index on the regulation of liberal professions. Unfortunately this study concentrates on international trade in professional services and for this reason focuses on some other categories of regulation than we do here (e.g. investment and ownership by foreign professionals etc.). Differences from the indices provided by Nguyen-Hong (2000) have various reasons:

- different categories of regulations measured in the index,
- a different system of weighting,
- the index applies to another time period (mid 1990s for Nguyen-Hong, 2001/2002 for our index)
- a higher quality of information on specific regulations in our study[4].

However, a major parallel between our methodology and the methodology adopted by Nguyen-Hong (2000) is that in both cases a market entry index, a conduct index, and an overall index have been constructed.

For the market entry index our weighting and coding is as represented in the following table[5]:

[3] See Nguyen-Hong, Duc (2000): Restrictions on Trade in Professional Services, Staff Research Paper, Productivity Commission, Melbourne.
[4] Nguyen-Hong mainly used information provided by OECD (1996) for his index.
[5] For pharmacists a slightly different method applies. See the relevant sub-chapter below.

Market Entry Regulation Index

	Category/Variables	Coding	Scale	Weighting1	Weighting2
ER	**Entry regulation (general)**	**ERLC*0.40+ ERED*0.40+ ERQT*0.20**	**0 to 6**		
ERLC	**Licensing** Number of exclusive and shared exclusive tasks	0 = 0 1 = 1.5 2 = 3 3 = 4.5 4 or more = 6	0 to 6		40%
ERED	**Requirements in education**/does only apply in cases of licensing; if no licensing: "0"	ERED1*0.30+ ERED2*0.40+ ERED3*0.20+ ERED4*0.10	0to6		40%
ERED1	Duration of special education/university or other higher degree	0 to ≥ 6 years	0 to 6	30%	
ERED2	Duration compulsory practising	0 to ≥ 6 years	0 to 6	40%	
ERED3	Number of professional exams	(0 to ≥ 3)*2	0 to 6	20%	
ERED4	Number of entry routes to profession (inv. scale)	(0 = 4 or more routes; 1=3 routes; 2=2 routes; 3=1 route)*2	0 to 6	10%	
ERQT	**Quotas/economic needs test**	0=no 6=yes	0 or 6		20%

ER is the overall entry regulation index. The scale is from 0 to 6, and the higher the figure the more restrictive the regulation. Licensing (ERLC) and requirements in education (ERED) have been assigned the highest weights (40% each). It is evident that market entry in most systems is mainly driven by these two categories of regulation. For ERLC we follow the methodology of Nguyen-Hong (2000) and count the number of exclusive or shared[6] exclusive tasks provided by the relevant profession. The respective *categories* of tasks are taken from OECD (1996). We are aware of the problem that the number of exclusive tasks may not perfectly reflect their actual importance. This means that, for example, one exclusive task provided by one profession may cover a higher overall market share (e.g. in % of GDP) than two or more exclusive tasks provided by an other profession. In fact there is no way to solve this problem, as there is insufficient information on the actual importance (in terms of market data) of different tasks provided by liberal professions from an international comparative point of view.

ERED (requirements in education) is constructed from three other categories: duration of special education/university or higher degree (30%), duration of compulsory professional practice (40%) number of professional exams (20%) and number of entry routes to profession (10%). The duration of compulsory practice has been assigned the highest weight

[6] In this case two or more different professions are licensed to offer the relevant service..

as long phases of mandatory practice (sometimes combined with relatively low income) may discourage potential professionals, to a considerable extent, from entering a profession. The duration of special education (for a university or other higher degree) and the number of special professional entry exams are each important measures of the degree of market entry regulation as well. The number of different entry routes to the professions is coded as follows: the higher the number of different possible routes, the lower the figure adding to the overall entry index. We gave this field a weight of only 10%, as the (stand-alone) effects of higher flexibility in the entry system (irrespective of the general degree of market entry regulation as expressed in the other categories) should be comparatively low. The existence of quotas/economic needs tests (ERQT), which seldom occurs in the European Union except for pharmacists and notaries, is of more importance and weighted 20%. If there are no restricted tasks (i.e. a “0” in licensing/ERLC applies), then the figure for ERED and ERQT are automatically set at “0”, even if some specific education is obligatory in one or more existing certification (but not licensing !) structures.

The construction of the conduct regulation index is somewhat more complicated, as more categories have to be considered. For the conduct index our weighting and coding is as follows:

Conduct Regulation Index

	Category/Variables	Coding	Scale	Weight -ing 1	Weight -ing 2
CR	***Conduct Regulation (general)***	**MCPR*0.25+ MCAD*0.15+ MCLOC*0.15+ MCDIV*0.20+ MCIC*0.25**	0 to 6		
MCPR	***Regulations on prices and fees***	0 = no regulations 1 = non binding reference prices on some services 2 = non binding reference prices on all services 3 = maximum prices on some services 4 = maximum prices on all services 5 = minimum prices on some services 6 = minimum prices on all services	0 to 6		25%
MCAD	***Regulations on advertising***	0 = no spec. regulations 2 = some forms forbidden (like comparative price advertising, direct mailing etc.) 4 = most forms are forbidden (advertising only in very narrow margins allowed) 6 = all forms of advertising are forbidden	0 to 6		15%
MCLOC	***Regulations on location***	0 = location not restricted 6 = location restricted	0 to 6		15%
MCDIV	***Regulations on diversification***	0 = no specific regulations 3 = diversification under specific preconditions allowed (branch office head is a professional, maximum number of branch offices etc.) 6 = diversification not allowed in any case	0 to 6		20%
MCIC	***Regulations on form of business and interprofessional co-operation (general)***	MCIC1*0.5+ MCIC2*0.5	0 to 6		25%
MCIC1	***MCIC1 Regulations on form of business***	0 = all forms (incl. incorporation allowed in any case) 2 = partnership allowed, incorporation only allowed in specific cases (regulations on ownership etc.) 5 = incorporation forbidden in any case 6 = partnership and incorporation forbidden in any case; only sole practitioners etc. allowed.	0 to 6	50%	
MCIC2	***MCIC2 Regulations on interprofessional co-operation***	0 = all forms allowed 3= with all professions but no incorporation; or only with comparable professions in all forms allowed etc. 4.5 = only with comparable professions and no incorporation 6=generally forbidden	0 to 6	50%	

Regulations on prices and fees (MCPR) and regulations on forms of business and inter-professional co-operation (MCIC) have been given the highest weightings (25% each). It is evident that the model of price setting has direct effects on the relevant market outcomes. The highest weighting coded here has been given to minimum prices: Whereas maximum prices and even reference prices also have some impacts on competition, the direct effects of minimum prices are the strongest.

The question of business form and inter-professional co-operation is very important in respect of potential investment coming from other economic sectors as well as product-innovation and business efficiency generally. The same is true in respect of rules concerning diversification (possibilities to open branch offices) (MCDIV). This category has been weighted 20%. Other categories are regulations on location (15%) and regulations on advertising (15%).

Our overall index is constructed from the sum of the market entry and the conduct regulation indices.

These indices provide a summary measure that quantifies the most important market restrictions that can be identified from available information sources. One pitfall to be avoided in constructing an index is that a higher score may simply reflect a greater availability of information rather than a more regulated regime - c.f. Nguyen-Hong (2000). For this reason, we construct a regulation index only for professions/countries where enough information of a rather good quality was available at the time of writing. Again, we have to stress that indices such as our regulation indices are not objective rational-scale measures. However, they are objective measures conditional upon the prior subjective definition of a higher or lower degree of regulation (as implemented by the choice and weighting of relevant categories of regulation). Isolated changes in the choice of relevant categories of regulation as well as coding and weighting would lead *ceteris paribus* to some changes in the regulation indices. Nevertheless, it is certain that no cases of countries/professions originally classed as having a high degree of regulation being classed as countries with a low degree of regulation (or vice versa) would arise after the adoption of an isolated reweighting. That is to say, the constructed indices are not highly sensitive to small changes in coding or weighting.

3.1. Accountancy Services

3.1.1. Organisation and market entry regulation

The following three tables (Table 3-1, Table 3-2 and Table 3-3) give an overview of actual organisational models of market entry regulations *in accountancy services*[7]. We can see from this that there exists a licensing-model in all EU member states – and, in fact – there has to be a licensing-model in all member states according to respective directives of the European Union, which codify some minimum requirements for international statutory audits (and the professionals engaged in these activities). But the member states have a considerable degree of freedom as to how to organise the respective licensing

[7] The term 'accountancy services' is always used in the wide sense, to include not only accountants, but also auditors, and (sometimes) tax advisors.

arrangements. We can see this in Table 3-1 regarding the basic organisational model and the question whether membership in a professional body is compulsory or not.

It is obvious, that when compulsory membership in a professional body is required, these body/bodies as a matter of course is/are regularly involved in the formulation and implementation of regulation as well as in the decision of disciplinary sanctions. A mandatory membership for auditors in a respective professional body exists in: Austria, Belgium, Denmark, France, Germany, Italy, Portugal, United Kingdom, Luxembourg and Ireland. In the United Kingdom and Ireland membership is compulsory only in those cases where Chartered or Certified Accountants want to work as a Registered Auditor (and for this purpose need to be licensed to do statutory audits). No compulsory membership in a professional body is found in: Finland, Spain and Sweden.

Table 3-2 shows the qualification requirements to get an accountant and/or auditor in the different Member States. U stands for “University Degree”, “HE” for “higher education”. In the case of the United Kingdom “Ch A” stands for “Chartered Accountant”, “Ce A” for “Certified Accountant”. If the information concerning University/higher education degree is set in brackets, this signals that a University degree is not a binding pre-condition to enter the profession and may be replaced e.g. by long practise times or specific non-university courses. In most countries to acquire the right for statutory audit a university or other higher degree is a precondition, but in some countries other, alternative “entrance roads” to the respective profession exist (as in Germany, the UK or Ireland). In all countries there are one or more special professional entry exams for auditors.

As already mentioned above, statutory audit is an exclusive right of one or more professional groups in all Member States of the European Union. Even more interesting is a second question on the exclusive rights other than that for statutory audit (Table 3-3). Here we can see that the market entry regulations for financial services are rather heterogeneous from an internationally comparative point of view. The respective *categories* of tasks given in Table 3-3 are taken from OECD (1996)[8]. “XX” means that the relevant task is reserved to the relevant profession *or* that it is reserved to the relevant profession and other licensed professions. We do not distinguish between these two cases because the question of “shared exclusive tasks” is a very complicated one and a major potential source of error. It became evident during our research that in many cases not even the professional association has exact knowledge on this point. If an “X” is set in brackets here, this means that the relevant regulations apply under specific circumstances only.

Overall, the exclusive rights of accountants are much wider in Austria, Belgium, France, Germany, and Luxembourg than they are in the other EU-member states. This is mainly because of the fact that not only statutory audit falls under exclusive rights in these countries

[8] All the information given is revised and updated according to our own sources.

but also services like non-statutory audits, accounting and bookkeeping (Austria, Belgium) as well as tax advice and tax representation (Austria, France, Germany), which are exclusive rights of the respective (and other) professions. According to this some of the professions listed in Table 3-1 are, if the respective title is protected at all, primarily of certifying character only (as for example the *Administrateurs* in the Netherlands or the Management Accountants in the UK).

Table 3-1 Accountancy Services: General

Country	Profession	Access to profession: level of regulation				Implementation of regulation by		Disciplinary sanctions decided by		Member-ship in a prof. assoc. compu-lsory?
		nat.	subnat.	gov.	self-reg	gov.	self-reg.	gov.	self-reg.	
Austria	Beeideter Wirtschaftsprüfer	X		X	X	X	X	X	X	Y
	Beeideter Steuerberater	X		X	X					Y
Belgium	*Chartered Accountant*	*X*	*?*	*X*	*?*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*
Denmark	State Authorised Public Accountant	X		X	X	X	X	X		N
	Registered Public Accountant	X		X	X	X			X	N
Finland	*KHT*	*X*		*X*		*n.a.*	*n.a.*	*n.a.*	*n.a.*	*N*
	HTM	*X*		*X*		*n.a.*	*n.a.*	*n.a.*	*n.a.*	*N*
France	*Expert Comptable (Chartered Accountant)*	*X*		*X*	*?*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*
	commissaire aux comptes (Statutory Auditor)	*X*		*X*	*?*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*
Germany	Wirtschaftsprüfer (Business Controler)	X		X	X		X	X	X	Y
	Vereidigter Buchprüfer (Sworn Auditor)	X		X	X		X	X	X	Y
	Steuerberater (Tax Adviser)	X		X	X	X	X	X	X	Y
Greece	Orkoton Elekton (Certified Public Accountant)	X		X	X	X	X	X	X	Y
Italy	Dottore Commercialista (Certified Public Accountant)	X		X	X	X	X	X	X	Y
	Regioniere Peritp Commerciale (Accountant)	X		X	X	X	X	X	X	Y
Netherlands	*Register Accountant (Public Accountant)*	*X*		*X*	*X*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*
	Accountant Administrative Consultant (Public Accountant)	*X*		*X*	*X*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*
	Administrateur (Bokkkeeper)					*n.a.*	*n.a.*	*n.a.*	*n.a.*	*N*
	Belasting-advusir (Tax adviser)					*n.a.*	*n.a.*	*n.a.*	*n.a.*	*N*
Portugal	*Statutory Auditor*	*X*		*X*		*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*
Spain	Audotires da cueantas (Accounting Auditor)	X		X		X		X	X	N
Sweden	*Auktorisened revisor (Authorised Public Accountant)*	*X*		*X*		*n.a.*	*n.a.*	*n.a.*	*n.a.*	*N*
	Godkänd revisor (Approved Public Accountant)	*X*		*X*		*n.a.*	*n.a.*	*n.a.*	*n.a.*	*N*
	Revisor (Accountant)					*n.a.*	*n.a.*	*n.a.*	*n.a.*	*N*
United Kingdom	Chartered Accountant		X	X	X	X	X		X	(Y)
	Certified Accountant		X	X	X	X	X		X	(Y)
	Registered Auditor	X		X	X	X	X		X	Y
	Public Finance Accountant				*X*	*n.a*	*n.a.*	*n.a.*	*n.a.*	*N*
	Management Accountant			*X*	*X*	*X*	*X*	*X*	*X*	*N*
	Insolvency Practitioner	*X*		*X*	*X*	*X*	*X*		*X*	*Y*
Luxembourg	Expert Comptable (Tax adviser)	X		X						N
	Réviseur d`Enterprises	X		X	X	X	X	X	X	Y
Ireland	*Chartered Accountant*	*X*		*X*	*X*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*(Y)*
	Certified Accountant	*X*		*X*	*X*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*(Y)*
	Tax Consultant/Tax Practitioner					*n.a.*	*n.a.*	*n.a.*	*n.a.*	*N*

Table 3-2 Accountants: Qualification Requirements

Country	Profession	University/Higher education degree (years)	Practise (years)	Professional exam	Number of "entrance roads" to profession
Austria	**Beeideter Wirtschaftsprüfer**	**U 4**	**5**	**Y (2)**	**2**
	Beeideter Steuerberater	**U 4**	**3**	**Y (1)**	**2**
Belgium	***Reviseur dÉnterprise***	***U 4***	***3***	***Y (2)***	***n.a.***
Denmark	**State Authorised Public Accountant**	**U 5**	**3**	**Y (2)**	**1**
	Registered Public Accountant	**U 4**	**2**	**N**	**1**
Finland	***KHT Approved Auditor***	***U 4-5***	***3***	***Y (1)***	***2***
	HTM Approved Auditor	***U 3***	***3***	***Y (1)***	***2***
France	**Expert Comptable (Chartered Accountant)**	**U 7**	**3**	**Y (1)**	**1**
	commissaire aux comptes (Statutory Auditor)	**U7**	**3**	**Y (1)**	**1**
Germany	**Wirtschaftsprüfer (Business Controler)**	**(U 4)**	**min. 3**	**Y (1)**	**3**
	Vereidigter Buchprüfer (Sworn Auditor)	**(U 4)**	**min. 5**	**Y (1)**	**2**
	Steuerberater (Tax Adviser)	**(U4)**	**min. 3**	**Y (1)**	**3**
Greece	**Orkoton Elekton (Certified Public Accountant)**	**U 4**	**8**	**Y (1) (?)**	**1**
Italy	**Dottore Commercialista (Certified Public Accountant)**	**U4**	**3**	**Y (3)**	**1**
	Regioniere Peritp Commerciale (Accountant)	**Umin3**	**3**	**Y (1)**	**1**
Netherlands	**Register Accountant (Public Accountant)**	**U 4+3**	**3**	**Y (1)**	**1**
	Accountant Administrative Consultant (Public Accountant)	**HE +6**	**2**	**Y (2)**	**2**
	Administrateur (Bokkkeeper)	**(U4)**	**0**	**N**	**2**
	Belasting-advusir (Tax adviser)	**(U4)**	**0**	**N**	**2**
Portugal	***Statutory Auditor***	***U 5***	***3***	***Y (1)***	***1***
Spain	**Audotires da cueantas (Accounting Auditor)**	**U 3**	**3 or 8 (no U)**	**Y (2)**	**2**
Sweden	***Auktorisened revisor (Authorised Public Accountant)***	***U 4***	***5***	***Y (1)***	***1***
	Godkänd revisor (Approved Public Accountant)	***U 3***	***3***	***Y (1)***	***1***
	Revisor (Accountant)	***U 3 – 4***	***0***	***N***	***1***
United Kingdom	**Chartered Accountant**	**(U 3 - 4)**	**3 or 4**	**Y (2)**	**3**
	Certified Accountant	**(U 3 - 4)**	**3**	**Y (1-3)**	**4**
	Registered Auditor	**Cha A/Ce A**	**CH A+2/Ce A+2**	**N (but Cha A/Ce A)**	**7**
	Public Finance Accountant		***Y***	***Y***	
	Management Accountant		**3**	**Y (1: 3 parts)**	**1**
	Insolvency Practitioner	**(U 3- 4)**	**CH A+3/Ce A+3**	**Y (1 Special)**	**several**
Luxembourg	***Expert Comptable (Tax adviser)***	***U (3)***	***3***	***N***	***1***
	Réviseur d`Enterprises	**U (4), HE**	**3 or more (HE)**	**Y (2)**	**2**
Ireland	***Chartered Accountant***	***U (3-4), others***	***3,5 (with U.)***	***Y (min 2) + 2 (RA)***	***4***
	Certified Accountant	***U (3-4), others***	***3***	***Y (1-3) + 2 (RA)***	***4***
	Tax Consultant/Tax Practitioner	***HE, several***	***0***	***Y (3 parts)***	***several***

Table 3-3 Accountancy Services: Scope of Activities

		XX = Exercise reserved; X= Activity exercised, but not reserved											
Country	**Profession**	**Statutory audit**	**Non-statutory audit**	**Audit of mergers and contributions in kind**	**Public sector audit**	**Accounting and-bookkeeping**	**Insolvency practise**	**Tax advice**	**Tax represen-tation**	**Manage-ment consul-tancy**	**Invest-ment advice**	**Legal advice and repres-entation**	**Expert witness in accounting**
Austria	Beeideter Wirtschaftsprüfer	XX	X	XX	XX	XX	X	XX	XX	X	X	XX	X
	Beeideter Steuerberater		X			XX		XX	XX	X	X	XX	X
Belgium	Reviseur d'Èntreprise	XX	XX	XX	XX	XX	X	X	X	X	X	X	XX
Denmark	State Authorised Public Accountant	XX	X	X	X	X	X	X	X	X	X		X
	Registered Public Accountant	XX	X	X		X	X	X	X	X	X		X
Finland	***KHT***	***XX***	***X***	***XX***	***X***			***X***		***X***	***X***		***X***
	HTM	***XX***	***X***	***XX***	***X***			***X***		***X***	***X***		***X***
France	Expert Comptable (Chartered Accountant)		X	XX		XX		XX	XX	X	X	XX	X
	Commissaire aux comptes (Statutory Auditor)	XX		XX	XX								
Germany	Wirtschaftsprüfer (Business Controler)	XX	X	XX	XX	X	X	XX	XX	X	X	XX	XX
	Vereidigter Buchprüfer (Sworn Auditor)	XX	X	XX		X	X	XX	XX	X	X	XX	XX
	Steuerberater (Tax Adviser)		X			X	X	XX	XX	X	X	XX	XX
Greece	Orkoton Elekton (Certified Public Accountant)	XX	X	XX		X	X	X		X	X		XX (?)
Italy	Dottore Commercialista (Certified Public Accountant)	XX	X	X	XX	X	X	X	XX				X
	Regioniere Peritp Commerciale (Accountant)	XX	X	X	XX	X	X	X	XX				X
Netherlands	***Register Accountant (Public Accountant)***	***XX***	***X***	***XX***	***XX***	***X***		***X***		***X***	***X***		***X***
	Accountant Administrative Consultant (Public Accountant)	***XX***	***X***	***XX***	***XX***	***X***		***X***		***X***	***X***		***X***
	Administrateur (Bokkkeeper)					***X***		***X***					
	Belasting-advusir (Tax adviser)					***X***		***X***			***X***		
Portugal	***Statutory Auditor***	***XX***	***X***	***XX***				***X***		***X***	***X***		***X***
Spain	Audotires da cueantas (Accounting Auditor)	X	XX	X	X	X	X	X	X	X	X	X	X
Sweden	***Auktorisened revisor (Authorised Public Accountant)***	***XX***	***X***	***XX***	***X***			***X***	***X***	***X***	***X***		***X***
	Godkänd revisor (Approved Public Accountant)	***XX***	***X***	***XX***	***X***			***X***	***X***	***X***	***X***		***X***
	Revisor (Accountant)		***X***		***X***	***X***		***X***	***X***	***X***	***X***		***X***
United	Chartered Accountant		X		X	X		X	X	X	X		X
Kingdom	Certified Accountant		X		X	X		X	X	X	X		X
	Registered Auditor	XX	X	XX	X	X		X	X	X	X		X
	Management Accountant		X			X		X	X	X	X		X
	Insolvency Practitioner						XX						
Luxembourg	*Expert Comptable (Tax adviser)*		***X***			***X(X)***	***X***	***X***	***X(X)***	***X***		***XX***	***X?***
	Réviseur d`Enterprises	XX	X	XX	X?	X(X)	X	X	X(X)	X		XX	X?
Ireland	***Chartered Accountant***	***XX***	***X***	***XX***	***X***	***X***	***X***	***X***	***X***	***X***	***X***	***X***	***X***
	Certified Accountant	***XX***	***X***	***XX***	***X***	***X***	***X***	***X***	***X***	***X***	***X***	***X***	***X***
	Tax Consultant/Taxation Practitioner					***X***		***X***	***X***	***X***	***X***		

3.1.2 Conduct regulation

As already mentioned above, in addition to market entry regulations the second important group of regulations is that of conduct regulations. Relevant fields (from left to right on Table 3-4) are price-setting, advertising, regulation on location, regulation on diversification, the question whether incorporation is generally forbidden, the rules concerning inter-professional co-operation, the question whether professional indemnity insurance is compulsory and whether there is an obligation for continuing education.

Concerning prices, we distinguish between minimum, maximum and non-binding reference prices. If a "Y" is set in brackets here, this means that the regulation only applies to some kinds of services or other specific pre-condition. Similarly, this applies to the question of advertising: brackets symbolise that only very few kinds of advertising are not allowed, or only very basic regulation exists in cases where, according to our table, "some kinds" of services are forbidden. In the other fields brackets mean that the respective regulation applies in a specific form that would need further description. In reply to the answer whether "inter-professional co-operation is forbidden" in our table four answers are possible:

- "any": this is quite clear: any form of inter-professional co-operation in a joint firm is forbidden.
- "incorp. gen": it is generally forbidden to practise inter-professional co-operation in from of a corporate entity (joint stock-company).
- "with non lib. prof": any form of inter-professional co-operation is allowed, but the respective partners must be members of a comparable profession (in this case e. g. lawyers etc.).
- "incorp with non lib prof.": any form of inter-professional co-operation is allowed, but if the firm is a corporate entity (joint-stock company), the respective partners must be members of a comparable profession (in this case e. g. lawyers etc.).
- Brackets in most cases indicate that there are specific rules on ownership etc., e. g. that members of the profession have to hold 51% of the shares or that other specific circumstances apply etc.

The trends in liberalisation, that have taken place for accountants in Europe in respect of conduct regulation in the last ten years led to a situation whereby there are only very few countries now with very rigid price regulation (Germany for tax advisers, Greece, Italy and Portugal). In most countries only some forms of advertising are forbidden today. Germany, Spain and arguably France and Belgium still show high regulation in this field. There are no regulations on location (regulations on offering services only in a restricted geographic area) and only in Denmark and in Germany (again for tax advisers) specific regulations on diversification are in place. Italy appears to be the only country where incorporation de facto

still is not possible (see case study in chapter 3 of this report), whereas the situation concerning inter-professional co-operation is more heterogeneous. The same is true as regards the existence of compulsory indemnity insurance and the obligation for continuing education.

Table 3-4 Accountancy Services: Conduct

Country	Profession	Regulation of prices			Advertising forbidden?			Reg. on location	Reg. on diversi-fication	Incorp. for-bidden	Interprof. co-operation forbidden?				Comp. indemn. insur-ance?	Comp. cont. edu-cation?
		min. price	Max. price	reference price	All	most	some				any	incorp. gen.	with non lib. prof.	incorp. w. non lib. prof.		
Austria	Beeideter Wirtschaftsprüfer	N	N	Y	N	N?	Y	N	(N)	N	N	N	Y	Y	Y	Y
	Beeideter Steuerberater	N	N	Y	N	N?	Y	N	(N)	N	N	N	Y	Y	Y	Y
Belgium	*Chartered Accountant, reviseur d' enterprises*	*N*	*N*	*N*	*N?*	*Y?*	*Y?*	*N?*	*N?*	*N?*	*N*	*Y?*	*Y*	*Y*	*Y?*	*Y*
Denmark	State Authorised Public Accountant	N	N	(N)	N	N	N	N	(Y)	N	N	N	N	N	Y	N
	Registered Public Accountant	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Finland	*KHT*	*N*	*N*	*N*	*N*	*N*	*Y?*	*N?*	*N?*	*N*	*N*	*(N)*	*N*	*(N)*	*Y*	*Y*
	HTM	*N*	*N*	*N*	*N*	*N*	*Y?*	*N?*	*N?*	*N*	*N*	*(N)*	*N*	*(N)*	*Y*	*Y*
France	*Expert Comptable (Chartered Accountant)*	N	*N*	*(N)*	*N*	*Y?*	*Y*	*N?*	*(N)?*	*(N)*	*N*	*(N)*	*(N)*	*(N)*	*Y*	*N*
	Commissaire aux comptes (Statutory Auditor)	*N*	*N*	*(Y)*	*N*	*Y?*	*Y*	*N?*	*(N)?*	*(N)*	*N*	*(N)*	*(N)*	*(N)*	*Y*	*N*
Germany	Wirtschaftsprüfer (Business Controler)	(N)	(N)	(N)	N	Y	Y	N	N	N	N	(N)	N	Y	Y	Y
	Vereidigter Buchprüfer (Sworn Auditor)	(N)	(N)	(N)	N	Y	Y	N	N	N	N	(N)	N	Y	Y	Y
	Steuerberater (Tax Adviser)	Y	Y	N	N	N	Y	N	(Y)	N	N	N	N	Y	Y	Y
Greece	Orkoton Elekton (Certified Public Accountant)	(Y)	N	N	N	N	N	N	N	N	N	N	N	N	Y	N
Italy	Dottore Commercialista (Certified Public Accountant)	N	N	Y	N	N	Y	N	N	Y	N	Y	Y			Y
	Regioniere Peritp Commerciale (Accountant)	N	N	Y	N	N	Y	N	N	Y	N	Y	Y			
Nether-lands	*Register Accountant (Public Accountant)*	*N*	*N*	*(Y)*	*N*	*N*	*(Y)*	*N*	*N*	*N*	*N*	*(N)*	*N*	*Y*	*N*	*Y*
	Accountant Administrative Consultant (Public Accountant)	*N*	*N*	*(Y)*	*N*	*N*	*(Y)*	*N*	*N*	*N*	*N*	*(N)*	*N*	*Y*	*N*	*Y*
	Administrateur (Bokkkeeper)	*N*	*N*	*(Y)*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*n.a.*	*Y*
	Belasting-adviseur (Tax adviser)	*N*	*N*	*(Y)*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*	*n.a.*	*Y*
Portugal	*Statutory Auditor; Revisor Oficiais de Contas*	*(Y)*	*(Y)*	*(N)*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*
Spain	Audotires da cueantas (Accounting Auditor)	*N*	*N*	Y	N	Y	Y	N	N	N	N?	(N)?	N?	(N)?	Y	(Y)
Sweden	*Auktorisened revisor (Authorised Public Accountant)*	*N*	*N*	*N*	*N*	*N*	*N?*	*N*	*N*	*N*	*N*	*(N)*	*N*	*(N)*	*Y*	*Y*
	Godkänd revisor (Approved Public Accountant)	*N*	*N*	*N*	*N*	*N*	*N?*	*N*	*N*	*N*	*N*	*(N)*	*N*	*(N)*	*Y*	*Y*
United Kingdom	Chartered Accountant	N	N	(Y)	N	N	(Y)	N	N	N	N	N	N	N	Y	(Y)
	Certified Accountant	N	N	(Y)	N	N	(Y)	N	N	N	N	N	N	N	Y	Y
	Registered Auditor	N	N	Y	N	N	(Y)	N	N	N	N	N	N	N	Y	Y
	Management Accountant	N	N	N	N	N	(Y)	N	N	N	N	N	N	N	Y	N
	Insolvency Practitioner	N	N	N	N	N	(Y)	N	N	N	N	N	N	(Y)	Y	Y
Luxem-bourg	*Expert Comptable (Tax adviser)*	*N*	*N*	*N*	*N*	Y?	*Y?*	*N*	*N*	*N*	N	*N*	*N*	*(Y)*	*n.a.*	*n.a.*
	Réviseur d`Enterprises	N	N	N	N	Y?	Y?	N	N	N	N	N	N	N	*N*	*N*
Ireland	*Chartered Accountant/Certified Accountant/RA*	*N*	*N*	*N*	*N*	*N*	*(Y)*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*Y*
	Tax Consultant / Taxation Practitioner	*N*	*N*	*N*	*N*	N	N?	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N?*	*N?*

The information presented above only gives a brief overview over the regulatory situation for the profession of accountants in respect of market entry and conduct. Overall, it appears very hard to estimate in which country regulation is higher or lower.

3.1.3 Regulation Indices

The table below summarises the market-entry, conduct and overall regulation index for accounting services in the Member States of the European Union.

Accountants (Auditors): IHS regulation indices

	Market Entry	Conduct	Total	Rank
Belgium	3.9	2.4	6.3	1
Austria	4.2	2.0	6.2	2
Germany	3.6	2.5	6.1	3
France	4.0	1.8	5.8	4
Greece	3.6	1.5	5.1	5
Italy	3.2	1.9	5.1	5
Luxembourg	3.8	1.2	5.0	6
Netherlands	3.1	1.4	4.5	7
Finland	2.6	0.9	3.5	8
Spain	1.9	1.5	3.4	9
Sweden	2.4	0.9	3.3	10
Ireland	2.7	0.3	3.0	11
UK	2.7	0.3	3.0	11
Denmark	2.2	0.6	2.8	12
Portugal	2.7	n.a.	n.a.	n.a.

A very or at least rather high level of market entry regulation for accountants and auditors can be found in Austria, Belgium, France, Luxembourg, Germany and Greece. This fits exactly with our colour-coding in Tables 3-1 to 3-3. On the low end we find Denmark, Sweden and Spain. In respect of conduct we find again the high figures in Austria, Belgium and Germany and this time as well in Italy (whereas the entry regulation for Italy is of medium level). The figures for conduct regulation are lowest for UK, Ireland, Denmark and Sweden. Overall Belgium appears to be the most regulated country in respect of accountants, closely followed by Austria, Germany and France. England & Wales, Ireland, Denmark and Sweden are the least regulated.

3.2. Legal Services

Lawyers

The main professions in legal services are lawyers and notaries. The following chapter at first deals with lawyers only as we only included this profession in our regulation index for legal professions. The reason for this is that it is in fact impossible to weigh the importance of regulations for notaries versus those for lawyers, whereas at the same time there are several countries in the European Community where the profession of a notary in form of the so-called “latin notary” is not existent. At the same time the market-share of the notaries (where they exist) is likely to be rather small compared to the lawyers. For this reason we can neglect the regulation in the field of notaries here: for our further analysis see chapter 4.

3.2.1 Organisation and market entry regulation

Concerning market entry, even more differentiation than in the field of accountancy services can be observed in the field of legal services (lawyers). But the same does not occur in respect of organisation. In nearly all countries membership in a professional organisation is compulsory. However, in not all countries is such membership obligatory in respect to reserved tasks, but regarding the protection of a specific title only.

The most liberal regimes in this regard exist in Finland and Sweden (see Table 3-7 below). Lawyers or advocates do not have any (Finland), or only very narrow (Sweden), exclusive rights for offering services in these countries. Thus (nearly) anyone is allowed to give legal advice or even undertake legal representation of clients before courts. In countries coloured dark grey legal representation only is the exclusive right of specific professions, but not legal advice. In the countries coloured black legal representation and legal advice (and sometimes other additional tasks) may only be offered by one or more specific professions. The most regulated in this case are again Austria, France and Germany but – in contrast with the situation regarding accounting services – also Portugal and Spain. In the median position are Belgium, Denmark, Italy, the Netherlands and the United Kingdom.

The respective *categories* of tasks given in Table 3-7 are taken from OECD (1996)[9]. “XX” means that the relevant task is reserved to the relevant profession *or* that it is reserved to the relevant profession and other licensed professions. We do not distinguish between these two cases because the question of “shared exclusive tasks” is a very complicated one and a major potential source of error. It became evident during our research that in many cases not even the professional association has exact knowledge on this point. If an “X” is set in brackets here, this means that the relevant regulations apply under specific circumstances only.

[9] All the information given in this table is revised and updated according to our own sources.

In respect to education (see Table 3-6 below) in most countries there exists only one “entry road” to the profession, whereby very often a university degree in law is a main precondition to become a lawyer/advocate. Additionally most countries require one or more professional exams and some time of professional practice. However, considerable differences occur in this respect: the spectrum in fact is very broad.

Table 3-5 Legal Services (Lawyers): General

Country	Profession	Level of regulation				Implementation of Regulation by		Disciplinary sanctions decided by		Membership in prof. assoc. compulsory?
		nat.	Subnat.	gov.	self-reg	Gov.	self-reg.	gov.	self-reg.	
Austria	Rechtsanwalt (Lawyer)	X		X	X	X	X	X	X	Y
Belgium	Adcocaat (Advocate)	X		X	X	X	X		X	Y
Denmark	Advokat (Attorney at Law)	X		X	X	X	X		X	Y
Finland	Advocate	X		X	X		X		X	Y (only for title)
	Lawyer	X		X		X				N
France	*Avocat*	X		X	X	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*
Germany	Rechtsanwalt (Attorney at law)	X		X	X	X	X	X	X	Y
Greece	Dikigoros (Advocate)	X		X	X		X		X	Y
Italy	*Accoccato (Lawyer)*	X		X	X	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*
Ireland	Barrister	X		X	X	X	X	X	X	Y
	Solicitor	X		X	X	X	X	X	X	N
Luxembourg	Acocat (Advocate)	X		X	X		X		X	Y
Netherlands	Advocaat (Agttorney at Law)	X		X	X	X	X	X		Y
Portugal	*Advogado*	X		X		*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*
Spain	*Abogado*	X		X	X	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y.*
	Precurador	X		X	X	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*
Sweden	Advokat (Advcate/avocat)	X		X	X	X	X	X	X	Y (only for title)
United Kingdom (Engl.&Wales)	Solicitor		X	X	X		X	X	X	N
	Barrister		X	X	X	X	X		X	Y

Table 3-6 Legal Services (Lawyers): Qualification Requirements

Country	*Profession*	*University/higher education degree (years)*	*Practise (years)*	*Professional exam*	*Number of „entrance roads" to profession*
Austria	**Rechtsanwalt (Lawyer)**	**U 4**	**5**	**Y (1)**	**1**
Belgium	**Adcocaat (Advocate)**	**U 5**	**3**	**N**	**1**
Denmark	**Advokat (Attorney at Law)**	**U 5**	**3**	**Y (1)**	**1**
Finland	**Advocate**	**U 5**	**4**	**Y (1)**	**1**
	Lawyer	**U 5**	**0**	**N**	**1**
France	***Avocat***	***U 5***	***2***	***Y (2)***	***n.a.***
Germany	**Rechtsanwalt (Attorney at law)**	**U 3,5**	**2**	**Y (2)**	**1**
Greece	**Dikigoros (Advocate)**	**U 4**	**1.5**	**Y (1)**	**1**
Italy	**Accoccato (Lawyer)**	***U 4***	***2+1***	***Y (1)***	***1***
Ireland	**Barrister**	**U or HE + course 2**	**1**	**Y (2)**	**2**
	Solicitor	**U or HE + course 2**	**2**	**Y (2)**	**3**
Luxembourg	**Acocat (Advocate)**	**U 4 + course**	**2**	**Y (2)**	**1**
Netherlands	**Advocaat (Agttorney at Law)**	**U 5**	**3**	**Y (1+)**	**1**
Portugal	***Advogado***	***U 4***	***1.5***	***Y (1)***	***1***
Spain	***Abogado***	***U5***	***N***	***Y (1)***	***1***
	Precurador	***U5***	***N***	***Y (1)***	***1***
Sweden	**Advokat (advcate/avocat)**	**U 4,5**	**5**	**Y (2004)**	**1**
	Jurist	**U 4,5**	**N**	**N**	**1**
United Kingdom (Engl.+Wales)	**Solicitor**	**U 3-4**	**2**	**see case study**	**3**
	Barrister	**U 3-4**	**1**	**see case study**	**2**

Table 3-7 Legal Services (Lawyers): Scope of Activities

XX = Exercise reserved; X= Activity exercised, but not reserved											
Country	Profession	Advice domestic law	Advice international law	Advice foreign law	Conveayancing of title to real estate, wills and regulation of familiy matters such as marriage contracts	Represen-tation before courts	Representation before adminsitrative agencies (incl. tax matters)	Tax advice	Insolvency practise	Managenment consulting etc.	Advice and repr. patent law
Austria	Rechtsanwalt (Lawyer)	XX	XX	XX	X	XX	XX	XX	X	X	
Belgium	Adcocaat /Advicate)	X	X	X	-	XX	X	X	X	X	XX
Denmark	Advokat (Attorney at Law)	XX	XX	XX	XX	XX	X	X	XX	X	XX
Finland	Advocate	X	X	X	X	X	X	X	X	X	X
	Lawyer	X	X	X	X	X	X	X	X	X	X
France	Avocat	*XX*	*XX*	*XX*	-	XX	*X*	X	*XX*	-	*XX*
Germany	Rechtsanwalt (Attorney at law)	XX	XX	XX	-	XX	XX	XX	*X(X)*	-	XX
Greece	Dikigoros (Adcocate)	XX	XX	XX	*?*	XX	*?*	*?*	*?*	*?*	*?*
Italy	Accoccato (Lawyer)	X	X	X		XX	X	X	X		
Ireland	Barrister				XX	XX					
	Solicitor	X	X		XX	XX	X	X	X	X	X
Luxembourg	Acocat (Advocate)	XX	XX	XX	?	XX	?	?	?	?	?
Netherlands	Advocaat (Agttorney at Law)	X	X	X	?	XX	X	X	X	X	X
Portugal	Advogado	*XX*	*XX*	*XX*		*XX*	*X*	*X*	*X*	*X*	-
Spain	Abogado	*XX*	*XX*	*XX*		*XX*	*X*	*X*	*XX*	*X*	*XX*
	Precurador					*XX*	*X*		*XX*		*XX*
Sweden	Advokat (Advcate/avocat)	X	X	X	X	X (X)	X	X	X	X	X
United Kingdom	Solicitor	X	X	X	XX	XX	X	X	XX	X	XX
(Engl.+Wales)	Barrister	X	X	X	XX	XX	X	X			XX

3.2.2 Conduct regulation

Table 3-8 presents an overview on conduct regulation for lawyers[10]. Minimum prices apply in Italy, Greece, Germany and Austria, but for the latter two this is only true for specific services (see case study in Germany). In several countries reference prices exist. About half of all countries show rather rigid regulation in respect of advertising. Specific regulations on location (restrictions in offering services from a geographical point of view) are only imposed in the Netherlands, Greece and France.

Lawyers in Luxembourg, Greece, Belgium and Germany are not allowed to open branch offices, and lawyers in France and Austria may do so only after fulfilling specific pre-conditions. Incorporation is forbidden in several countries: this is true for Greece, Italy, Ireland, Germany, Belgium, Portugal, Spain as well as England & Wales (Barristers only). Additionally in several countries registered lawyers are not allowed to work together with other professions in a joint firm. In many cases they may not incorporate with members of other professions.

Overall – for example compared with technical professions (see below) – conduct regulation for lawyers in many countries appear to be very rigid. However, at the same time in many countries some liberalisation occurred in the last ten years – especially concerning prices and advertising. Only few countries like Denmark, Finland, Sweden – but now also England & Wales (solicitors only) show rather low degrees of conduct regulation.

In this context it is worth mentioning that it is especially the professional organisations of the lawyers, that oppose more liberal regulations concerning form of business and especially in respect to inter-professional co-operation (see case studies in chapter 3).

[10] For further explanations of acronyms, etc., used in the table please refer to section 3.1.2. above.

Table 3-8 Legal Services (Lawyers): Conduct

Country	Profession	Regulation of prices			Advertising forbidden?			Reg. on location	Reg. on diversi-fication	Incorp. for-bidden?	Interprof. co-operation forbidden?				Comp. indemn. insur-ance?	Comp. cont. edu-cation?
		min. price	Max. price	Reference price	All	Most	Some				any	incorp. gen.	with non lib. prof.	incorp. w. non lib. prof.		
Austria	Rechtsanwalt (Lawyer)	(Y)	N	Y	N	Y	Y	N	(Y)	N	Y	Y	Y	Y	Y	Y
Belgium	Adcocaat /Advicate)	N	N	N	N	*N*	Y	N	Y	*Y*	N	*Y*	*N*	*Y*	Y	Y
Denmark	Advokat (Attorney at Law)	N	N	(Y)?	N	N	Y	N	N	N	*Y*	*Y*	Y	Y	Y	N
Finland	Advocate	N	N	N	N	N	*Y*	N	N	N	N	N	N	N	Y	Y
France	*Avocat*	*N*	*N*	*N*	*N*	*Y*	*Y*	*Y*	*(Y)*	*N*	*N*	*Y*	*N*	*Y*	*n.a.*	*n.a.*
Germany	Rechtsanwalt (Attorney at law)	(Y)	N	N	N	N	Y	N	Y	N	N	N	Y	Y	Y	Y
Greece	Dikigoros (Adcocate)	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Italy	Accoccato (Lawyer)	Y	Y	N	N	Y	Y	N	N?	Y	Y?	N?	Y	Y	Y?	N
Ireland	Barrister	N	N	N	Y	Y	Y	N	N	Y	Y	Y	Y	Y	n.a.	n.a.
	Solicitor	N	N	N	N	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y
Luxembourg	Avocat (Advocate)	N	N	N	N	(Y)	Y	N	Y	N	Y	Y	Y	Y	Y	Y
Netherlands	Advocaat (Agttorney at Law)	N	N	N	N	N	Y	Y	N	N	N	N	Y	Y	Y	Y
Portugal	*Advogado*	*N*	*N*	*Y*	*Y*	*Y*	*Y*	*N*	*N*	*Y*	*N?*	*Y*	*Y*	*Y*	*n.a.*	*n.a.*
Spain	*Abogado*	*N*	*N*	*Y*	*N*	*Y*	*Y*	*N*	*N*	*Y*	*N*	*Y?*	*Y?*	*Y?*	*n.a.*	*n.a.*
	Precurador	*N*	*N*	*Y*	*N*	*Y*	*Y*	*N*	*N*	*Y*	*N*	*Y?*	*Y?*	*Y?*	*n.a.*	*n.a.*
Sweden	Advokat (Advcate/avocat)	N	N	(Y)	N	N	(Y)	N	N	N	N	Y	N	Y	Y	N
United Kingdom	Solicitor	N	N	N	N	N	Y	N	N	N	N?	Y	N	Y	Y	Y
(Engl.+Wales)	Barrister	N	N	N	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y

3.2.3 Regulation Indices

The table below summarises the market-entry, conduct and overall regulation index for lawyers in the Member States of the European Union.

A very high entry index applies for Austria, France, Luxembourg, Germany, Greece, Portugal und Spain. England & Wales (calculated by ((Barristers+Solicitors)/2), Italy, Belgium, the Netherlands and also Ireland are in the medium field. Of comparatively low level is market entry regulation for lawyers in Sweden and Denmark. No specific entry-regulation exists according to our definition in Finland. This exactly fits our colour-coding above.

In respect of conduct the most broad and rigid regulations are found in Greece, followed by Italy, Austria, Spain, Luxembourg, Germany and France. The least restrictive regulation models in respect of conduct exist in Finland, Sweden and Denmark. These are at the same time countries with rather low entry requirements. Only a little bit higher than for these countries is the conduct index for England & Wales (again the figure is given for ((Barristers+Solicitors)/2). Belgium, Ireland, the Netherlands and Portugal are positioned in the medium field.

Legal Services (Lawyers): IHS regulation indices

	Entry	Conduct	Total	Rank
Greece	3.5	6.0	9.5	1
Austria	4.1	3.3	7.3	2
France	3.9	2.7	6.6	3
Luxemburg	3.8	2.8	6.6	3
Germany	3.7	2.8	6.5	4
Spain	3.4	3.1	6.5	4
Italy	2.6	3.9	6.4	5
Portugal	3.5	2.2	5.7	6
Belgium	2.5	2.1	4.6	7
Ireland	2.4	2.1	4.5	8
England&Wales	2.9	1.2	4.0	9
Netherlands	2.1	1.8	3.9	10
Denmark	2.1	0.9	3.0	11
Sweden	2.0	0.4	2.4	12
Finland	0.0	0.3	0.3	13

The overall index is by far the highest for Greece. Then follow Austria, France, Germany, Spain and Italy. Finland, Sweden and Denmark show the lowest overall indices. Also the Netherlands, England & Wales and Ireland have overall regulation indices below the medium level. Overall regulation in Portugal lies in the middle.

Notaries

The *Notary profession* is often analysed together with other liberal professions or professional services. However, they appear to represent a special case in certain countries as they fulfil – at least from their own point of few – a kind of public task or duty. This is an important and widely discussed question and which deserves some attention. What we can see from the following tables is that there are some countries in the EU where the profession of notaries in the sense of the so-called "latin notary" does not exist. The important difference between latin notaries and other professional descriptions of notary (e.g." Notary Public" or "Scriveners"), is that the notarial deeds of the former are endowed (e.g. in the case of litigation) with the characteristic of representing special evidence guaranteed by public law. No 'latin' notary exists in England/Wales, Scotland, Northern Ireland, Ireland and the Scandinavian countries. This means that documents issued or authenticated by a notary do not have a special status before courts and other state offices there.

3.2.4 Organisation and market entry regulation

In countries where there is a Latin notary, the market entry regulations are always without exception relatively rigid. First, notaries have to fulfil extensive qualification requirements in those countries. A university degree in law is a mandatory precondition to enter the profession. Additionally, in most countries some professional practising is required. Further, special professional exams exist. From an internationally comparative point of view there is some differentiation in the education requirements, but what is even more important is the fact that in all countries with a Latin notary (due to recent liberalisation, with exception of the Netherlands[11]) the number of notaries or of notaries' branch offices is structurally limited (via more or less objective economic needs tests etc.).

The main tasks fulfilled by notaries are the following: The notary draws up public and private documents, as well certificates and wills. At the same time notaries also give general legal advice and in some countries may represent clients before administrative agencies or even before courts.

In all countries regulations exists a question concerning the cases for which the consultation of a notary is mandatory and there appears to be a wide variety of more or less inclusive regulations in this point. Whereas, for example, in Italy even the buying of a used car has to be certified by a notary, the regulations in Austria are less restrictive. Here notarial form is required for more sensitive areas, such as for marriage contracts, donations, all legal transactions undertaken by blind, deaf or illiterate persons, medical artificial reproduction and for some cases in company law.

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[11] See http://www.notaris.nl/knb/dutchnotaris/index.html,

Table 3-9 Notary Services: General

Country	Profession	Level of regulation				Implementation of regulation by		Disciplinary sanctions decided by		Member-ship in prof. assoc. compul-sory?	Number restrict-ed?
		nat.	subnat.	gov.	self-reg	gov.	self-reg.	gov.	self-reg.		
Austria	Notar (Notary)	X		X	X	X	X	X	X	Y	Y
Belgium	Notaire (Notary)	X		X		X	X	X	X	N	Y
Denmark	no Notaries in form of liberal profession										
Finland	no Notaries in form of liberal profession										
France	Notaire (Notary)	X		X		X	X	X	X	Y	Y
Germany	Notar (Notary)	X		X	X	X		X		Y	(Y)
Italy	Notario	X		X		X	X	X	X	Y	Y
Netherlands	Notary	X		X	X	X	X	X		Y	(N)
Portugal	*Notario (Notary Public)*	X		*X*	*X?*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*	*Y*
Spain	Notario (Notary Public)	X		X	X	X	X	X	X	Y	Y
Sweden	No Notaries in form of liberal profession										
England/Wales	No Notaries in form of liberal profession										
Greece	*Notary*	*X*		*X*	X?	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*	*Y*
Luxemburg	*Notaire*	*X*		*X*	*X*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*	*Y*
Ireland	No Notaries in form of liberal profession										

Table 3-10 Notaries: Qualification Requirements

Country	Profession	University/higher education degree (years)	Practise (years)	Professional Exam	Number of „entrance roads“ to Profession
Austria	Notar (Notary)	U 4	7	Y (1)	1
Belgium	Notaire (Notary)	U 5+1	3	Y (1)	1
Denmark	no Notaries in form of liberal profession				
Finland	no Notaries in form of liberal profession				
France	Notaire (Notary)	U 4 + 3 (course)	2 to 3	Y (2)	2
Germany	Notar (Notary)	U 3.5	5 to 7	(Y (2)) (Staatsexamen)	2
Italy	Notario	U 4	2	Y (1)	1
Netherlands	Notary	U 4	6	Y (1)	1
Portugal	*Notario (Notary Public)*	*U 5*	*1*	*N*	*1?*
Spain	Notario (Notary Public)	U 5	0	Y (1)	1
Sweden	No Notaries in form of liberal profession				
England/Wales	No Notaries in form of liberal profession				
Greece	*Notary*	*U 4*	*3.5*	*Y (2)*	*1*
Luxemburg	*Notaire*	*U (4-5)*	*3*	*Y (1) 2 parts*	*1?*
Ireland	No Notaries in form of liberal profession				

Table 3-11 Notaries: Scope of Activities

XX = Exercise reserved; X= activity exercised, but not reserved									
Country	**Profession**	**Advice domestic law**	**Advice international law**	**Advice foreign law**	**Conveayancing of title to real estate, wills and regulation of familiy matters such as mar-riage contracts**	**Notarial deeds**	**Represen-tationn before courts**	**Representation before adminsitrative agencies (incl. tax matters)**	**Tax advice**
Austria	**Notar (Notary)**	**XX**	**XX**	**XX**	**XX**	**XX**	**X(X)**	**XX**	**XX**
Belgium	**Notaire (Notary)**	**X**	**X**	**X**	**XX**	**XX**			
Denmark	**no Notaries in form of liberal profession**								
Finland	**no Notaries in form of liberal profession**								
France	**Notaire (Notary)**	***XX***	***XX***	***XX***	***XX***	**XX**			**XX**
Germany	**Notar (Notary)**	**XX**	**XX**	**XX**	**XX**	**XX**		**XX**	**XX**
Italy	**Notario**	**XX**	**XX**	**XX**	**XX**	**XX**			**X**
Netherlands	**Notary**	**X**	**X**	**X**	**XX**	**XX**	**XX**		
Portugal	***Notario (Notary Public)***	***XX***	***XX***	***XX***	***XX***	**XX**	***n.a***	**n.a**	**n.a**
Spain	**Notario (Notary Public)**	**XX**	**XX**	**XX**	**XX**	**XX**			
Sweden	**No Notaries in form of liberal profession**								
England/Wales	**No Notaries in form of liberal profession**								
Greece	***Notary***	***XX***	***XX***	***XX***	***XX***	***XX***	***n.a.***	***n.a.***	***n.a***
Luxemburg	***Notaire***	***XX***	***XX***	***XX***	***XX***	***XX***	***n.a.***	***n.a.***	***n.a.***
Ireland	**No Notaries in form of liberal profession**								

3.2.5. Conduct regulation

We may observe below (Table 3-12), that these systems of market entry are accompanied by a relatively high degree of regulation of market behaviour[12]. In most countries some kinds of minimum prices are in place (not in the Netherlands and due to recent liberalisation also not in Austria). Regulations on advertising are very restrictive e. g. in Italy, France and Spain, and to some degree more liberal in Austria, Belgium, Germany and especially the Netherlands. In comparison with other liberal professions furthermore there exist strict rules concerning form of business, diversification and inter-professional co-operation in as much as nearly all countries with a Latin notary.

[12] For further explanations of acronyms etc. used in the table please refer to section 2.1.2. above.

Table 3-12 Notary Services: Conduct

Country	Profession	Regulation of prices			Advertising forbidden?			Reg. on location	Reg. on diversi-fication	Incorp. for bidden?	Interprof. co-operation forbidden?				Comp. indemn. insur-ance?	Comp. cont. edu-cation?
		Min. price	max. price	refer-ence price	All	most	Some				any	incorp. gen.	with non lib. prof.	Incorp. w. non lib. prof		
Austria	Notar (Notary)	N	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y
Belgium	Notaire (Notary)	Y	Y	Y	N	Y?	Y	Y	Y	Y?	Y	Y	Y	Y	Y	N
Denmark	no Notaries in form of liberal profession															
Finland	no Notaries in form of liberal profession															
France	Notaire (Notary)	(Y)	(Y)	N	Y	Y	Y	N	Y	Y?	Y	Y	Y	Y	Y	Y
Germany	Notar (Notary)	Y	Y	N	N	Y	Y	Y	Y	Y	(Y)	(Y)	Y	Y	Y	Y
Italy	Notario	N	Y	N	Y	Y	Y	Y	Y	Y?	Y	Y	Y	Y	N	N
Netherlands	Notary	N	(Y)	N	N	N	Y	N	Y	N	N	Y	Y	Y	Y	Y
Portugal	*Notario (Notary Public)*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*
Spain	Notario (Notary Public)	Y	Y	N	Y	Y	Y	Y	N?	Y	Y	Y	Y	Y	Y	N
Sweden	no Notaries in form of liberal profession															
England/wales	no Notaries in form of liberal profession															
Greece	*Notary*	Y	*Y*	*N*	*Y?*	*Y?*	*Y?*	*N?*	Y?	*N?*	*Y?*	*Y?*	*Y?*	*Y?*	*n.a.*	N?
Luxemburg	Notaire	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*
Ireland	no Notaries in form of liberal profession															

3.2.6 Regulation Indices

There are still information deficits in the one or other field concerning notaries.

- We did not receive a questionnaire from the respective professional organisations in three countries (Greece, Luxembourg, Portugal).

- There is a lack of detailed knowledge on regulation concerning cases for which the consultation of a notary is mandatory in the respective countries.

Nevertheless, we calculated regulation indices for the profession of notaries according to the methodology already used for the other professions. As the figures given in the following table do not reflect variations concerning the obligation to consult a notary in different situations, they may underestimate the actual differences in regulations that occur for notaries from an international comparative perspective. Still, some nuances are evident. They mainly derive from differences in the market entry system regarding education and exclusive tasks (concerning legal advice) and the recently implemented absence of economic needs tests (Netherlands) as well as from some differences that appear in the field of conduct regulation. Here again the Netherlands shows the lowest degree of regulation, followed – at a distance - by Austria (where some liberalisation took place in recent years) and France. The level of conduct regulation in Spain may be slightly under-estimated (insecure information concerning the question of diversification/branch offices).

Notaries: IHS regulation indices

	Entry	Conduct	Total	Rank
Germany	5.5	5.6	11.0	1
Italy	4.8	5.9	10.7	2
France	5.3	4.7	10.0	3
Austria	5.4	4.2	9.6	4
Spain	4.6	4.8	9.4	5
Belgium	4.0	5.3	9.3	6
Netherlands	3.6	2.6	6.3	7
Greece	5.2	n.a.	n.a.	n.a.
Luxemburg	5.1	n.a.	n.a.	n.a.
Portugal	4.6	n.a.	n.a.	n.a.

3.3. Technical Services

Architects

3.3.1 Organisation and market entry regulation

In architectural services, as well as in engineering services (see below 3.3.5.), the regulatory situation is more bipolar than in legal services. On the one hand, there are some countries in the EU where market entry regulations in this field are still relatively broad and rigid. This holds for Austria, Belgium, France, Germany, Italy, Spain, Portugal, Greece and Luxembourg. In these countries architects are – to a smaller or larger degree – holders of reserved rights to offer specific services on the market. The respective *categories* of tasks given in Table 3-15 are taken from OECD (1996)[13]. "XX" means that the relevant task is reserved to the relevant profession *or* that it is reserved to the relevant profession and other licensed professions. We do not distinguish between these two cases because the question of "shared exclusive tasks" is a very complicated one and a major potential source of error. It became evident during our research that in many cases not even the professional association has exact knowledge on this point. If a "X" is set in brackets here, this means that the relevant regulations apply under specific circumstances only.

At the same time in all the countries where reserved tasks for architects apply membership in a professional association is compulsory. As regards education, a university degree in all these countries is a basic requirement to enter the respective market, but a considerable degree of variation exists in regard to mandatory professional exams and required professional practice.

On the other hand, there are several countries, where the relevant regulations are comparatively liberal. The latter are once more the northern European countries (Sweden, Finland and here also Denmark) as well as the Netherlands, England/Wales and Ireland. In these countries for architects no or almost no (Finland) reserved tasks are existent. For this education requirements only apply in respect of certification, but not as a precondition for licensing.

[13] All the information given in this table is revised and updated according to our own sources.

Table 3-13 Architectural Services: General

Country	Profession	Level of regulation				Implementation of regulation by		Disciplinary sanctions decided by		Membership in prof. assoc.
		Nat.	Subnat.	Gov.	self-reg	gov.	self-reg.	gov.	self-reg.	compulsory ?
Austria	Architekt (Architect)	X		X	X	X	X	X	X	Y
	Baumeister (not a Lib Prof)	X		X	X	X	X	X	X	Y
Belgium	*Architect*	*X*		*X*		*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*
Denmark	Architect	X		X	X	X	X	-	-	N
Finland	*Architect*	*X*			*X*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*N*
France	Architects	X		X	X	X	X	X	X	Y
Germany	Freier Architekt (Architect)		X	X	X	X	X	X	X	Y
Italy	Architect	X		X		X	X	X	X	Y
Netherlands	Architect	X		X		X		X	X	N
Portugal	Arquitecto (Architect)	X		X	X		X		X	Y
Spain	Arquitecto (Architect)	X		X	X	*X*	*X*	*X*	*X*	Y
	Arquitecto Tecnico (technical Architect)	*X*		*X*		*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*
Sweden	Arkitekt	X			X		X		X	N
England/Wales	Architect (RIBA)	X		X	X	X	X	X	X	N/Y (RIBA)
	Chartered Surveyor	*X*			*X*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*N*
	Chartered Designer	*X*			*X*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*N*
	Chartered Building Services Engineer	*X*			*X*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*N*
	Chartered Builder	*X*			*X*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*N*
	Planner	*X*			*X*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*N*
Greece	*Architect*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*
Luxembourg	Architecte	X		X		X	X	X	X	Y
Ireland	Architect (RIAI)	X			X		X		X	N/Y (RIAI)

Table 3-14 Architects: Qualification Requirements

Country	Profession	University/higher education degree (years)	Practise (years)	Professional exam	Number of „entrance roads“ to profession
Austria	Architekt (Architect)	U 5	3	Y (1)	1
	Baumeister (not a Lib Prof)		6	Y	1
Belgium	*Architect*	*U 5*	*2*	*N*	*1?*
Denmark	Architect	(U 5)	0	N	several
Finland	*Architect*	*U 4,5-5,5*	*0*	*N*	*several*
France	Architects	U 6	0	N	1
Germany	Freier Architekt (Architect)	U 4	02.Apr	N	1
Italy	Architect	U 5	0	Y	1
Netherlands	Architect (BNA)	(U 4-5)	-2	N	2
Portugal	Arquitecto (Architect)	U 5-6	1	Y (1); not always	1
Spain	*Arquitecto (Architect)*	*U 5*	*0*	*N*	*1*
	Arquitecto Tecnico (technical Architect)	*U 3*	*0*	*N*	*1*
Sweden	Arkitekt (SAR)	U 4,5	0.5	N	1
England/Wales	Architect (RIBA)	U 5	2	Y (1)	1
	Chartered Surveyor	*U 3-4*	*2*	*N*	*n.a.*
	Chartered Designer	*U 3*	*3*	*N*	*n.a.*
	Chartered Building Services Engineer	*U 3-4*	*6*	*N*	*n.a.*
	Chartered Builder		*3*	*N*	*n.a.*
	Planner	*U 4*	*2*	*N*	*n.a.*
Greece	*Architect*	*U 5*	*0*	*Y (1)*	*n.a.*
Luxembourg	Architecte	U 4	1	N	Y
Ireland	Architect (RIAI)	U 5	2	2	N

Table 3-15 Architectural Services : Scopes of Activity

XX = Exercise reserved; X= Activity exercised, but not reserved										
Country	Profession	Feasibility studies	Topographical determination, demarcation, land surveying	Planning (blue prints)	Request for construction permit	Preparations and monitoring of construction	Technical control and certi-fication	Construction cost management	Urban and landscape planning	Interior design
Austria	Architekt (Architect)	XX		XX	XX	XX		XX	XX	X
	Baumeister (not a Lib Prof)	XX		XX	XX	XX	XX	XX		
Belgium	*Architect*	*X*		*XX*	*X*	*XX*	*X*	*X*	*X*	*X*
Denmark	Architect	X	X	X	X(X?)	X	X	X	X	X
Finland	*Architect*	*X*	*X*	*(XX)*	*(XX)*	*X*	*X*	*X*	*X*	*X*
France	Architects	X		X	XX	XX (publ. Works)		X	XX?	X
Germany	Freier Architekt (Architect)	X		X	XX	X		X	X	X
Italy	Architect	XX	XX	XX	X	XX	XX	XX	XX	X
Netherlands	Architect	X		X	X	X	X	X	X	X
Portugal	Arquitecto (Architect)	X	X	X	X	X	X	X	XX	X
Spain	*Arquitecto (Architect)*	*XX*	*XX*	*XX*	*XX*	*XX*	*XX*	*XX*	*XX*	*X?*
	Arquitecto Tecnico (technical Architect)	*X(X)*	*X(X)*	*X(X)*		*X(X)*	*X(X)*	*X(X)*	*X(X)*	*X?*
Sweden	Arkitekt	X	X	X	X	X	X	X	X	X
United Kingdom	Architect (RIBA)	X		X	X	X	XX	X	X	X
	Chartered Surveyor	X	X		X	X	XX	X		X
	Chartered Designer			X					X	X
	Chartered Building Services Engineer	X		X			XX	X		
	Chartered Builder	X	X	X	X	X	XX	X		
	Planner	X	X	X	X	X	XX		X	
Greece				*XX?*	*XX?*					
Luxembourg	Architecte	n.a.	n.a.	X	XX	XX?	n.a.	n.a.	XX	n.a.
Ireland	Architect	X	X	X	X	X	X	X	X	X

3.3.2 Conduct regulation

In contrast to the situation in legal or accounting services rather broad and rigid market entry regulation in technical professions does not always (or at least in most cases) correspond with respective conduct regulation (see table 3-16)[14].

In most countries there does not exist any binding price or fee system (exceptions are Belgium, Germany, Italy and Luxembourg (for public works only)). Concerning advertising, in most countries only moderate regulations persist and regulations on forms of business and inter-professional co-operation are rarely found.

[14] For further explanations of acronyms etc. used in the table please refer to section 2.1.2. above.

Table 3-16 Architectural Services: Conduct

Country	Profession	Regulation of prices			Advertising forbidden?			Reg. on location	Reg. on diversi-fication?	Incorp. for-bidden?	Interprof. co-operation for-bidden?				Comp. indemn. insur-ance?	Comp. cont. edu-cation?
		Min. price	max. price	reference price	All	Most	Some				any	incorp. gen.	with non lib. prof.	incorp. w. non lib.		
Austria	Architekt (Architect)	N	N	Y	N	N	Y	N	N	N	N	N	(Y)	(Y)	N	N
Belgium	*Architect*	Y?	*N*	*N*	N	N?	*Y?*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Denmark	Architect	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Finland	*Architect*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	N	*N*	*N*
France	Architects	N	N	N	N	N	Y	N	N	N	N	*N*	(N)	(N)	Y	N
Germany	Freier Architekt (Architect)	Y	Y	N	N	N	Y	N	N	N	N	(Y)	N	(Y)	(Y)	(Y)
Italy	Architect	Y	N	N	Y	Y	Y	N	N	N	N	N	N	Y	Y	N
Netherlands	Architect	N	N	N	N	N	(Y) BNA	N	N	N	N	N	N	N	(Y) BNA	(Y)(BNA)
Portugal	Arquitecto (Architect)	N	N	N	N?	Y?	Y	N	N	N	N	N	N	N	N	N
Spain	Arquitecto (Architect)	N	N	Y	N	N	Y	N	N	N	N	N	N	N	Y	n.a.
	Arquitecto Tecnico (technical Architect)	*N*	*N*	*Y?*	*N*	*N*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*n.a.*	*n.a.*
Sweden	Arkitekt	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
United Kingdom	Architect	N	N	N	N	N	N	N	N	N	N	N	N	N	Y (RIBA)	N
Greece	*Architect*	*na.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*
Luxembourg	Architecte	(Y) pub.	N	Y	N	Y?	Y	N	N	N	N	Spec. Y	Y	Y	Y	N
Ireland	Architect	N	N	Y (RIAI)	N	N	Y (RIAI)	N	N	N	N	N	N	N	N	N

3.3.3 Regulation Indices

The table below summarises the market-entry, conduct and overall regulation index for architects in the member states of the European Union. Unfortunately, at the time of writing, due to lack of appropriate ad secure information, for Greece we are able to provide neither an entry nor a conduct index. According to our basic knowledge of the system of technical professions in Greece this country belongs to the group with a high level of regulation in this field.

Entry regulation appears to be most restrictive in Austria, followed by Spain, Italy and Luxembourg. Portugal France, Germany and Belgium are in the middle field. On the lower end (no or only very slight regulation) we find Denmark, Finland, Ireland, Sweden and the United Kingdom. So our colour-code fits well for the less regulated countries, whereas in the more regulated countries some further differentiation appears. The reason for this mainly lies in the different educational systems, whereby for example in Austria comparatively long times of educational practise are required.

Technical Services (Architects): IHS regulation indices

	Entry	Conduct	Total	Rank
Italy	3.2	3.0	6.2	1
Luxemburg	2.6	2.7	5.3	2
Austria	3.9	1.2	5.1	3
Germany	1.8	2.7	4.5	4
Spain	3.2	0.8	4.0	5
Belgium	2.4	1.6	3.9	6
France	2.2	0.9	3.1	7
Portugal	2.2	0.6	2.8	8
Finland	1.4	0.0	1.4	9
Denmark	0.0	0.0	0.0	10
Ireland	0.0	0.0	0.0	10
Netherlands	0.0	0.0	0.0	10
Sweden	0.0	0.0	0.0	10
United Kingdom	0.0	0.0	0.0	10
Greece	n.a.	n.a.	n.a.	n.a.

As regards conduct, for all countries the figures calculated are – compared to other professional groups – rather low. The only exceptions are Italy, Germany and Luxembourg.

The overall regulation index is highest for Italy (because of high figures for entry and conduct) followed by Austria (high figure especially for market entry) and Luxembourg. Above or around the medium level lie Portugal, Germany, France and Belgium.

Engineers

3.3.4 Organisation and market entry regulation

In the field of engineering services even more countries show rather or very low entry restrictions compared to architectural services.

Countries with low regulation are Sweden, Finland, Denmark, the Netherlands, UK, Ireland, as well as France and Belgium (which count among the higher regulated systems in engineering). Relatively broad and restrictive regulation is found in Austria, Germany, Italy, Spain, Portugal, Luxembourg and probably in Greece (also there is a lack of information on this country at the time of writing). The respective *categories* of tasks given in Table 3-19 are taken from OECD (1996)[15]. "XX" means that the relevant task is reserved to the relevant profession *or* that it is reserved to the relevant profession and other licensed professions. We do not distinguish between these two cases because the question of "shared exclusive tasks" is a very complicated one and a major potential source of error. It became evident during our research that in many cases not even the professional association has exact knowledge on this point. If an "X" is set in brackets here, this means that the relevant regulations apply under specific circumstances only.

Again, as with architects, in all countries where some licensing applies, membership in a professional organisation is compulsory. Here again elements of self-regulation are found within a framework of licensing. In the other countries often one or more models of certification exists, but very often not even professional titles are protected by law.

In regards to educational requirements, in most countries with a licensing system a university degree or another higher educational degree is a precondition to entering the profession. Remarkable differences again are present concerning professional exams and the length of compulsory professional training. In this respect the regulations are most restrictive in Austria and Germany.

[15] All the information given in this table is revised and updated according to our own sources.

Table 3-17 Engineering Services: General

Country	Profession	Level of regulation				Implementation of regulation by		Disciplinary sanctions decided by		Member-ship in prof. assoc. compul-sory?
		Nat.	subnat.	Gov.	self-reg	gov.	self-reg.	gov.	self-reg.	
Austria	Ingenieurkonsulenten (Consultant Engineer)	X		X		X	X	X	X	Y
	Technische Büros (Technical Office)	X		X		X		X		Y
Belgium	Burgerlijk Inginieur, Industrieel Inginieur	*X*		*X*		*n.a.*	*n.a.*	*n.a.*	*n.a.*	*N*
Denmark	Civilingenior	X		X		X		X		N
	Diplomingenior	X		X		X		X		N
Finland	Engineer	X		X		X		-	-	N
France	*Engineer*	*X*		*X*	*(X)*	*X*	*(X)*	*X*	*(X)*	*N*
	Consulting Engineer and Engineering Firms	*X*		*X*	*(X)*	*X*	*(X)*	*X*	*(X)*	*N*
Germany	Beratender Ingenieur (Advisory Engineer)		X	X		X		X	X	Y
Italy	Engineer	X		X	X	X	X		X	Y
Netherlands	University Engineer									N
	Polytechnic Engineer									N
	Architect				X					N
Portugal	*Engenheiro (Engineer)*	*X*		*X*		*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*
Spain	Ingeniero de Caminos, Canales i Puertos	X		X		X		-	-	Y
	Ingeniero de Telecommunicationes	X		X		X		-	-	Y
	Ingeniero Aeronautico	X		X		X		-	-	Y
	Ingeniero tecnico de Telecommunicationes	X		X		X		-	-	Y
	Ingeniero tecnico Aeronautico	X		X		X		-	-	Y
	For other types of engineers: see case sudies									
Sweden	*Civilengenjör*	*X*		*X*		*n.a.*	*n.a.*	*n.a.*	*n.a.*	*N*
	Höjskoleiugenijor	*X*		*X*		*n.a.*	*n.a.*	*n.a.*	*n.a.*	*N*
United Kingdom	Chartered Engineer		X		X	X	X			Y
	Incorporated Engineer		X		X	X	X			Y
	Engineer Technician		X		X	X	X			Y
	Engineer		X			X				N
Greece	*Diplomatouchos Michanicos*	X		*X*	*X*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y?*
Luxembourg	Ingénieur-conseil	X		X		X	X	X	X	Y
Ireland	Chartered Engineer	X		X	X		X		X	Y
	Other types of engineers	X		X		X		-	-	N

Table 3-18 Engineers: Qualification Requirements

Country	Profession	University/higher education degree (years)	Practise (years)	Professional exam	Number of „entrance roads“ to profession
Austria	Ingenieurkonsulenten (Consultant Engineer)	U 5	3	Y (1)	1
	Technische Büros (Technical Office)	(U 5) or spec. HE	U: 3; HE: 6	Y (1)	2
Belgium	Burgerlijk Inginieur, Industrieel Inginieur	*U 4,5-5*	*0*	*N*	*2*
Denmark	Civilingenior	U 5	0	N	1
	Diplomingenior	U 3	0	N	1
Finland	Engineer	U 3-5	0	N	2
France	*Engineer*	*(U 3-5)*	*0*	*N*	*Several*
	Consulting Engineer and Engineering Firms	*(U 3-5)*	*0*	*N*	*Several*
Germany	Beratender Ingenieur (Advisory Engineer)	U/HE 4	02.Mai	N	1
Italy	Engineer	U 5	0	Y (1)	0
Netherlands	University Engineer	U 5	0	N	1
	Polytechnic Engineer	U 3 (4 incl. training)	1	N	1
Portugal	*Engenheiro (Engineer)*	*U 4-5*	*2 (or 6 month*	*N*	*1*
Spain	Ingeniero de Caminos, Canales i Puertos	U 5-6	0	N	1
	Ingeniero de Telecommunicationes	U 5-6	0	N	1
	Ingeniero Aeronautico	U 5-6	0	N	1
	Ingeniero tecnico de Telecommunicationes	U 3	0	N	1
	Ingeniero tecnico Aeronautico	U 3	0	N	1
	For other types of enginers: see case studies				
Sweden	*Civilengenjör*	*U 4,5*	*0*	*N*	*1?*
	Höjskoleiugenijor	*U 2*	*0*	*N*	*1?*
United Kingdom	Chartered Engineer	U 4	IPD (no spec.	Y (1)	several
	Incorporated Engineer	U 3	IPD (no spec.	Y (1)	several
	Engineering Technician	U 3	IPD (no spec.	Y (1)	several
	Engineer	U 3-4	0	0	several
Greece	*Diplomatouchos Michanicos*	*U 5*	*0*	*Y (1)*	*1*
Luxembourg	Ingénieur-conseil	U 3-5	1	N	1?
Ireland	Chartered Engineer	U 4	4	N	several
	Other types of engineers	HE sev./U 4	0	N	several

Table 3-19 Engineering Services : Scope of Activity

XX = Exercise reserved; X= Activity exercised, but not reserved											
Country	**Profession**	**Feasibility**	**Environ-**	**Design and**	**Representat**	**Tender and**	**Project**	**Constructio**	**Planning**	**Testing and**	**Expert**
Austria	**Ingenieurkonsulenten (Consultant Engineer)**	**XX**	**XX**	**XX**	**XX**	**X**	**X**	**X**	**X**	**XX**	**XX**
	Technische Büros (Technical Office)	**XX**	**XX**	**XX**	**XX**	**X**	**X**	**X**	**X**	**XX**	**XX**
Belgium	***Burgerlijk Inginieur, Industrieel Inginieur***	**X**	**X**	**X**		**X**	**X**	**X**	**X**	**X**	**X**
Denmark	**Civilingenior**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
	Diplomingenior	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Finland	**Engineer**	**X**	**X**	**X(X)**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
France	***Engineer***	***X***	***X***	***X***	***X***	***X***	***X***		***X***	***X***	***X***
	Consulting Engineer and Engineering Firms	***X***	***X***	***X***	***X***	***X***	***X***		***X***	***X***	***X***
Germany	**Beratender Ingenieur (Advisory Engineer)**	**XX**	**X**	**XX**	**XX**	**X**	**X**	**XX**	**X**	**XX**	**XX**
Italy	**Engineer**	**X**	**X**	**XX**	**XX**	**X**	**X**	**X**	**XX**	**XX?**	**XX?**
Netherlands	**University Engineer**	**X**	**X**	**X**	**(XX)**	**(XX)**	**X**	**X**	**X**	**X**	**X**
	Polytechnic Engineer	**X**	**X**	**X**	**(XX)**	**(XX)**	**X**	**X**	**X**	**X**	**X**
Portugal	***Engenheiro (Engineer)***	***XX***	***XX***	***XX***	***XX***	***XX***	***XX***	***XX***	***XX***	***XX***	***XX***
Spain	**Ingeniero de Caminos, Canales i Puertos**	**XX**	**X**	**XX**	**XX**	**X**	**XX**	**X**	**XX**	**XX**	**XX**
	Ingeniero de Telecommunicationes	**XX**		**XX**	**XX**	**X**	**XX**	**X**	**XX**	**XX**	**XX**
	Ingeniero Aeronautico	**XX**		**XX**	**XX**	**X**	**XX**	**X**	**XX**	**XX**	**XX**
	Ingeniero tecnico de Telecommunicationes	**(XX)**		**(XX)**	**(XX)**	**X**	**(XX)**	**X**	**(XX)**	**(XX)**	**(XX)**
	Ingeniero tecnico Aeronautico	**(XX)**		**(XX)**	**(XX)**	**X**	**(XX)**	**X**	**(XX)**	**(XX)**	**(XX)**
	For other types of engineers see case studies										
Sweden	***Civilengenjör***	***X***	***X***	***X***	***X***	***X***	***X***	***X***	***X***	***X***	***X***
	Höjskoleiugenijor	***X***	***X***	***X***	***X***	***X***	***X***	***X***	***X***	***X***	***X***
United Kingdom	**Chartered Engineer**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
	Incorporated Engineer	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
	Engineer	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**x**
Greece	***Diplomatouchos Michanicos***	***n.a.***	***n.a.***	***n.a.***	***n.a.***	***n.a.***	***n.a.***	***n.a.***	***n.a.***	***n.a.***	***n.a.***
Luxembourg	**Ingénieur-conseil**	**X**	**X**	**XX**	**XX**	**X**	**XX**	**X**	**X**	**?**	**?**
Ireland	**Chartered and other engineers**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**

3.3.5 Conduct regulation

For engineers conduct regulation from an international comparative point of view is even more liberal than for architects. The only countries with a considerable degree of conduct regulation for this professional group are: Austria, Germany, Italy and Luxembourg (see Table 3-20)[16]. For Portugal and Greece we do not have enough relevant information. On our basic knowledge of these systems at least the one of Greece shows a considerable degree of conduct regulation as well.

In all the other countries, generally speaking no specific regulations exist. This, together with the findings in market entry regulation, suggests that the profession of engineers is the most market-driven of all the professions under consideration in this report.

[16] For further explanations of acronyms etc. used in the table please refer to section 2.1.2. above.

Table 3-20 Engineering Services: Conduct

Country	Profession	Regulation of prices			Advertising forbidden?			Reg. on location	Reg. on diversi-fication?	Incorp. for bidden?	Interprof. co-operation forbidden?				Comp. indemn. insur-ance?	Comp. cont. edu-cation?
		min. price	max. price	refer-ence price	all	Most	Some				any	incorp. gen.	with non lib. prof.	incorp. w. non lib. prof		
Austria	Ingenieurkonsulenten (Consultant Engineer)	N	N	Y	N	N	Y	N	N	N	N	(Y)	N	(Y)	N	N
	Technische Büros (Technical Office)	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N
Belgium	*Burgerlijk Inginieur, Industrieel Inginieur*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Denmark	Civilingenior/Diplomingenior	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Finland	Engineer, various types	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
France	*Ingenieur*	*N*	N	N	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
Germany	Beratender Ingenieur (Advisory Engineer)	Y	Y	N	N	N	Y	Y	(Y)	N	N	(Y)	(Y)	(Y)	Y	Y
Italy	Engineer, various types	Y	N	N	Y	Y	Y	N	N	N	N	N	(Y)	(Y)	Y	N
Netherlands	Engineer, various types	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Portugal	*Engenheiro (Engineer)*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*
Spain	Ingeniero de Caminos, Canales i Puertos (for "Superior Enginneers")	N (?)	N	N	N	N	N	N	N	N	N	N	N	N	Y	N
Sweden	*Civilengenjör*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
	Höjskoleiugenijor	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*
United	Engineer; various types	N	N	N	N	N	N	N	N	N	N	N	N	N	N	(Y) reg.
Greece	*Diplomatouchos Michanicos*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*
Luxembourg		(Y)	N	Y	N	Y?	Y	N	N	N	N	Spec. Y	Y	Y	Y	N
Ireland	Chartered and other engineers	N	N	N	N	N	N	N	N	N	N	N	N	N	N	(Y) reg.

3.3.6 Regulation Indices

The table below summarises the market-entry, conduct and overall regulation index for engineers in the Member States of the European Union. Unfortunately, at the time of writing, due to lack of appropriate and certain information, we are not able to provide an overall index for Greece and Portugal. For Portugal we only have been able to calculate an entry index, for Greece neither an entry nor a conduct index. According to our basic knowledge of the system of technical professions in Greece this country belongs to the group with a high level of regulation in this field.

Technical Services (Engineers): IHS regulation indices

	Entry	Conduct	Total	Rank
Germany	3.7	3.7	7.4	1
Italy	3.4	3.0	6.4	2
Luxemburg	2.7	2.6	5.3	3
Austria	3.8	1.2	5.0	4
Spain	3.2	0.0	3.2	5
Netherlands	1.5	0.0	1.5	6
Finland	1.3	0.0	1.3	7
Belgium	0.0	1.2	1.2	8
Denmark	0.0	0.0	0.0	9
France	0.0	0.0	0.0	9
Ireland	0.0	0.0	0.0	9
Sweden	0.0	0.0	0.0	9
United Kingdom	0.0	0.0	0.0	9
Greece	n.a.	n.a.	n.a.	n.a.
Portugal	3.4	n.a.	n.a.	n.a.

Austria is the country with the highest entry index, basically because of rather broad exclusive tasks reserved to the profession and because of relatively long mandatory professional practise. Austria is closely followed by Germany, Italy, Portugal, Spain and then – with some distance – Luxembourg. All the other countries regarding market entry show no or only very slight restrictions.

Concerning conduct the highest figure we calculated applies to Germany, which is followed by Italy and Luxembourg, and then, with remarkable distance, by Austria and Belgium. Rather interesting is the case of Spain, which shows a rather high figure for entry regulation but no conduct regulation.

3.3.7 Overall Regulation Indices for Technical Professions (Engineers + Architects)

For our further analysis in Chapter 5 we have to construct a joint regulation index for all technical professions, i.e. for architects and engineers together. For this we sum the respective indices for architects and engineers and then divide the respective number by two. The table below summarises the market-entry, conduct and overall regulation index for technical professions (Engineers + Architects) in the Member States of the European Union. It also once more shows the specific indices for engineers and architects as calculated above.

Technical Services (Engineers + Architects): IHS regulation indices

	Entry			**Conduct**			**Total**			**Rank**
	Eng.	Arch.	**Total-E**	Eng.	Arch.	**Total-C**	Eng.	Arch.	**Total**	**Total**
Italy	3.4	3.2	3.3	3	3	3	6.4	6.2	6.3	1
Germany	3.7	1.8	2.7	3.7	2.7	3.2	7.4	4.5	5.9	2
Luxemburg	2.7	2.6	2.7	2.7	2.7	2.7	5.3	5.3	5.3	3
Austria	3.8	3.9	3.8	1.2	1.2	1.2	5	5.1	5	4
Spain	3.2	3.2	3.2	0	0.8	0.4	3.2	4	3.6	5
Belgium	0	2.4	1.2	1.2	1.6	1.4	1.2	3.9	2.6	6
France	0	2.2	1.1	0	0.9	0.5	0	3.1	1.5	7
Finland	1.3	1.4	1.4	0	0	0	1.3	1.4	1.4	8
Netherlands	1.5	0	0.7	0	0	0	1.5	0	0.7	9
Denmark	0	0	0	0	0	0	0	0	0	10
Ireland	0	0	0	0	0	0	0	0	0	10
Sweden	0	0	0	0	0	0	0	0	0	10
UK	0	0	0	0	0	0	0	0	0	10
Portugal	3.4	2.2	2.8	n.a.	0.6	n.a.	n.a.	2.8	n.a.	n.a.
Greece	n.a.	n.a.	n.a.	n.a.	n.a.	0	n.a.	n.a.	n.a.	n.a.

Italy shows the highest overall regulation index, whereby the total Index for each the architects and the engineers is high. Italy is followed by Germany (very high index for engineers, lower for architects), by Luxembourg (same index for engineers and architects) and Austria (nearly the same overall index for engineers and architects). The total index for both professions in Belgium is 2,6 (whereas it has been 3,9 for the Architects and 1,2 for the engineers). All the other countries show a total overall index between 0 and 1,5.

3.4. Pharmacists

3.4.1 Organisation and market entry regulation

The profession of the pharmacist is, broadly speaking, organised as a licensing-model in all EU member states. But still there are significant differences. In Sweden pharmaceutical products are sold via a state-monopoly. There is only one state owned company carrying out services of pharmacies. Also in Austria, Belgium, Denmark, Finland, France, Italy, Portugal, Spain, Greece and Luxembourg the regulations are quite extensive. In all these countries the number of pharmacies is restricted (via economic needs tests etc.). Only in Germany, UK, Netherlands and Ireland are there, as far our present knowledge extends, no such regulations.

In regards to our colour-coding we marked all the countries, where the number of pharmacies is restricted, as “high regulation countries”. All the others have been marked as countries of medium regulation.

Although regulation is uniformly very high in most of the countries, the regulation indices at the end of this chapter still show some differences.

Table 3-21 Pharmacies/Pharmacists: General

Country	Profession	Level of regulation				Implementation of regulation by		Disciplinary sanctions decided by		Membership in prof. assoc. compulsory?	Number of pharmacies restricted?
		nat.	subnat.	gov.	self-reg	gov.	self-reg.	gov.	self-reg.		
Austria	Apotheker	X		X	X	X	X	X	X	Y	Y
Belgium	Pharmacien /	X		X	X	X	X	X	X	Y	Y
Denmark	Apoteker	X		X		X		X		N	(N)
Finland	Proviisori	X		X		X		X		N	Y
France	*Pharmacien*	*X*		*X*	*X*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*	*Y*
Germany	Apotheker	X		X	X	X	X	X	X	Y	N
Italy	Farmacisti	X		X	X	X	X		X	Y	Y
Netherlands	Pharmacist	X		X		X		X		N	N
Portugal	Farmaceutico	X		X	X	X	X		X	Y	Y
Spain	*Farmacéutico*	*X*	*X*	*X*		*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y?*	*Y*
Sweden	Apotekare	X		X		X		X		N	Y (owned
United Kingdom	Pharmacist	X		X	X	X	X	X	X	Y	(N)
Greece	Pharmacist	X		X		X		X		Y	Y
Luxembourg	*Pharmacist*	*X*		*X*	*X*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*Y*	*Y*
Ireland	Pharmacist	X		X		X	X	X	X	N	N

Table 3-22 Pharmacists: Qualification Requirements

Country	Profession	University/higher education degree (years)	Practise (years)	Professional exam	Number of „entrance roads“ to profession
Austria	Apotheker	U 4,5	1	Y (1)	1
Belgium	Pharmacien / Apotheker	U 5	0	N	1
Denmark	Apoteker	U 5	0	Y (1)	1
Finland	Proviisori	U 5	0.5	N	1
France	*Pharmacien*	*U 5*	*1*	*N*	*1*
Germany	Apotheker	U 4	1	Y (1: 3 parts)	1
Italy	Farmacisti	U 5	2	Y (1)	1
Netherlands	Pharmacist	U 6	0	N	1
Portugal	Farmaceutico	U 5	0,5 (pre-graduate)	Y (1) as from 2003	1
Spain	*Farmacéuticos*	U 4,5	*0,5 (pre-graduate)*	*N?*	*1*
Sweden	Apotekare	U 5	0	N	1
United Kingdom	Pharmacist	U 4	1	Y (2)	1
Greece	Pharmacist	U 4	0.5	Y (1)	1
Luxembourg	Pharmacist	*U 4,5*	*0.5*	*n.a.*	*1*
Ireland	Pharmacist	U 4	1	Y (1)	1

Table 3-23 Pharmacists: Scope of Activity/Monopoly

A. Pharmacists have the monopoly of the retail sale of medicinal products.
B. Members of other health professions may sell medicinal products (please specify).
C. Medicinal products may also be sold in retail shops other than pharmacies.

	A	B	C	Remarks
Austria	X	X		For the treatment of patients, doctors may obtain permission to set up an "in? house" pharmacy if the surgery is more than 6 km from the nearest dispensary. Veterinary surgeons may keep a veterinary pharmacy at home without authorisation to serve the needs of the veterinary surgery. Certain pharmaceutical products (specified by regulation) may be sold in retail shops ("Drogerien").
Belgium		X		Medicinal products may be supplied only by dispensing pharmacists and by doctors and veterinary surgeons authorised to stock such products. Doctors and veterinary surgeons are required to buy them in a pharmacy which is open to the public. They may dispense such
Denmark		X	X	Veterinarians are allowed to sell veterinary medicines. Medicinal products from the group Vet. OTC drugs can be sold from retail shops which have special permission from the "Danish Medicine Agency".
Finland		X		In addition to pharmacists veterinarians are authorised to sell veterinary medicinal products.
France	X	X		Article L 512 of the Public Health Code (see Annex X). Derogation's are provided for in Articles L 594, L 610, L 612, L 659 and L 662 of the Code and in the Law of 28 December 1967 on birth control.
Germany		X	X	(1) By veterinarians for animals they are treating.
		-1	-2	(2) Medicines having only a slight effect.
Italy	X			
Nether-lands	X	X	X	A+B: except in some rural areas, pharmacies have a monopoly.
				C: "druggists" may, under licence, sell a limited number of medicinal products.
				Veterinarians may supply medicinal products for an animal under their care.
Portugal	X			Only veterinary surgeons when carrying out emergency operations.
Spain	X	X		Medicinal products may be stocked, stored and supplied only by legally authorised pharmacies and by hospital, health-centre and first-aid unit pharmacies for internal use or where special monitoring, supervision and inspection of multidisciplinary health-care teams is
				Vetereinary medicinal products may be supplied only by dispensing pharmacies or breeding establishments/ associations and authorised commercial undertakings and only under the supervision of the competent pharmaceutical authorities.
Sweden		X		OTC-pharmaceuticals can be sold in Apoteket AB (Nat. Corp. Swe. Pharm.) pharmacies by technicians.
United Kingdom		X	X	Doctors may sell medicines to their patients under the Medicines Act 1968 but under the National Health Service Acts only doctors in rural areas who are specifically permitted to dispense may supply medicines to their patients and they can sell only medicines which are not permitted to be dispensed on NHS prescriptions. Dentists may sell medicines for dental treatment but only to non? NHS patients. Medicinal products which are on the General Sale List (GSL) may be sold from any shop provided that the premises can be closed i.e. sales are not permitted from places such as stall in markets. GSL medicines are those which, in the opinion of the competent authorities can, with reasonable safety, be sold other than under the supervision of a pharmacist. Veterinary surgeons may sell medicines for the treatment of animals under their care. Certain medicines for horses may also be sold by saddlers and a specified range of medicines for animals may be sold by agricultural merchants.
Greece	X			
Lux.		X		Veterinary surgeons may supply medicinal products, which they must buy in a pharmacy open to the public.
Ireland			X	These are commonly described as "general sales list" medicines.

Source: PHARMACEUTICAL COMMITTEE (Free movement of pharmacists) (2001): CONDITIONS FOR THE OPERATION OF A COMMUNITY PHARMACY IN THE MEMBER STATES, Working Document, Brussels, XV/E/8115/4/97/EN.

3.4.2 Conduct regulation

Conduct regulation for pharmacists is in all countries rather restrictive. But still there is a remarkable degree of differentiation (see Table 3-24)[17].

In all countries the one or other type of price regulation exists. Normally the prices for prescription only medicines are fixed (at least as a maximum price), but the prices for OTC-medicines can be set by wholesalers and pharmacists freely.

Regulations concerning advertising can be found in all countries, but there is some differentiation in the range and breadth and rigidity of these regulations (see for some examples the case studies in the second part of the report).

In many countries regulations on location, diversification (opening of branch offices) and inter-professional co-operation (with respect to ownership of pharmacies) also exist. The most liberal regimes can be found in this respect in Ireland and the United Kingdom. Denmark, Finland and Germany, among others, are examples of rather restrictive regulation in these fields.

[17] For further explanations of acronyms etc. used in the table please refer to section 2.1.2. above.

Table 3-24 Pharmacists: Conduct

Country	Profession	Regulation of prices			Advertising forbidden?			Reg. on location	Reg. on diversi-fication	Incorp. for-bidden?	Interprof. co-operation forbidden?				Comp. indemn. insur-ance?	Comp. cont. edu-cation?
		min. price	max. price	Reference price	all	most	Some				any	incorp. gen.	with non lib. prof.	incorp. w. non lib. prof		
Austria	Apotheker	N	Spec. Y	N	N	Y	Y	N	Y	Y	(N)	Y	(N)	Y	N	Y
Belgium	Pharmacien / Apotheker	N	Spec. Y	N	N	N	Y	N	(Y)	N	N	N	N	N	N	N
Denmark	Apoteker	Spec. Y	Spec. Y	N	N	N	(Y)	N	Y	Y	Y	Y	Y	Y	N	N
Finland	Proviisori	N	Y	N	N	N	Y	N	(Y)	Y	Y	Y	Y	Y	N	(Y)
France	*Pharmacien*	Spec Y	*Y?*	N	*N*	*Y*	*Y*	*N*	*(Y)*	*N*	*Y*	*Y*	*Y*	*Y*	*N?*	*N*
Germany	Apotheker	Spec. Y	Spec. Y	N	N	N	Y	N	Y	Y	Y	Y	Y	Y	N	Y
Italy	Farmacisti	N	Spec. Y	N	N	N	Y	N	Y	Y	Y	Y	Y	Y	N	Y
Netherlands	Pharmacist	N	Y	N	N	N	Y	N	(Y)	N	N	N	N	N	N	Y
Portugal	Farmaceutico	N	Y Spec.	N	N	Y	Y	N	Y	N	Y	Y	Y	Y	N	Y
Spain	*Farmacéutico*	*N*	*Y Spec.*	*N*	*N*	*Y*	*Y*	*N*	*Y*	Y?	*Y?*	*Y?*	*Y?*	*Y?*	*n.a.*	*Y*
Sweden	Apotekare (state monopoly)	Y	Y	N	N	N	Y	Spec.	Y	Spec.	Spec.	Spec.	Spec.	Spec.	N	N
United Kingdom	Pharmacist	N	(Y)	N	N	N	Y	N	N	N	N	N	(Y)?	(Y)?	Y	Y
Greece	Pharmacist	Y Spec.	Y Spec.	N	N	Y	Y	N	Y	Y?	Y?	Y?	Y?	Y?	Y	N
Luxembourg	*Pharmacist*	*N?*	*Y. Spec.*	*N*	*N?*	*Y*	*Y*	*N*	*Y*	Y?	*Y?*	*Y?*	*Y?*	*Y?*	*n.a.*	*n.a.*
Ireland	Pharmacist	N	Y Spec.	N	N	(N)	(N)	N	N	N	N	N	N	N	N	N

3.4.3 Regulation Indices

For pharmacists we have changed the modus of the calculation of the entry index. The reason for this is that the main differences between the countries can be found in regards of the existence/non-existence of an economic needs test, whereas the regulations concerning licensing are *rather* similar. For this we changed the weighting of the respective categories of regulation as shown in the table below. ERLC has now a weight of 20% (instead of 40% for the other profession), ERED has a weight of 45% (instead of 40% for the other professions) and ERQT is weighted 35% (instead of 20% for the other professions).

Market Entry Regulation Index for Pharmacists

	Category/Variables	**Coding**	**Scale**	**Weighting1**	**Wighting2**
ER	**Entry regulation (general)**	**ERLC*0.20+ ERED*0.45+ ERQT*0.35**	**0 to 6**		
ERLC	**Licensing**	See separate table below	0 to 6		20%
ERED	**Requirements in education/**does only apply in cases of licensing; if no licensing: "0"	ERED1*0.30+ ERED2*0.40+ ERED3*0.20+ ERED4*0.10	0to6		45%
ERED1	Duration of special education/university or other higher degree	0 to ≥ 6 years	0 to 6	30%	
ERED2	Duration compulsory practising	0 to ≥ 6 years	0 to 6	40%	
ERED3	Number of professional exams	(0 to ≥ 3)*2	0 to 6	20%	
ERED4	Number of entry routes to profession (inv. scale)	(0 = 4 or more routes; 1=3 routes; 2=2 routes; 3=1 route)*2	0 to 6	10%	
ERQT	**Quotas/economic needs test**	0=no 6=yes	0 or 6		35%

Furthermore, the coding for Licensing (ERLC) has been changed. The methodology applied here is shown in the table below.

Coding ERLC (Licensing) for Pharmacists

Country	Pharmacists Monopoly	Selling of Medicinal Products Doctors and Veterinarians		Others: Retail Shops	Index ERLC
		Doctors	Veterinarians		
Greece	X				6,0
Italy	X				6,0
Sweden	X				6,0
Luxembourg			X		4,5
Portugal			(X)		4,5
Finland			XX		4,5
Belgium		X	X		3,0
Spain	X	(X)			3,0
France	X	X	X		3,0
Denmark			X	X	1,5
Germany			X	X	1,5
Ireland				X	1,5
Netherlands	X	X	X	X	1,5
Austria		X	XX	X	1,5
UK		(X)	(X)	X	1,5

Explanation of Indices:
6: only pharmacies are allowed to sell medicinal products
4,5: under specific preconditions also veterinarians (no doctors) are allowed to sell medicinal products
3: under specific preconditions also doctors (and veterinarians) are allowed to sell medicinal products
1,5: under specific preconditions also retail shops are allowed to sell medicinal products

The table below summarises the market-entry, conduct and overall regulation index for Pharmacists in the Member States of the European Union.

Pharmacists: IHS regulation indices

Pharmacists	Entry	Conduct	Total	Rank
Sweden	6.0	6.0	12.0	1
Greece	4.4	4.5	8.9	2
Italy	4.8	3.6	8.4	3
Portugal	4.2	3.8	8.0	4
Luxemburg	4.0	3.9	7.9	5
Spain	3.6	3.9	7.5	6
Austria	3.6	3.7	7.3	7
France	3.8	3.5	7.3	7
Finland	4.0	3.0	7.0	8
Denmark	2.3	3.6	5.9	9
Germany	1.6	4.1	5.7	10
Belgium	3.6	1.8	5.4	11
United Kingdom	2.7	1.4	4.1	12
Netherlands	1.2	1.8	3.0	13
Ireland	1.5	1.2	2.7	14

According to our index entry regulation is strongest in Sweden (state monopoly), followed by Italy, Greece, Portugal, Finland and the group of Spain, Austria and Belgium. Even a little bit lower is the index for Denmark. However, the differences arising in this group may be

somewhat artificial, as in all these countries market entry tests in the form of economic needs tests apply, that may be of different nature but all have been coded the same way. The differences primarily apply because of different education systems and broader or less broad licensing. The lowest figures have been calculated for the Netherlands, Ireland, Germany and the UK. In these countries the maximum number of community pharmacies is not fixed (in Ireland since February 2002, see case study in chapter 3 below).

Conduct regulation, apart from Sweden (which is a special case again), is most restrictive in Greece, followed by Italy, Luxembourg, Spain, France, Austria and Finland. A little bit more on the liberal side are Belgium, Denmark and Germany. The most liberal systems exist in the UK, Netherlands, Ireland as well as Belgium.

Overall, the highest “total index” (entry+conduct) has been ascribed to Sweden (state monopoly). Very high figures show also Greece, Italy, Luxembourg, Spain, Austria, France, Portugal and Finland. Placed in the middle are Belgium, Denmark and Germany. The most liberal regimes overall can be found in the UK, the Netherlands and Ireland.

3.5 Summary of regulation across member states

If we take a look at our simplified structure of market entry regulations (i.e. the colour-coding) we get the following overall picture. In regard to the different countries we can state that Austria, Germany and Luxembourg show rather extensive regulations in all professional fields. The same is true - for most professions - for France, Spain, Portugal, Italy, Belgium (and as far as we know at this stage also for Greece). The less regulated markets in respect to market entry regulations are found in Sweden, Denmark, Finland, the Netherlands, the UK (in some professions only England/Wales has been analysed) and Ireland.

Summary Market Entry Regulations/Colour Coding

Accountancy Services Country	Legal Services Country	Notary Services Country	Architectural Services Country	Engineering Services Country	Pharmacies Country
Austria	Austria	Austria	Austria	Austria	Austria
Belgium	Belgium	Belgium	Belgium	Belgium	Belgium
Denmark	Denmark		Denmark	Denmark	Denmark
Finland	Finland		Finland	Finland	Finland
France	France	France	France	France	France
Germany	Germany	Germany	Germany	Germany	Germany
Italy	Italy	Italy	Italy	Italy	Italy
Netherlands	Netherlands	Netherlands	Netherlands	Netherlands	Netherlands
Portugal	Portugal	Portugal	Portugal		Portugal
Spain	Spain	Spain	Spain	Spain	Spain
Sweden	Sweden		Sweden	Sweden	Sweden
United Kingdom	United Kingdom		United Kingdom	United Kingdom	United Kingdom
Greece	Greece	Greece	Greece	*Greece*	Greece
Luxembourg	Luxembourg	Luxembourg	Luxembourg	Luxembourg	Luxembourg
Ireland	Ireland		Ireland	Ireland	Ireland

In respect of the various professional fields there is a rather bipolar situation in engineering and architectural services: some countries show rather rigid licensing models, in others certification is the standard model. In accountancy services all countries show a kind of certification model, but the scope of exclusive rights to offer services varies considerably. In legal services one can observe all degrees of market entry regulation, especially for lawyers: from very loose (Finland and Sweden) to very rigid (Austria, France, Germany and others). For notaries the situation is different: in all countries with a so-called “Latin notary” the market entry regulations are rather strict (number of notary branches restricted by economic needs tests etc.). As regards pharmacies/pharmacists we find a considerable degree of market entry regulation in most countries. In all countries there is some kind of licensing model, but in Ireland, Germany, the UK and the Netherlands the number of pharmacies are not restricted.

This colour-coding is very well reflected in our regulation indices. The following table gives the figures for the overall regulation indices, for all the professions/professional fields where one has been calculated (i.e. not the notaries), sorted by countries.

Overview: Total IHS regulation indices for different professions

	Accountants	Lawyers	Notaries	Architects	Engineers	Pharmacists
Austria	**6.2**	**7.3**	**9.6**	**5.1**	**5.0**	**7.3**
Belgium	**6.3**	**4.6**	**9.3**	**3.9**	**1.2**	**5.4**
Denmark	**2.8**	**3.0**		**0.0**	**0.0**	**5.9**
Finland	**3.5**	**0.3**		**1.4**	**1.3**	**7.0**
France	**5.8**	**6.6**	**10.0**	**3.1**	**0.0**	**7.3**
Germany	**6.1**	**6.5**	**11.0**	**4.5**	**7.4**	**5.7**
Greece	**5.1**	**9.5**	***n.a.***	***n.a.***	***n.a.***	**8.9**
Ireland	**3.0**	**4.5**		**0.0**	**0.0**	**2.7**
Italy	**5.1**	**6.4**	**10.7**	**6.2**	**6.4**	**8.4**
Luxembourg	**5.0**	**6.6**	***n.a.***	**5.3**	**5.3**	**7.9**
Netherlands	**4.5**	**3.9**	**6.3**	**0.0**	**1.5**	**3.0**
Portugal	***n.a.***	**5.7**	***n.a.***	**2.8**	***n.a.***	**8.0**
Spain	**3.4**	**6.5**	**9.4**	**4.0**	**3.2**	**7.5**
Sweden	**3.3**	**2.4**		**0.0**	**0.0**	**12.0**
UK	**3.0**	**4.0**		**0.0**	**0.0**	**4.1**

All the regulation indices with a value of 5 or higher have been coloured black. The indices with a value between 2.5 and 4.9 are coloured dark grey; those below 2.5 are light grey. It is obvious that the profession of pharmacists shows the most highly regulated systems in relative terms. It is followed by legal services and accounting services. Concerning engineers there exist only four countries with relatively high regulation, in regards to architects only three (whereas the two missing countries supposedly would count among the countries with high regulation indices). Most light grey fields (low regulation indices) can be found in engineering services, followed by architects and then legal services.

Countries with high indices for all professions are Austria, Italy, Luxembourg and with one exception Germany (and possibly Greece). Belgium, Portugal and Spain appear to be in the medium field, whereas The UK, Sweden (with the exception of pharmacists), the Netherlands, Ireland, Finland and Denmark (the latter again with the exception of pharmacists) show rather liberal regulatory regimes (from a *comparative* point of view).

4. Overview of the Case Studies

This report includes a special section (Part 2) that provides detailed information on the regulation – both for market entry and conduct – on a heterogeneous selection (subset) of member states, along with further detailed information on the economic characteristics of each branch of professional services. Cross-reference is also made to the overall degree of regulation, for market entry and conduct regulation, as described and calculated in Chapter 3.

The subset of member states is different for each profession. Within professional fields the following member states are studied:

- ***Legal profession (lawyers, notaries):*** **5 member states**

  Denmark, Italy, UK/England and Wales, Germany, France

- ***Accountancy (+Tax advisers):*** **4 member states**

  Italy, Netherlands, Germany, France

- ***Technical professions (engineers, architects):*** **4 member states**

  Austria, Finland, France, Spain

- ***Pharmacists:*** **4 member states**

  Ireland, Portugal, Sweden, Germany

The current chapter presents a brief comparative overview of the case studies in each professional field, focussing on recent trends in regulation changes.

4.1 Legal Services

In legal services, detailed analysis has been undertaken for Denmark, Italy, England&Wales, Germany and France. In Italy, Germany and France we find the typical continental model, where legal services are traditionally organised in two main professions: the lawyer and the ("latin") notary, whereas in England&Wales as well as in Denmark the notary of the latin type is not known. The important difference between latin notaries and other professional descriptions of notary (e.g."Notary Public" or "Scriveners"), which we do not include in the

analysis, is that the notarial deeds of the former are endowed (e.g. in the case of litigation) with the characteristic of representing special evidence guaranteed by public law.

In England&Wales, however, there is another division of the profession in existence: that between solicitors and barristers. According to the regulatory information encapsulated in our regulation indices (see the previous chapter 3), a relatively high degree of market entry regulation for lawyers exists in Germany and France, whereas it is considerably lower in Italy, England and Wales and Denmark. This is conditioned by the fact, notwithstanding other important differences (especially in the respective education systems), that legal advice is an exclusive task of selected professions in France and Germany, but not in the other three countries, where representation before courts (and some times other organisations) is the only important service field reserved for lawyers.

Conduct regulation for lawyers attains the highest level in our subset in Italy, followed by Germany and France. In England&Wales as well as in Denmark – after a series of liberalisation in the 1990s – conduct regulation now is rather liberal, with a certain higher degree of regulation remaining, however, concerning questions of business form and inter-professional co-operation. As indeed applies to all the member states of the European Union regarding trends in regulatory changes in legal professions, one cannot observe any far-reaching system changes that have taken place within the case study subset of countries. (An example of such would be a change from a licensing to a certification model or *vice-versa*). What we can observe, however, are gradual changes in the systems of market-entry, and even more so in respect of conduct-regulation.

In *Denmark* liberalisation concerning prices and advertising, and, to some extent forms of business etc., was combined with a certain complication of the process of market-entry. A new final admittance examination was introduced in 1996, exactly at the same time as some regulations concerning conduct were liberalised to a certain extent.

In *Italy*, According to the Law of 24 February 1997, the distinction between two groups of attorneys - *avvocati* and *procuratori legali* is no longer made. The profession of *Procuratore Legale* has been abolished. As has been the case for the accounting professions (see below), several attempts have been made in recent years to deregulate the legal professions in Italy. The system of market entry has been changed (and liberalised to some extent). The same is true for regulations on marketing and advertising, as well as for the system of fee setting and regulations concerning forms of business and inter-professional co-operation (although the last have not been implemented up to now).

The professional division between Solicitors and Barristers in *England&Wales* has been a subject for discussion in these countries for quite a while now. Whereas upon first consideration there may be no direct negative outcomes of this separation (as a monopoly for barristers in representation in the higher courts does not exist any more), to the external

observer it is rather unclear what, apart from tradition, the advantage of this separation is. Conduct regulation for legal professions in England&Wales is now rather liberal as far as prices fees/advertising are concerned. Somewhat rigid regulations are still applicable, however, concerning forms of business and inter-professional co-operation.

In *Germany* several regulatory changes have been implemented in recent years in various fields of lawyers' conduct regulation (advertising, business forms, location and diversification). However, the fees system and the rather high-level market entry regulation remain unchanged.

In *France*, following the reform of 1990, the differentiation between "*avocats*" and "*conseil juridiques*" has been eliminated. In contrast to the developments in many other countries, in France no far-reaching steps towards liberalisation of conduct-regulation have been made.

In overall general terms, for the profession of lawyers we notice certain trends towards liberalisation (especially in respect of conduct regulation) in most of our case study countries.

Concerning notaries, such tendencies are generally less common in the selected case study countries. However, there are some examples for liberalisation in this profession in other member states. Countries in this category are Austria (liberalised fee system, advertising) and especially the Netherlands (fees, advertising, inter-professional cooperation).

4.2 Accountancy Services

In relation to accountancy professions detailed analysis has been carried out for Italy, the Netherlands, Germany and France. According to our regulation indices, the highest degree of market-entry regulation of these countries exists in France and Germany, whereas it is considerably lower in the Netherlands and Italy. Apart from differences in the education systems, this is again conditional primarily on different exclusive tasks reserved to the professions: whereas tax-advising is a reserved task in Germany in France, it is not in Denmark and Italy. Conduct regulation is highest in Germany, followed by Italy, France and the Netherlands, where rather liberal regulations are in place.

As in the field of legal services, no truly system-changing developments have taken place in the regulatory systems of the relevant professions during the last ten years. However, several steps towards liberalisation can be observed. The regulatory system of accountants in *Italy* in the last ten years has undergone several changes. Some of them led to a higher degree of freedom for professionals. Regulatory changes of this kind primarily concerned prices and fees, forms of advertising and forms of business (although the last one has not effectively been implemented yet).

The regulatory systems for accountants in the *Netherlands* are a rather good example for a country where the market-entry regulations basically fulfil the minimum requirements of the EC 8th Directive on auditing, and where the conduct-regulations are rather liberal. This is especially true for regulation on fees and prices as well as advertising and, with some limitation, also for inter-professional co-operation. Both professional bodies (the NOvAA and the NIvRA) appear to be rather open-minded as regards further liberalisation, especially concerning inter-professional co-operation. However, this reform, up to now, has been strongly opposed by Dutch lawyers, who worry about a possible market dominating position of the big accounting firms also occurring in the legal services field.

In *Germany,* some steps towards liberalisation have been taken, mainly in respect of business forms and regulations concerning advertising.

Regulation for *French* auditors appears to be rather restrictive with respect to entry regulation and no changes in this respect have occurred during recent years. Conduct regulation, however, appears to be rather liberal. This is especially the case in respect of price regulation and partially as regards the form of firm and inter-professional co-operation. At the same time, the profession has adopted new measures in relation to professional quality management (peer reviews etc.) and continuing education.

4.3 Technical services

In regard to technical professions (engineers and architects), detailed analysis has been undertaken for Austria, Finland, France and Spain. Finland is an example of a country, where almost no special regulation in the sense of rules concerning market entry and conduct applies to the technical professions. This means that no licensing system exists and that no special rules on prices, business forms, advertising etc. have to be followed. Neither engineers nor architects are obliged to become members of, or be registered with, a professional association. The associations of architects (SAFA), construction engineers and architects (RIA) as well as civil engineers (RIL) have been set up on a voluntary basis. Austria is one of the countries with a high degree of regulation concerning market entry, but with comparatively low conduct regulation. The same is true for Spain. In France, special market entry regulation (in the sense of licensing) only applies to architects, but not to engineers. In France, conduct regulation is non-existent (engineers), and of a very liberal character (architects). Taken altogether, the case studies show the considerable variations concerning different degrees of regulation in technical services that occur throughout the European Union.

As in the other professions, recent trends in regulation show no complete system changes but a gradual adaptation towards more liberal rules. In respect of our case studies, the latter is especially true for Austria and Spain.

In *Austria* since 1994, Civil Technicians may establish Civil Technician Corporations. The opening of local branch offices has been allowed since 1993/94: the formerly applicable restrictions have been abolished. The same is true for price regulation that established minimum prices, which was in place until 1993.

In *Spain* rather tight regulation of prices existed until 1997, but it was rescinded in that year. Regulations restricting which services may be offered in geographical terms were also abolished in 2000. However, the professional bodies are still organised on a territorial basis, but membership of one territorial body is now enough to practise anywhere in Spain.

In *France,* advertising for architects was liberalised to some degree in 1992. In respect of market entry, a reform is currently under discussion. The proposed reform does not show clear signs of liberalisation. On the one hand, if it were to be adopted, some facets of the reform would lead to a considerably higher degree in market entry regulation (by defining a broader range of cases where planning has to be performed by a licensed professional). On the other hand, the group of professions allowed to perform building and planning tasks would be enlarged (by licensing of professions other than architects in respect of these tasks).

4.4 Pharmacy Services

For pharmacists detailed analysis has been carried out for Ireland, Portugal, Sweden and Germany. The profession of the pharmacist is, broadly speaking, organised as a licensing model in all EU member states. Nevertheless, there are still significant differences between countries. In Sweden, pharmaceutical products are sold via a state-monopoly. There is only one state owned company carrying out the services of pharmacies. Portugal represents an example of a large group of countries (Austria, Belgium, Denmark, Finland, France, Italy, Spain, Greece, Luxembourg) that have quite extensive regulations. In all these countries the number of pharmacies is restricted (via economic needs tests etc.). Ireland is (together with Germany, the UK and the Netherlands) one of the countries where no such regulations apply.

Generally speaking, steps towards liberalisation have occurred less frequently in this professional group than in the other professional groups analysed in this report. One exception is Ireland, where in fact a “re-liberalisation” took place. Regulations came into force as from May 1996 that limited the number of General Medical Scheme (GMS) dispensing pharmacies, i.e. pharmacies which are reimbursed by the GMS for dispensing prescriptions to medical cardholders and other qualifying individuals. The requirements for opening a new pharmacy included several preconditions in regards to minimum population density in the local area and distance from already established pharmacies. The Minister for Health and Children announced on 31st January 2002 his revocation of these regulations. The effect of the revocation, in respect of the awarding of new Community Pharmacy

Contracts, is a return to the pre-1996 situation, whereby the applicant applies to the health board for a Community Pharmacy Contract, which may be granted providing the relevant educational preconditions are met.

In *Portugal,* some regulatory changes have occurred in recent years, but there are no signs of real liberalisation.

A similar lack of recent regulation can be stated for *Germany*. However, we should stress that Germany is one of the few countries in the European Union where the number of community pharmacies is not limited via economic needs tests etc.

4.5 Summary

All aspects considered together, a high degree of “system-stability” is evident for all professions analysed in the case studies of this report in respect of regulatory changes. In this context, we did not find any complete system change (from a licensing model to certification model or in the reverse direction) and it only rarely occurs that exclusive tasks which are reserved to one or more liberal professions are opened to other potential service providers in the market.

However, frequent changes in the regulatory framework can be observed in the field of *conduct regulations*. These changes in almost all cases have taken the form of liberalisation (e.g. in respect of price regulation, advertising, form of firm, inter-professional co-operation). Such liberalisation is seldom accompanied by the introduction of more restrictive regulation in the field of *market entry* (but an example of this indeed happening is the case of lawyers in Denmark).

Despite the continued existence of traditional, somewhat ‘defensive’ forms of regulation on market entry and conduct in a few countries, there is a trend to more pro-active forms of consumer protection and quality management, which implies a lower degree of anti-competitive effects. For several professions in several countries in recent years, for example, professional indemnity insurance has been made obligatory (or, if already in existence, broadened). Other examples are the introduction of obligatory continuing education, facilities for specialisation, or in some cases, specific voluntary certification and/or benchmarking systems.

5. A Benchmarking Survey of Professional Services

This section presents a comparative analysis of nearly all EU member states in terms of key economic variables and indicators. For a few countries and professions no comparable data has been found, and for this reason they are missing from the analysis.

Unfortunately from an analytical point of view, comparable data, i.e. statistical data collected for groups of services on an identical basis, exists only, and then again sparingly, at the 4-digit level of the NACE classification system. Thus our results are grouped into four professional service areas for analysis as follows, whereby aggregated data for certain professions are included (shown in brackets):

– Legal professional services (lawyers and notaries)

– Accountancy Services (accountants, statutory, but also book-keeping*and tax advising*

– Technical professions (consulting engineers (various sub-classifications) and architects)

– Pharmacists

The inclusion of economic activities like book-keeping and tax-advising (marked with *) in a 4-digit category poses a problem for the analysis: these occupations, inasmuch as they may be carried out by persons who are not included as professionals in our scope of professional services as ‘liberal professions’ also contribute to the economic statistics. Due to lack of an alternative (which would filter out these activities) the analysis of ‘accounting services’ is carried out in the following pages *as if* the activities were within the scope of our professional definitions. The possible resulting contamination of the data and the corresponding analysis is mitigated by the observation that such activities as tax-advising are also within the domain of professional accountants. Due to the over-proportionate contribution to economic output of large and medium-sized accountancy firms, the possible distorting effect on turnover statistics is likely to be less than the effect on employment. Such observations will be true for all member states, sometimes to slightly varying degrees. Nevertheless, within the ‘broad-brush’ approach of our analysis the deleterious effects on consistency are assumed to be minimal.

5.1 Description of the Dataset

Basic data on the number of firms (F), turnover of the 4-digit branch (T) and employment (E) are presented for the year 2000, or alternatively, when this data was not available, for the nearest year to 2000. At the time of the study data for 2001 was only available in a few cases, so 2000 was chosen as the base year.

Employment figures include both paid employees and also 'unpaid persons', i.e. self-employed and assisting spouses. The definitions are based on EUROSTAT definitions[1], which are unified for EU member states. Data definitions from national data which differ from the EUROSTAT definitions were taken into account: in some cases a correction to the data could be justified; in some few cases the data from the member state statistical office could not be used to augment the dataset because of incompatibility.

Key indicators are ratios that are calculated based on the variables F, T and E, and their relation to the population (Pop) and GDP of each member state in the survey. The following units are used:

- **F**: Number [Firms]

- **T**: Million EUR (or ECU as appropriate) [Turnover] (- **TS**: Turnover Share)

- **E**: Number [Employment]

- **Pop**: Millions [Population]

- **GDP**: Million EUR (or ECU as appropriate) [Gross Domestic Product]

A further key variable associated with each branch is the number of practising *professionals*.[2] The following definitions were used:

- Legal Professions: Total number of qualified registered lawyers, notaries in practice, excludes patent lawyers (relatively small in number)

- Accountancy Professions: Total number of professional accountants (for example registered in the 'Chamber' or 'Chartered'/'Certified' and equivalents) and statutory auditors in public practice (note: usually qualified with academic degree but with some exceptions), auditors, but excluding 'only tax advisors'

- Architects and Engineering Professions: Number of academic (university, polytechnic degree) practising consulting engineers and architects

- Pharmacy Profession: Academically qualified registered, non-clinical pharmacists

For each of the four branches there does not exist a unique single complete source of data on professionals. Our data has been constructed based on numerous sources, data from IHS questionnaires (where given), and many telephone enquiries to professional bodies in the member states. The resulting figures for professionals are the best estimates based on

[1] New Cronos Database.
[2] see also *Note on terminology* in section 1.1.

this information[3]. The information on the number of practising professionals is important for the further analysis.

An additional variable, volume of services provided (V) has been derived from the turnover variable: it is expressed in units of millions POI-adjusted EUR (price and output adjusted euros), i.e. adjusted by price factors and the size of the GDP in each member state[4]. Volume expresses the branch turnover in a comparable unit: different effects of price levels and the total output of the economy are taken into account. The latter adjustment is considered necessary because professional business services derive their revenues in large part from the business sector. It can be expected *ceteris paribus* that the level of output of a professional service is dependent on the level of output on a per capita basis (or productivity) of the whole economy.[5]

Despite our best efforts, inaccuracies in data are possible. For this reason we have adopted lines of empirical analysis that are robust. That is to say that the observations made would withstand sensitivity analysis of variations in the data, to within any reasonably expected deviations.

Each indicator shows a spectrum of results, shown by the coefficient of variation[6]. The categorisation of member states, for each indicator on its own merits, into 'High', 'Medium' and 'Low' is based on the median values, not the mean, as the latter can be strongly biased by exceptional high or low values. Roughly speaking, in each case about one third of member states are classified in each category: but this is not a fixed rule – if, for example 6 states show values close together near the median value, then these will all be classified as 'Medium'. See the charts 'Distribution of Key Ratios in EU Member States' in each of the benchmarking sections for legal, accountancy, technical, and pharmacy services respectively.

Altogether there are data for13 member states used in the benchmarking of legal services (Portugal and Greece missing), 12 member states for accountancy services (Belgium, Portugal and Greece missing), 13 member states for technical services (Portugal and Greece missing), and 14 member states for pharmacies' services (Greece missing).

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[3] See Annexes D for sources.

[4] POI – price and output indices - were constructed as the product of Purchasing Power Parities (PPPs) deflators, which remove the effect of price level differences between countries, and GDP per capita in Purchasing Power Standards (PPS) obtained from EUROSTAT. One PPS – a 'standardised euro' based on an EU average - buys the same given average volume of goods and services in all countries. See Annexes C for these indices.

[5] The POI adjustment in any year has the same effect as comparing the ratio of branch turnover with GDP for each member state (the indicator *T in % of GDP*), which also takes into account differences in prices and outputs, but has the disadvantage of being a dimensionless coefficient.

[6] The coefficient of variation (CV%) is the intrasubject standard deviation divided by the mean, expressed as a percentage.

5.2 Results of Benchmarking

Reference in the following is made to the branch Overview-tables which appear before each benchmarking analysis i.e. for each of legal, accountancy, technical, and pharmacy services. The sequence of appearance of member states in the overview-tables is from left to right, in decreasing order of the overall regulation index (the sum of entry and conduct regulation indices) which was presented in Chapter 3, i.e. most highly regulated to least regulated.

The intention of the benchmarking exercise is to determine whether there are any indications of causality between the performance of individual EU member states in each of the four professional services areas, and the degree of regulation as expressed in the indices of regulation. Whereas the construction of the regulation indices involves a weighting of factors, which inevitably involves an element of subjectivity, the choices made have been explained in section 2 and the calculation methodology has been made explicit. The data used to calculate key indicators has been obtained from published statistics, so that there is no *a priori* linkage between these two sets of data.

Interpretation of the relationship between indicators and regulation indices is, however, a delicate matter. This is not chiefly conditioned by remaining uncertainties in the data on professional services at the 4-digit level, nor by the construction of the regulation index, but by the inherent aggregated level of the data, and the not entirely one-to-one correspondence between the 4-digit level and the professions studied. Furthermore, regulation of the professions is surely not the only factor that can influence outcomes in member states, even when care is taken to analyse the results on an equitable comparative basis. Other systemic variables that can affect results, such as the distribution of demand for services, including the 'product mix' of services, patterns of education and employment, or efficiencies of production, among others, may all serve to mask the effects of regulation. Nevertheless, we can detect certain patterns that do not appear to be random effects, inasmuch as we can explain the data using the knowledge gathered about the differences between member states in their regulation systems. Some trends are only apparent in a group of countries: contradictions in trends are noted where of importance, but some effects may be uncommented. A case in point is Luxembourg, which is considered a special case of its own, due to its size and concomitant specialised business and industrial structure.

In examining a ratio, it is simple arithmetic that it will be, for example, relatively high if either the numerator is also relatively high in international comparison to the denominator, or the denominator is relatively low in international comparison to the numerator. So the fact (of being, say a relatively high value) is not in itself necessarily conclusive. The importance of a relationship (or lack of it) lies in the interplay of several characteristics simultaneously, and interpreting these is the aim of the following sub-sections. Care is taken not to fall into the trap of casuistic explanations.

5.2.1 Legal Services

All the comparisons in this section refer to data in Overview Table 5-1, and to the relative classification shown by the 'colour coding' as high, medium or low in relation to member states in the survey.

Austria and France[7] are medium producers of legal services (in terms of turnover as a percentage of GDP or volume per capita Austria is slightly less than median, whereas France is above the median of the countries surveyed). The 'professional density', i.e. the relative number of legal professionals as defined in the previous section, is however low in both countries, which results in high turnover per professional (and volume per professional) relative to the group of member states surveyed. Employment is low in Austria, and somewhat below the median value in France, and the number of firms is relatively low in Austria, medium in France, in relative terms, respectively.

Interestingly, Austria and France have the highest regulation indices, 7.34 and 6.61 respectively (excepting Luxembourg). These countries also show the highest index on entry regulations, which would offer an explanation for the low number of professionals, and high volumes generated in comparison to this number.

The other country with an (enormously) high volume to professional ratio is Belgium, which appears to be an extreme outlier in terms of per capita volume, has a medium number of professionals for its size.

A group of countries with low regulation index scores, Netherlands, Denmark, Finland and Sweden have relatively low numbers of professionals, but unlike Austria and France the overall volume per professional in these countries is in the middle bracket.

Netherlands and Denmark are also the only countries with low number of firms and relatively high employment per firm and high or medium turnover per firm (this last indicator is high for Netherlands, just above median value for Denmark), indicative of a higher degree of concentration in the market. This points to an association between 'market shake-out' or concentration processes and low degrees of regulation, especially in the area of conduct regulation, and seems to be a clear result of firms having the scope to merge. This process is, however, not associated with high market power, as the volume of legal services per capita in both these countries is below the median (and low in Denmark).

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[7] Note that there is some uncertainty concerning data for France – c.f. Case Studies in Part 2. In this analysis we use extrapolated Eurostat data for France (see corresponding Case Study in Chapter 7). Even if the INSEE data were used, the sense of the analysis above for accountancy services does not change: in this case the volume per capita for France is over twice the median value, but the volume per professional is over four times the median value.

In contrast, Spain and Italy exhibit a high degree of de-concentration, with relatively high numbers of firms and also a high density of professionals, so fairly high degrees of (entry) regulation do not seem to act as a barrier to entry in these countries. The level of overall employment in relation to the number of professionals in Spain and Italy is also the lowest in our survey sample, so it seems possible that there is a different division of labour between professionals and other employees, including trainees, applying, compared to other countries.

UK and Ireland are high volume countries for legal services, also on a per employed person basis, which can be related to systemic differences in legal practice, but in both cases the volume per professional does not rise out of the middle category. In both member states the degree of regulation takes on medium to low values. They are also characterised by having large firms, whether measured by the number of professionals per firm or employment per firm, as do two countries with lower overall degree of regulation, namely Netherlands and Denmark. It is noticeable that all four countries have low indices of entry regulation, but this trend is not continued in the case of Sweden and Finland.

Germany appears as an exception to one of the trends described above. Despite having a high regulation index the volume per professional is not high. However the volume of business compared to the level of employment is low despite a medium per capita volume, i.e. relatively low productivity, in common with Luxembourg, which also has a high regulation index. The relative number of firms and the associated employment per firm are both in the ‘average’ bracket for German legal services. Since data is only available for Germany for the year 2000, there is a question as to whether the effects of reunification in 1991, and the subsequent combination of two legal systems from different models of society, are still of major influence.

Table 5-1 Overview – Legal Services 2000

Legal Services (k7411)	AUT	LUX	FRA[2]	GER	ESP[1]	ITA	BEL	IRL[1]	UK	NLD[1]	DNK	SWE	FIN
Key Variables:													
F in units	2 792	494	30 340	31 195	79 565	87 608	27 196	1 525	24 416	2 675	1 658	4 344	1 557
T in Mio EUR	1 234	130	13 352	11 863	5 041	11 273	14 744	971	25 062	2 565	876	1 388	384
E in units	16 456	1 395	146 018	200 461	127 812	148 665	85 787	11 065	272 000	36 700	14 507	15 881	3 334
Professionals in units[3]	4 592	830	39 940	105 724	105 296	139 500	14 888	7 476	111 772	13 222	4 359	8 480	2 120
	(2001)	(2001)	(2001)	(2000)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2000)	(2000)	(2002)
Population in Mio.	8.10	0.44	59.23	82.16	39.39	57.68	10.24	3.73	59.62	15.76	5.33	8.86	5.17
GDP in Bil. EUR	205	21	1 405	2 026	565	1 166	248	89	1 548	374	176	247	132
Key Indicators:													
T per Firm in 1000 EUR	442	263	440	380	63	129	542	637	1 026	959	528	319	247
E per 1000 firms	5 894	2 824	4 813	6 426	1 606	1 697	3 154	7 256	11 140	13 720	8 750	3 656	2 141
T per E in 1000 EUR	75	93	91	59	39	76	172	88	92	70	60	87	115
E per Mio. of Pop	2 031	3 200	2 465	2 440	3 244	2 577	8 378	2 963	4 562	2 329	2 722	1 792	645
F per Mio. of Pop	345	1 133	512	380	2 020	1 519	2 656	408	410	170	311	490	301
Prof per 1000 F	1 645	1 680	1 316	3 389	1 323	1 592	547	4 902	4 578	4 943	2 629	1 952	1 362
T per Prof in 1000 EUR	269	157	334	112	48	81	990	130	224	194	201	164	181
E per 1000 Prof	3 584	1 681	3 656	1 896	1 214	1 066	5 762	1 480	2 434	2 776	3 328	1 873	1 573
Prof Density (per Mio. Pop)	567	1 904	674	1 287	2 673	2 419	1 454	2 002	1 875	839	818	957	410
T per cap. in EUR	152	298	225	144	128	195	1 440	260	420	163	164	157	74
T in % of GDP	0.60	0.62	0.95	0.59	0.89	0.97	5.94	1.09	1.62	0.69	0.50	0.56	0.29
*Vol in POI-adjusted Mio. EUR**	1 101	61	12 947	10 849	7 472	12 577	13 715	868	21 584	2 309	597	1 125	340
Vol per cap. in EUR*	136	139	219	132	190	218	1 339	232	362	147	112	127	66
Vol per firm in 1000 EUR*	394	123	427	348	94	144	504	569	884	863	360	259	219
Vol per E in 1000 EUR*	67	43	89	54	58	85	160	78	79	63	41	71	102
Vol per Prof in 1000 EUR*	240	73	324	103	71	90	921	116	193	175	137	133	161
Entry Index	4.1	3.8	3.9	3.7	3.4	2.6	2.5	2.4	3.3	2.1	2.1	2.0	0.0
Conduct Index	3.3	2.8	2.7	2.8	3.1	3.9	2.1	2.1	1.2	1.8	0.9	0.4	0.3
REGULATION INDEX	**7.3**	**6.6**	**6.6**	**6.5**	**6.5**	**6.4**	**4.6**	**4.5**	**4.5**	**3.9**	**3.0**	**2.4**	**0.3**

* adjusted for relative prices and national output - NB. not shown as high, medium or low (absolute, not relative values)

Sources: Eurostat, IHS, national statistics

Colour code:

high relative to median

medium relative to median

low relative to median

[1] 1999

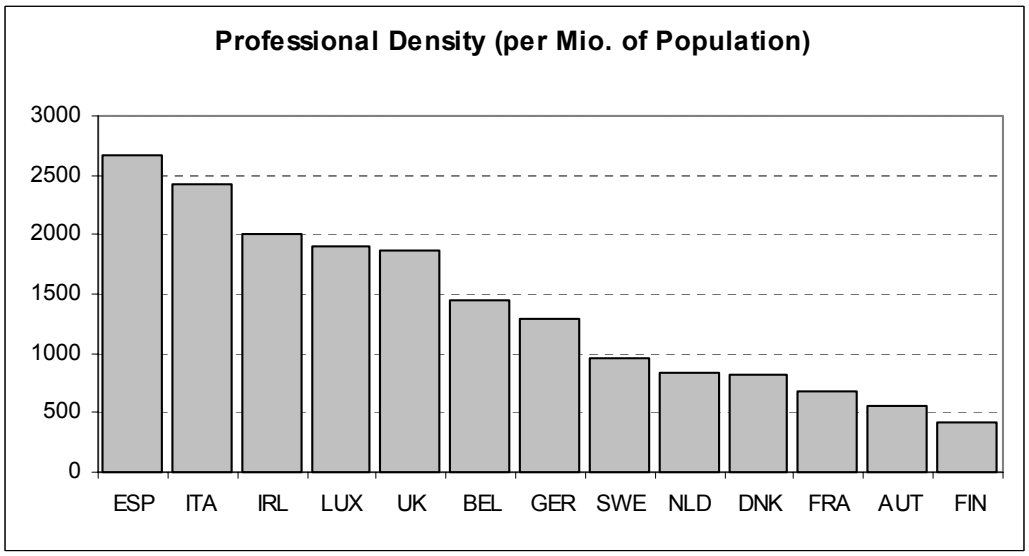
[2] based on extrapolated values

[3] reference year see row below

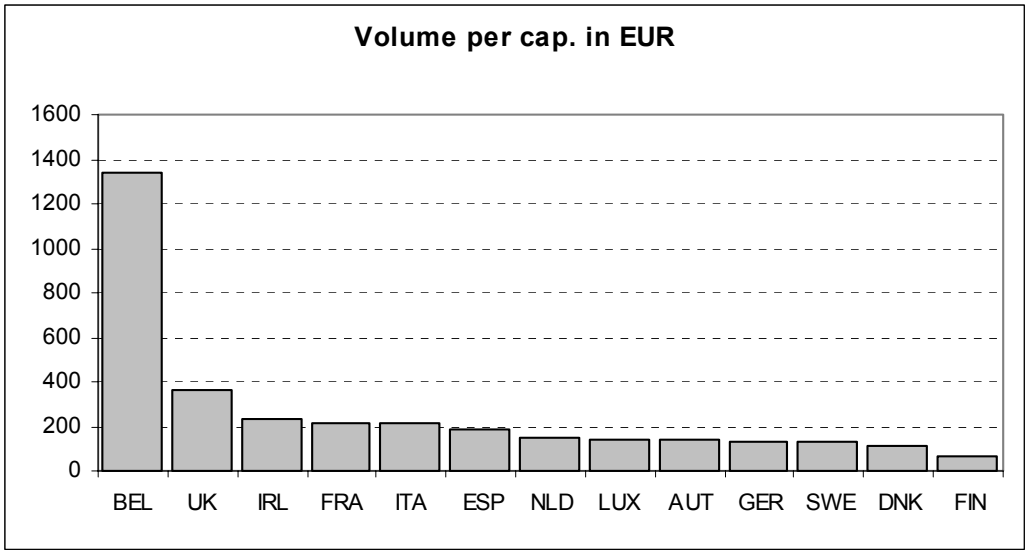
Summary statistics	Median	Mean	Standard deviation	Coeff. of variation
Key Variables:				
F in units	4 344	22 720	29 673	131%
T in Mio EUR	2 565	6 837	7 752	113%
E in units	36 700	83 083	88 396	106%
Professionals in units	13 222	42 938	51 973	121%
Population in Mio.	10.2	27.4	28.2	103%
GDP in Bil. EUR	248	631	667	106%
Regulation Indices:				
Entry Index	2.6	2.8	1.1	41%
Conduct Index	2.1	2.1	1.1	53%
REG. INDEX	4.6	4.9	2.1	43%

	Median	Mean	Standard deviation	Coeff. of variation
Key Indicators:				
T per Firm in 1000 EUR	440	460	287	62%
E per 1000 firms	4 813	5 621	3 778	67%
T per E in 1000 EUR	87	86	32	37%
E per Mio. of Pop	2 577	3 027	1 842	61%
F per Mio. of Pop	410	820	780	95%
Prof per 1000 F	1 680	2 451	1 507	61%
T per Prof in 1000 EUR	181	237	239	101%
E per 1000 Prof	1 896	2 486	1 322	53%
Prof Density (per Mio. Pop)	1 287	1 375	739	54%
T per cap. in EUR	164	294	355	121%
T in % of GDP	0.69	1.18	1.47	125%
Vol in POI-adjusted Mio. EUR*	2 309	6 580	7 068	107%
Vol per cap. in EUR*	147	263	332	126%
Vol per firm in 1000 EUR*	360	399	255	64%
Vol per E in 1000 EUR*	71	76	31	40%
Vol per Prof in 1000 EUR*	137	210	225	107%

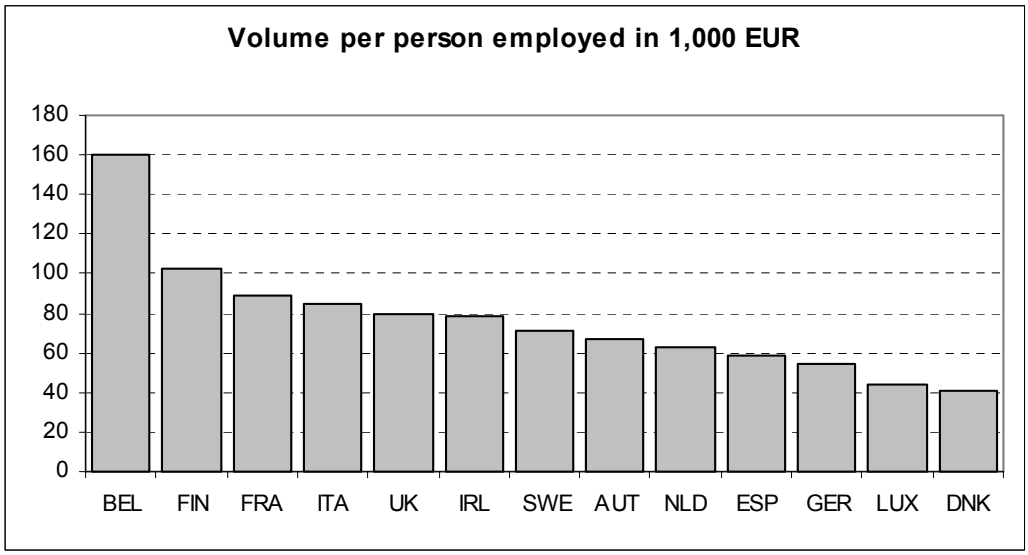
Chart 5-1 Distribution of Key Ratios in EU Member States - Legal Services



Sources: EUROSTAT, national statistics, IHS



Sources: EUROSTAT, national statistics, IHS



Sources: EUROSTAT, national statistics, IHS

5.2.2 Accountancy Services

All the comparisons in this section refer to data in Overview Table 5-2, and to the relative classification shown by the 'colour coding' as high, medium or low in relation to member states in the survey.

Austria and France[8] are blow median producers of accountancy services (in terms of turnover as a percentage of GDP or volume per capita) whereas the branch in Germany may be classed as being of medium size. The 'professional density', i.e. the relative number of accountancy professionals per head of population, is however low in all three member states. As a result the turnover per professional (and volume per professional) is in a higher category than the output volume on its own, i.e. in the case of France and Austria, volume per capita is relatively low, but volume per professional is medium; in the case of Germany volume is medium, but volume per professional is high. Employment is also low in Austria as in France, relatively, and at a medium level in Germany: exactly the same holds for the number of firms in each country.

In our data, Spain, a medium volume producer, is the same as Germany in terms of all the variables mentioned in last paragraph. The number of professionals recorded for Spain is however, certainly much lower than the figure needed for a fair comparison, because it is restricted to the number of registered auditors in practice *without* the number of accountants. Since accountants do not require registration, we were unable to obtain a valid estimate for the number of accountants.[9]

Interestingly, Austria has the highest regulation index (6.19), and Germany and France have the third and fourth highest regulation indices, 6.08 and 5.83 respectively. In terms of the entry index alone, Austria ranks first, France second, and Germany third, which would offer an explanation for the low number of professionals, and high volumes generated in comparison to this number.

As is the case for legal services, Italy exhibits a high degree of de-concentration, with relatively high numbers of firms and also a high density of professionals, so the high degree of (entry) regulation (second highest overall index, and fifth highest index in terms of entry) does not seem to act as a barrier to entry. The level of overall employment in relation to the number of professionals in Italy is also the lowest in our survey sample, so it seems possible that there is a different division of labour between professionals and other employees, including trainees, applying, compared to other countries.

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[8] Note that there is some uncertainty concerning data for France – c.f. Case Studies in Part 2. In this analysis we use extrapolated Eurostat data for France (see corresponding Case Study in Chapter 8). Even if the INSEE data were used, the sense of the analysis above for accountancy services does not change: in this case the volume per capita for France is classed as medium, but the volume per professional is high.

[9] Communication with Asociación Española de Asesores Fiscales.

In contrast, the three countries with the lowest regulation indices, Denmark, UK and Ireland have each a density of professionals in a higher category than the associated indicator, volume per professional (medium/low, high/medium and high/low respectively), so that the opposite effect from that applying to Austria, France and Germany is in evidence. Sweden and Finland are respectively medium and low suppliers of accountancy services, that are at least 'neutral' in terms of the categories relative number of professionals and volume per capita (medium/medium and medium/low respectively).

Netherlands has a smaller number of professionals (medium category) than the associated volume generated per professional (high), but it is also high volume per capita producer of accountancy services so there are no clear trends that would mark it out in our analysis. Interestingly, it shares middle position in terms of regulation index along with Finland among 12 member states surveyed.

A higher degree of market concentration i.e. a low number of firms compared to the country's size (population) combined with relatively high employment per firm and volume per firm, is present in UK, Ireland, and France, and to a slightly lesser extent in Germany. The first two of these member states exhibit a low degree of regulation (as summarised by the regulation index) whereas the latter two countries are high up on the scale of overall regulation. The degree of conduct regulation is in cross-professional examination, lower, however (c.f. legal services). In accountancy services, therefore, the existence of relatively higher numbers of larger firms, employing higher numbers of persons, most likely is a result of firms having the scope to merge. This process is, however, associated with high market power, as the volume of services per accounting firm in these countries is without exception high. This finding is unique among the four professional services areas covered in this survey.

Table 5-2 Overview – Accountancy Services 2000

Accounting (k7412)	AUT	ITA	GER	FRA[2]	LUX	NLD[1]	FIN	ESP[1]	SWE	IRL[1]	UK	DNK
Key Variables:												
F in units	3 530	90 216	35 070	15 800	780	13 680	4 239	37 064	13 212	1 416	27 350	4 104
T in Mio EUR	1 377	9 460	17 038	9 023	424	5 310	595	5 041	2 306	687	19 674	1 376
E in units	22 663	182 211	283 087	135 476	4 164	82 400	9 924	128 490	20 561	11 559	231 000	17 024
Professionals in units[3]	3 068	88 421	14 078	14 800	346	6 359	3 126	5 162	4 100	2 696	51 675	5 077
	(2000)	(2001)	(2000)	(2002)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)
Population in Mio.	8.10	57.68	82.16	59.23	0.44	15.76	5.17	39.39	8.86	3.73	59.62	5.33
GDP in Bil. EUR	205	1 166	2 026	1 405	21	374	132	565	247	89	1 548	176
Key Indicators:												
T per Firm in 1000 EUR	390	105	486	571	544	388	140	136	175	485	719	335
E per 1000 firms	6 420	2 020	8 072	8 574	5 338	6 023	2 341	3 467	1 556	8 163	8 446	4 148
T per E in 1000 EUR	61	52	60	67	102	64	60	39	112	59	85	81
E per Mio. of Pop	2 797	3 159	3 445	2 287	9 550	5 228	1 919	3 262	2 320	3 095	3 874	3 194
F per Mio. of Pop	436	1 564	427	267	1 789	868	820	941	1 491	379	459	770
Prof per 1000 F	869	980	401	937	444	465	737	139	310	1 904	1 889	1 237
T per Prof in 1000 EUR	449	107	1 210	610	1 226	835	190	977	562	255	381	271
E per 1000 Prof	7 387	2 061	20 108	9 154	12 035	12 958	3 175	24 892	5 015	4 287	4 470	3 353
Prof Density (per Mio. Pop)	379	1 533	171	250	794	403	605	131	463	722	867	953
T per cap. in EUR	170	164	207	152	973	337	115	128	260	184	330	258
T in % of GDP	0.67	0.81	0.84	0.64	2.03	1.42	0.45	0.89	0.93	0.77	1.27	0.78
*Vol in POI-adjusted Mio. EUR**	1 229	10 554	15 581	8 749	198	4 780	528	7 472	1 868	614	16 943	938
Vol per cap. in EUR*	152	183	190	148	454	303	102	190	211	165	284	176
Vol per firm in 1000 EUR*	348	117	444	554	254	349	124	202	141	434	619	229
Vol per E in 1000 EUR*	54	58	55	65	48	58	53	58	91	53	73	55
Vol per Prof in 1000 EUR*	401	119	1 107	591	572	752	169	1 447	456	228	328	185
Entry Index	4.2	3.2	3.6	4.0	3.8	3.1	2.6	1.9	2.4	2.7	2.7	2.2
Conduct Index	2.0	2.9	2.5	1.8	1.2	1.4	0.9	1.5	0.9	0.3	0.3	0.6
REGULATION INDEX	**6.2**	**6.1**	**6.1**	**5.8**	**5.1**	**4.5**	**3.6**	**3.4**	**3.3**	**3.0**	**3.0**	**2.8**

* adjusted for relative prices and national output - NB. not shown as high, medium or low (absolute, not relative values)

Sources: Eurostat, IHS, national statistics

Colour code:

high relative to median

medium relative to median

low relative to median

[1] 1999

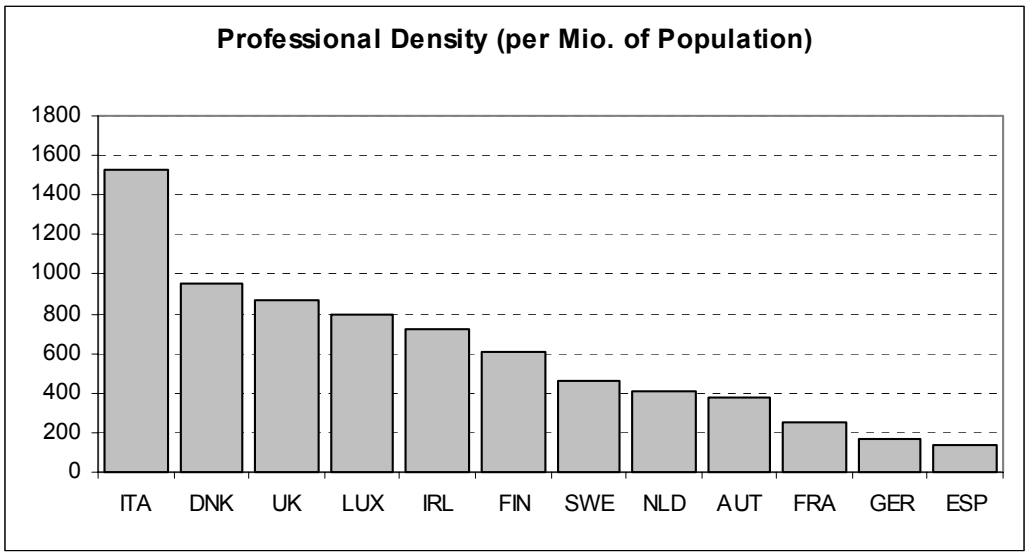
[2] based on extrapolated values

[3] reference year see row below

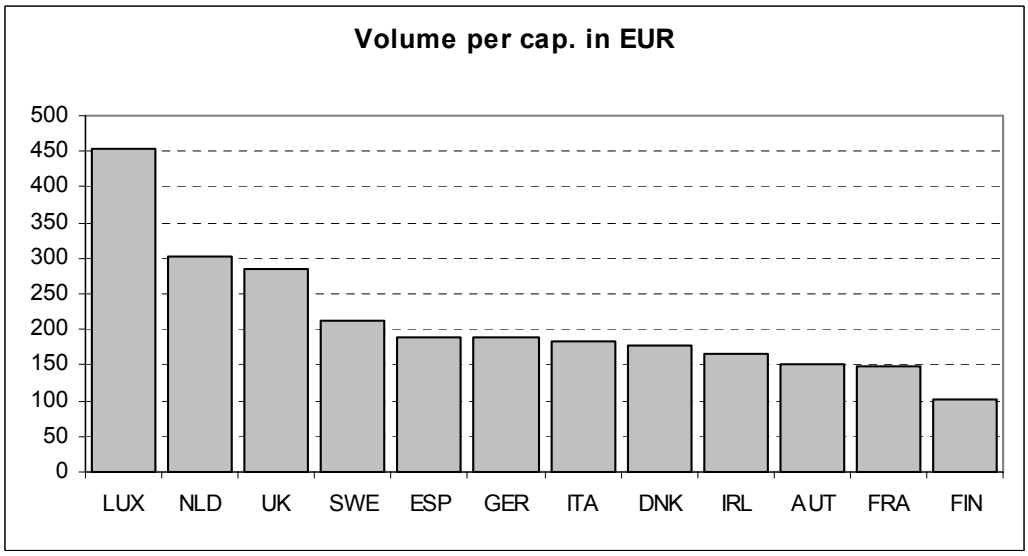
Summary statistics	Median	Mean	Standard deviation	Coeff. of variation
Key Variables:				
F in units	13 446	20 538	25 388	124%
T in Mio EUR	3 673	6 026	6 580	109%
E in units	52 532	94 047	97 090	103%
Professionals in units	5 120	16 576	26 535	160%
Population in Mio.	12.3	28.8	28.9	100%
GDP in Bil. EUR	310	663	686	104%
Regulation Indices:				
Entry Index	2.9	3.0	0.7	24%
Conduct Index	1.3	1.4	0.8	61%
REG. INDEX	4.0	4.4	1.4	31%

	Median	Mean	Standard deviation	Coeff. of variation
Key Indicators:				
T per Firm in 1000 EUR	389	373	199	53%
E per 1000 firms	5 681	5 381	2 636	49%
T per E in 1000 EUR	63	70	21	30%
E per Mio. of Pop	3 176	3 678	2 037	55%
F per Mio. of Pop	795	851	512	60%
Prof per 1000 F	803	859	579	67%
T per Prof in 1000 EUR	506	589	390	66%
E per 1000 Prof	6 201	9 075	7 236	80%
Prof Density (per Mio. Pop)	534	606	399	66%
T per cap. in EUR	196	273	232	85%
T in % of GDP	0.83	0.96	0.43	44%
Vol in POI-adjusted Mio. EUR*	3 324	5 788	6 038	104%
Vol per cap. in EUR*	186	213	94	44%
Vol per firm in 1000 EUR*	301	318	169	53%
Vol per E in 1000 EUR*	57	60	12	19%
Vol per Prof in 1000 EUR*	428	530	405	76%

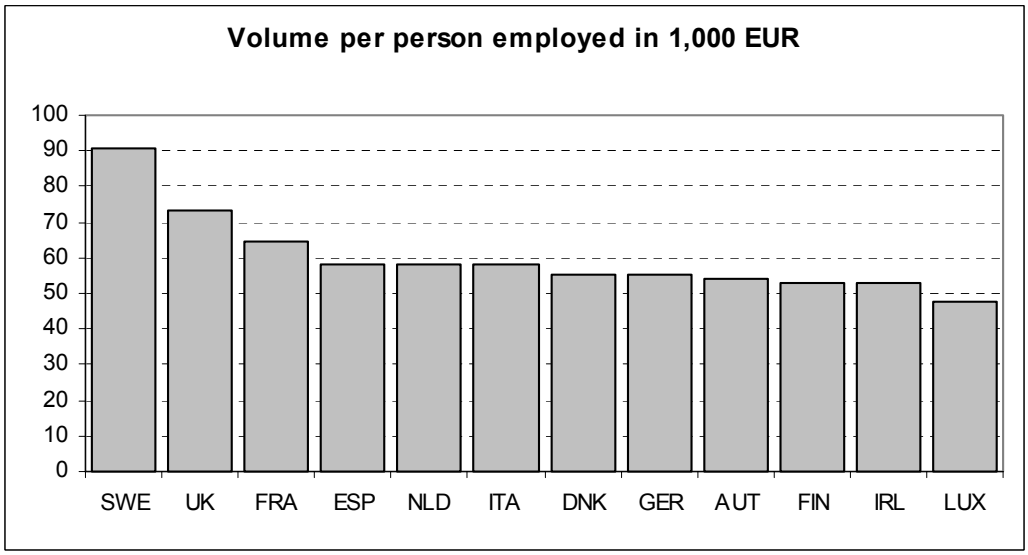
Chart 5-2 Distribution of Key Ratios in EU Member States - Accountancy



Sources: EUROSTAT, national statistics, IHS



Sources: EUROSTAT, national statistics, IHS



Sources: EUROSTAT, national statistics, IHS

5.2.3 Technical Services

All the comparisons in this section refer to data in Overview Table 5-3, and to the relative classification shown by the 'colour coding' as high, medium or low in relation to member states in the survey.

Austria and Spain are, compared to respective size, medium producers in the technical services branch (in terms of turnover as a percentage of GDP or volume per capita). The 'professional density', i.e. the number of architecture and consulting engineering professionals per head of population, as defined in the previous section, takes on, however, the lowest values of all member states in the survey. Correspondingly, the volume of services supplied per professional is in the highest of these 13 countries.

A similar situation, albeit in a less pronounced form, exits in the market for technical services in Germany. Germany is also, in relative (but not absolute) terms, a medium producer of technical services, with an output per capita volume about 10% under the median in our survey. Its above median volume per professional coefficient is therefore rather to be explained in terms of a professional density more than 10% beneath its respective median position. In yet weaker form, these observations also hold for the Belgian technical services market. A certain contrast should be noted between the data for Germany and Belgium and those of Denmark. Although all three countries have been banded in our classification in terms of the three indicators discussed here as medium, the latter has generated a volume per capita that is about 20% above median, with professional numbers also about 20% higher than median, which results in a volume per professional that takes a value exactly in the middle of the countries in our survey.

Interestingly, of the countries thus far discussed, only Denmark has a low (actually, zero) regulation index. In contrast, Germany and Austria have high degrees of regulation, and the regulation index for Spain and Belgium takes on above-median values. In terms of the entry index alone, Austria ranks first, Spain third, Germany fourth, and Belgium fifth, which offers an explanation for the low number of professionals, and high volumes generated in comparison to this number.

As is the case for legal services and accountancy services, Italy exhibits a high degree of de-concentration, with relatively high numbers of firms and also a high density of professionals, so the high degree of (entry) regulation (the highest overall index, and second highest index in terms of entry) does not seem to act as a barrier to entry. The level of overall employment in relation to the number of technical professionals in Italy is also the third lowest in our survey sample, so it seems possible that there is a different division of labour between professionals and other employees, including trainees, applying, compared to other countries.

In contrast, UK, Ireland and Netherlands have each a density of technical professionals in a higher category than the associated indicator, volume per professional (high/low, medium/low, and high/low, respectively), and these countries have very low scores on the scale of regulation index (zero for UK, zero for Ireland, and zero for conduct regulation in Netherlands) so that the opposite effect from that applying to many of the highly regulated technical services of countries discussed above.

Sweden exhibits a high volume per professional but this is due to it being the highest per capita producer of technical services in our survey group of member states, rather than being conditioned by the number of professionals, which is somewhat above median level. Finland may be classed along with Spain in terms of the key indicators examined in the overview table, but this would otherwise go against the grain of our general findings. (This assumes, however, that the number of professionals for Finland is in fact not an underestimate.[10])

A higher degree of market concentration i.e. a low or medium number of firms compared to the country's size (population) combined with high employment per firm and volume per firm well above the median, is found in UK, Ireland, and Netherlands, all three very low regulated countries for technical services. France[11] fits into this general pattern also, and to a much lesser extent in Denmark and Germany. Germany is thus the only exception in the above list, having a high index of regulation. In technical services, therefore, the existence of relatively higher numbers of larger firms, employing higher numbers of persons, is clearly associated with a low degree of regulation, and seems to be a clear result of firms having the scope to merge. This process is not associated with high market power, as the volume of technical services per capita in these countries is medium or low (an exception being UK).

[10] Data for Finland: 3000 practising graduated civil engineers; SAFA estimates the number of architects at 3500.
[11] Note that there is some uncertainty concerning data for France – c.f. Case Studies in Part 2.

Table 5-3 Overview – Technical Services 2000

Technnical Services (k7420)	ITA	GER	LUX	AUT	ESP	BEL	FRA[2]	FIN	NLD[1]	DNK	IRL[1]	SWE	UK
Key Variables:													
F in units	195 754	69 880	809	7 932	79 679	14 824	50 376	6 337	14 780	5 719	1 663	24 369	56 097
T in Mio EUR	15 848	32 490	310	4 517	11 911	4 428	29 662	2 784	7 242	3 795	869	7 393	39 619
E in units	278 437	360 269	3 449	37 385	184 682	39 598	287 698	26 355	93 100	29 742	10 928	53 450	341 000
Professionals in units[3]	131 448	130 148	789	7 673	48 723	16 992	80 300	6 500	39 000	11 595	7 189	17 850	199 039
	(2001)	(2001)	(2001)	(2000)	(2001)	(2001)	(2000)	(2001)	(2001)	(2000)	(2001)	(2001)	(2000)
Population in Mio.	57.68	82.16	0.44	8.10	39.44	10.24	59.23	5.17	15.76	5.33	3.73	8.86	59.62
GDP in Bil. EUR	1 166	2 026	21	205	609	248	1 405	132	374	176	89	247	1 548
Key Indicators:													
T per Firm in 1000 EUR	81	465	383	569	149	299	589	439	490	664	522	303	706
E per 1000 firms	1 422	5 156	4 263	4 713	2 318	2 671	5 711	4 159	6 299	5 201	6 571	2 193	6 079
T per E in 1000 EUR	57	90	90	121	64	112	103	106	78	128	80	138	116
E per Mio. of Pop	4 827	4 385	7 911	4 614	4 682	3 867	4 858	5 097	5 907	5 580	2 926	6 032	5 719
F per Mio. of Pop	3 394	850	1 856	979	2 020	1 448	851	1 225	938	1 073	445	2 750	941
Prof per 1000 F	671	1 862	975	967	611	1 146	1 594	1 026	2 639	2 027	4 323	732	3 548
T per Prof in 1000 EUR	121	250	392	589	244	261	369	428	186	327	121	414	199
E per 1000 Prof	2 118	2 768	4 371	4 872	3 790	2 330	3 583	4 055	2 387	2 565	1 520	2 994	1 713
Prof Density (per Mio. Pop)	2 279	1 584	1 810	947	1 235	1 660	1 356	1 257	2 475	2 175	1 925	2 014	3 338
T per cap. in EUR	275	395	710	557	302	432	501	538	460	712	233	834	664
T in % of GDP	1.36	1.60	1.48	2.20	1.96	1.78	2.11	2.11	1.94	2.15	0.98	3.00	2.56
*Vol in POI-adjusted Mio. EUR**	17 681	29 711	144	4 031	17 392	4 119	28 762	2 467	6 519	2 587	777	5 991	34 120
Vol per cap. in EUR*	307	362	331	497	441	402	486	477	414	485	208	676	572
Vol per firm in 1000 EUR*	90	425	178	508	218	278	571	389	441	452	467	246	608
Vol per E in 1000 EUR*	64	82	42	108	94	104	100	94	70	87	71	112	100
Vol per Prof in 1000 EUR*	135	228	183	525	357	242	358	380	167	223	108	336	171
Entry Index	3.3	2.7	2.7	3.8	3.2	1.2	1.1	1.4	0.7	0.0	0.0	0.0	0.0
Conduct Index	3.0	3.2	2.7	1.2	0.0	1.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0
REGULATION INDEX	**6.3**	**5.9**	**5.3**	**5.0**	**3.2**	**2.6**	**1.5**	**1.4**	**0.7**	**0.0**	**0.0**	**0.0**	**0.0**

* adjusted for relative prices and national output - NB. not shown as high, medium or low (absolute, not relative values)

Sources: Eurostat, IHS, national statistics

Colour code:

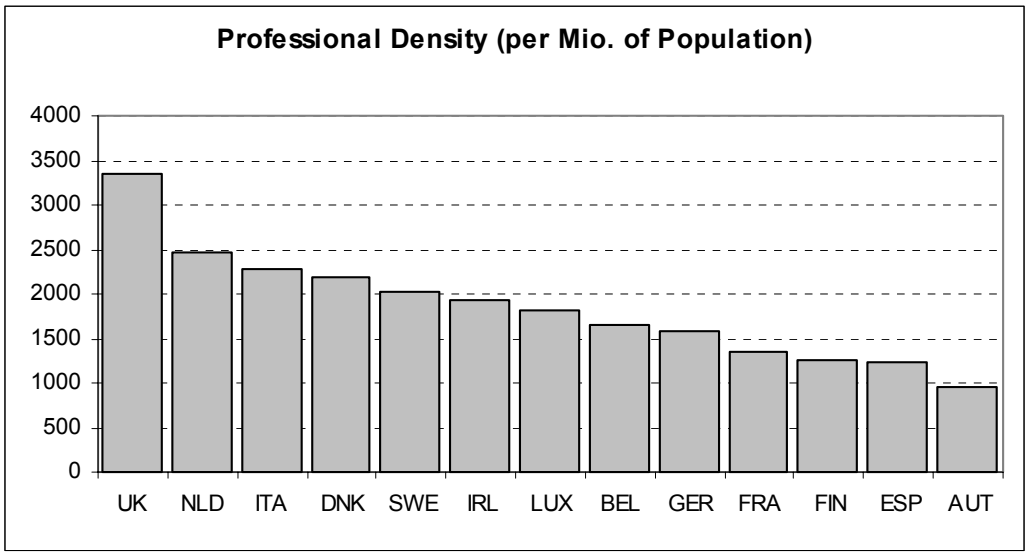
high relative to median
medium relative to median
low relative to median

[1] 1999
[2] based on extrapolated values
[3] reference year see row below

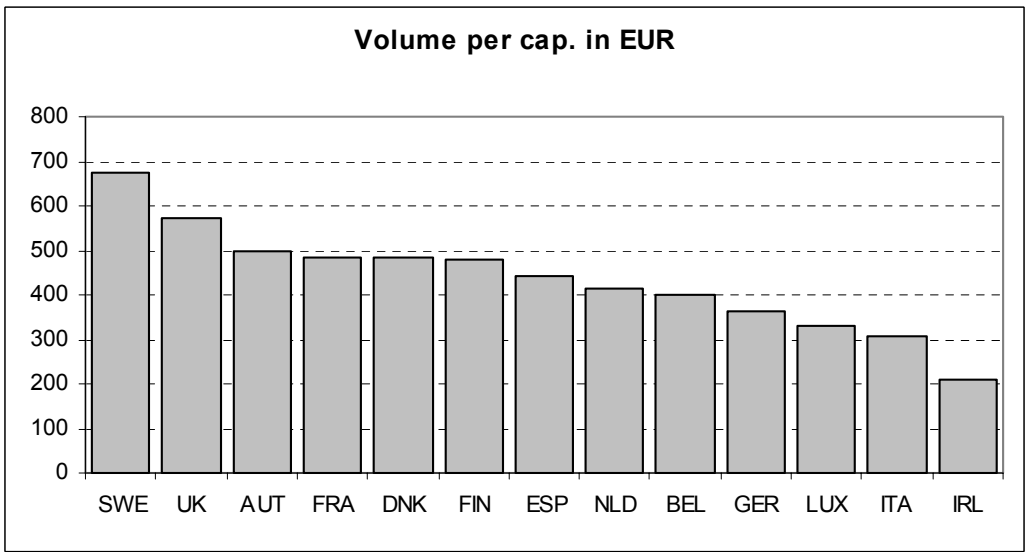
Summary statistics	Median	Mean	Standard deviation	Coeff. of variation
Key Variables:				
F in units	14 824	40 632	53 964	133%
T in Mio EUR	7 242	12 374	13 158	106%
E in units	53 450	134 315	136 062	101%
Professionals in units	17 850	53 634	63 031	118%
Population in Mio.	10.2	27.4	28.2	103%
GDP in Bil. EUR	248	634	667	105%
Regulation Indices:				
Entry Index	1.1	1.4	1.4	99%
Conduct Index	0.0	0.7	1.1	154%
REG. INDEX	1.4	2.1	2.2	105%

	Median	Mean	Standard deviation	Coeff. of variation
Key Indicators:				
T per Firm in 1000 EUR	465	435	188	43%
E per 1000 firms	4 713	4 366	1 715	39%
T per E in 1000 EUR	103	99	25	25%
E per Mio. of Pop	4 858	5 108	1 202	24%
F per Mio. of Pop	1 073	1 444	848	59%
Prof per 1000 F	1 146	1 702	1 166	69%
T per Prof in 1000 EUR	261	300	136	45%
E per 1000 Prof	2 768	3 005	1 047	35%
Prof Density (per Mio. Pop)	1 810	1 850	634	34%
T per cap. in EUR	501	509	185	36%
T in % of GDP	1.96	1.94	0.52	27%
Vol in POI-adjusted Mio. EUR*	5 991	11 869	12 189	103%
Vol per cap. in EUR*	441	435	120	28%
Vol per firm in 1000 EUR*	425	375	159	42%
Vol per E in 1000 EUR*	94	87	20	23%
Vol per Prof in 1000 EUR*	228	263	120	46%

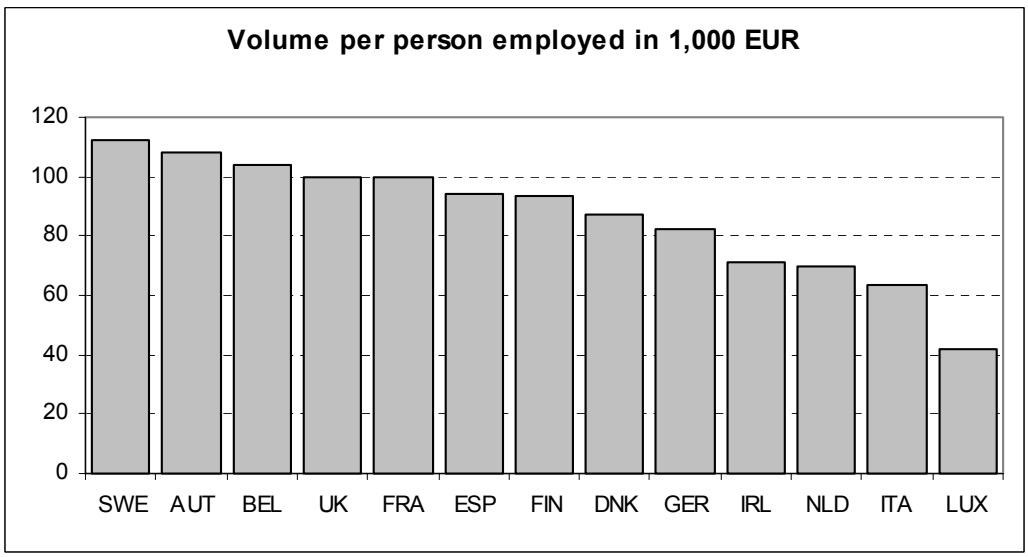
Chart 5-3 Distribution of Key Ratios in EU Member States - Technical Services



Sources: EUROSTAT, national statistics, IHS



Sources: EUROSTAT, national statistics, IHS



Sources: EUROSTAT, national statistics, IHS

5.2.4 Pharmacy Services

All the comparisons in this section refer to data in Overview Table 5-4, and to the relative classification shown by the 'colour coding' as high, medium or low in relation to member states in the survey.

Compared to the three other professional services studied, all countries excepting Netherlands and Ireland exhibit a high degree of regulation in pharmacy services, as may be shown by comparison of index values.

Both Denmark and especially Portugal have low number of professional pharmacists; whereas Denmark also exhibits a high volume per professional, the corresponding value for Portugal is a medium value. Both countries have high overall indices (in terms of absolute value, not the median value[12]). This is not the case for Netherlands' pharmacy services, on the other hand, which meet the same criteria, but which are not particularly highly regulated, especially in terms of barriers to entry.

The foregoing discussion would seem to indicate a certain weaker relationship between a low number of professionals and high volumes per professional than was found for the other three professions, exemplified in pharmacy services by the cases of Denmark and especially Portugal, as this finding is shared by the case of Netherlands, which is less restrictively regulated (whereas Italy is regarded as a special case, see below).

It is in fact quite noticeable that the 'spread' of values in many of the indicators in pharmacy services differs from that found in the other three professions: the number of exceptional 'high' and 'low' deviations from the median value is correspondingly fewer. Also the coefficients of variation are generally smaller than for legal and accountancy professions (especially when the 'outlier' case of Sweden is disregarded).

The inverse relationship between the relative number of professionals and corresponding volume (turnover share) of pharmacy business on a per professional basis is, however, more clearly in evidence: of the five countries for which the former indicator is in a higher classification category than the latter, Ireland, UK and Belgium have the first, third, and fourth least regulated pharmacy professions according to the regulation index (whereas Finland and France occupy middle positions on our scale).

Italy is the only country meeting extreme opposite criteria, i.e. a high density of professionals combined with a low volume per professional, which in the other professions studied has often been associated with less regulated professions. Italy, however, has a high degree of

[12] This is a fair comparison: the regulation index assesses restrictive criteria on an equal basis across the professions; the key indicators in a branch of the professional services may, however, only have comparative value within the profession itself.

regulation pertaining. As in the case of the legal, accountancy and technical services, Italy exhibits a high degree of de-concentration, with relatively high numbers of firms and also a high density of professionals (as do France, Belgium and Ireland), so the high degree of Italian (entry) regulation (highest overall index after the exceptional case of Sweden), does not seem to act as a barrier to entry. Outstandingly, the level of overall employment in relation to the number of pharmacy professionals in Italy is also the lowest in our survey sample of 14 countries, so it seems that there is possibly a different division of labour between professionals and other employees applying, compared to other countries.

A higher degree of market concentration i.e. a low or medium number of firms compared to the country's size (population) combined with high employment per firm and volume per firm well above the median, is found in UK, Denmark and Finland, all three very low or less regulated countries for pharmacy services. Therefore, the existence of relatively higher numbers of larger firms, employing higher numbers of persons, is clearly associated with a low degree of regulation, and seems to be a clear result of firms having the scope to merge. This process is not associated with abuse of market power, as the volume of pharmacy services per capita in these countries is around the median value (even low in the case of UK). Sweden, of course, with 2 firms in the year 2000 (!), satisfies this criterion; in this case it is the result of complete state regulation, not concentration driven by the market.

Table 5-4 Overview – Pharmacies 2000

Pharmacies (g5231)	SWE	ITA	PRT	LUX	ESP	FRA	AUT	FIN	DNK	GER[1]	BEL[1]	UK	NLD[2]	IRL[1]
Key Variables:														
Pharmacists Share in %	20,0	22,4	20,0	31,8	27,9	27,6	28,9	28,8	29,3	31,7	31,0	17,3	21,4	33,0
EUROSTAT T in Mio EUR	3 300	13 184	2 311	171	8 978	24 048	1 870	1 413	1 178	22 638	3 367	11 531	2 909	946
F in units	2	15 602	2 832	80	18 855	23 527	1 055	591	288	19 491	4 594	5 744	1 525	1 173
TS in Mio EUR	660	2 953	462	54	2 505	6 637	540	406	345	7 176	1 044	1 995	622	312
E in units	11 150	53 169	14 227	708	57 751	124 842	11 060	7 184	5 273	160 081	17 280	67 878	16 324	7 136
Professionals in units[3]	5 000	64 000	9 498	292	19 641	57 650	4 581	4 200	1 008	46 078	8 000	31 000	2 528	2 966
	(2001)	(2000)	(2001)	(1998)	(2000)	(2002)	(2001)	(2002)	(2001)	(2000)	(2001)	(2001)	(1999)	(2000)
Population in Mio.	8,86	57,68	10,00	0,44	39,44	59,23	8,10	5,17	5,33	82,04	10,21	59,62	15,65	3,73
GDP in Bil. EUR	247	1 166	115	21	609	1 405	205	132	176	1 974	236	1 548	352	89
Key Indicators:														
TS per Firm in 1000 EUR	330 030	189	163	678	133	282	512	687	1 196	368	227	347	408	266
E per 1000 firms	5 575 000	3 408	5 024	8 850	3 063	5 306	10 483	12 156	18 309	8 213	3 761	11 817	10 704	6 084
TS per E in 1000 EUR	59	56	32	77	43	53	49	57	65	45	60	29	38	44
E per Mio. of Pop	1 258	922	1 423	1 624	1 464	2 108	1 365	1 389	989	1 951	1 692	1 138	1 043	1 911
F per Mio. of Pop	0,23	270	283	183	478	397	130	114	54	238	450	96	97	314
Prof per 1000 F	2 500 000	4 102	3 354	3 650	1 042	2 450	4 342	7 107	3 500	2 364	1 741	5 397	1 658	2 529
TS per Prof in 1000 EUR	132	46	49	186	128	115	118	97	342	156	130	64	246	105
E per 1000 Prof	2 230	831	1 498	2 425	2 940	2 166	2 414	1 710	5 231	3 474	2 160	2 190	6 457	2 406
Prof Density (per Mio. Pop)	564	1 110	95	670	498	973	565	812	189	562	783	520	161	794
TS per cap. in EUR	74	51	46	124	64	112	67	79	65	87	102	33	40	84
TS in % of GDP	0,27	0,25	0,40	0,26	0,41	0,47	0,26	0,31	0,20	0,36	0,44	0,13	0,18	0,35
*Vol in POI-adjusted Mio. EUR**	535	3 295	904	25	3 658	6 436	482	360	235	6 342	963	1 718	564	279
Vol per cap. in EUR*	60	57	90	58	93	109	60	70	44	77	94	29	36	75
Vol per firm in 1000 EUR*	267 449	211	319	316	194	274	457	609	816	325	210	299	370	238
Vol per E in 1000 EUR*	48	62	64	36	63	52	44	50	45	40	56	25	35	39
Vol per Prof in 1000 EUR*	107	51	95	87	186	112	105	86	233	138	120	55	223	94
Entry Index	6,0	4,8	4,2	4,0	3,6	3,8	3,6	4,0	2,3	1,6	3,6	2,7	1,2	1,5
Conduct Index	6,0	3,6	3,8	3,9	3,9	3,5	3,7	3,0	3,6	4,1	1,8	1,4	1,8	1,2
REGULATION INDEX	12,0	8,4	8,0	7,9	7,5	7,3	7,3	7,0	5,9	5,7	5,4	4,1	3,0	2,7

* adjusted for relative prices and national output - NB. not shown as high, medium or low (absolute, not relative values)

Sources: Eurostat, IHS, national statistics

Colour code:

high relative to median

medium relative to median

low relative to median

[1]1999

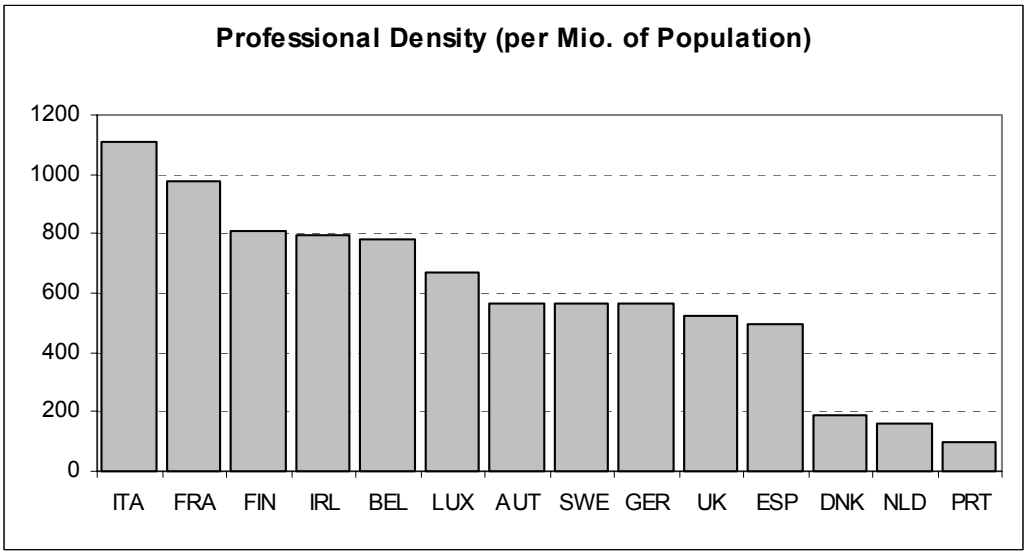
[2]1998

[3]reference year see row below

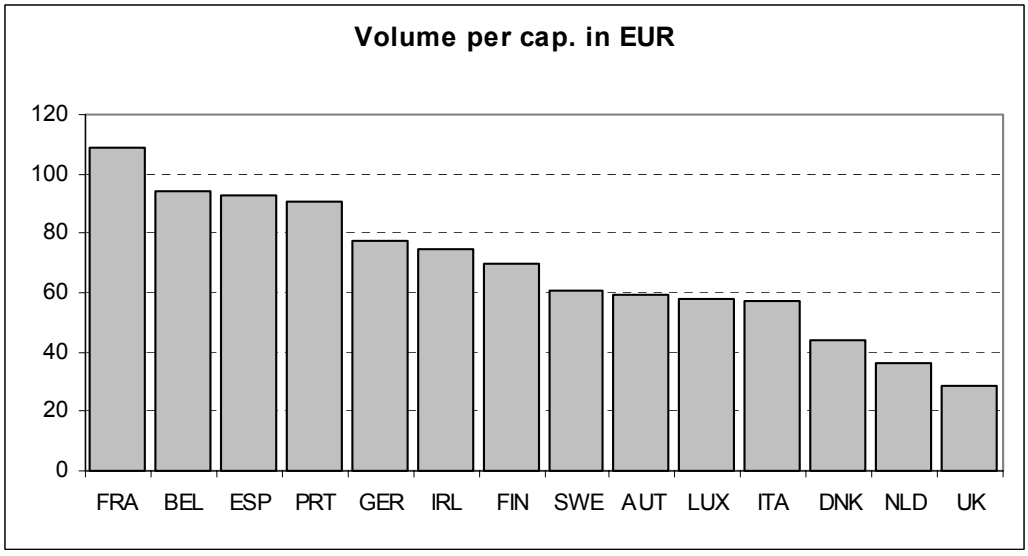
Summary statistics	Median	Mean	Standard deviation	Coeff. of variation
Key Variables:				
Pharmacists Share in %	28325.0	26.5	5.2	20%
EUROSTAT T in Mio EUR	3 104	6 989	8 030	115%
F in units	2 179	6 811	8 549	126%
TS in Mio EUR	641	1 837	2 322	126%
E in units	15 276	39 576	48 989	124%
Professionals in units	6 500	18 317	22 234	121%
Population in Mio.	10	26	27	105%
GDP in Bil. EUR	241	591	648	110%
Regulation Indices:				
Entry Index	3.6	3.4	1.4	41%
Conduct Index	3.6	3.2	1.3	40%
REG. INDEX	7.2	6.6	2.4	37%

Key Indicators:	Median	Mean	Standard deviation	Coeff. of variation
TS per Firm in 1000 EUR	358	23 963	88 092	368%
E per 1000 firms	8 532	405 870	1 487 784	367%
TS per E in 1000 EUR	51	51	13	26%
E per Mio. of Pop	1 406	1 448	371	26%
F per Mio. of Pop	211	222	150	68%
Prof per 1000 F	3 427	181 660	667 266	367%
TS per Prof in 1000 EUR	123	137	79	58%
E per 1000 Prof	2 318	2 724	1 478	54%
Prof Density (per Mio. Pop)	565	593	298	50%
TS per cap. in EUR	71	73	27	37%
TS in % of GDP	0.29	0.31	0.10	34%
Vol in POI-adjusted Mio. EUR*	734	1 843	2 221	121%
Vol per cap. in EUR*	65	68	23	34%
Vol per firm in 1000 EUR*	318	19 435	71 383	367%
Vol per E in 1000 EUR*	46	47	12	25%
Vol per Prof in 1000 EUR*	106	121	56	46%

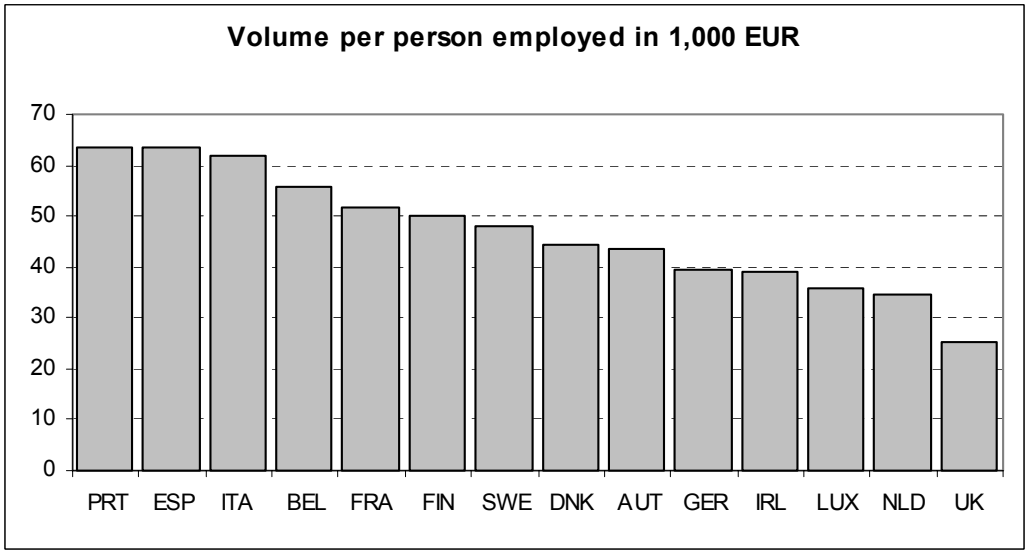
Chart 5-4 Distribution of Key Ratios in EU Member States – Pharmacies



Sources: EUROSTAT, national statistics, IHS



Sources: EUROSTAT, national statistics, IHS



Sources: EUROSTAT, national statistics, IHS

5.3 Hypotheses derived from the analysis

The type and extent of analysis is limited by the level of aggregation of the data available for comparison purposes and the heterogeneity of specific characteristics of individual member states' professional services. For example, the high volume of legal service in UK, in per capita as well as absolute terms, may to a greater or less extent be conditional on the types and degree of regulation (which is less than the median in the survey). However, the roots of this development lie almost certainly in the particular legal systems of England and Wales (and the legal system of Scotland). It is not surprising in the light of this comment, therefore, that there appears to be no pattern of linkage in our data between the relative volume of business and our assessment of regulation restrictiveness. Some caution has thus to be exercised in interpreting the data.

Raising output potential by means of less regulation

It is of interest here to consider the effects of regulation on the economic performance of professional services in member states In the following we highlight links that appear to exist between output indicators and corresponding values of our calculated regulation index for the country – whereby attention is restricted to the business professional services, i.e. legal, accounting and technical. In a later step we will examine these possible links after filtering the data to take account of different conditions in member states.

Table 5-5 Output measures and degree of regulation

	Professional Services			
Correlations:	**Legal**	**Accountancy**	**Technical**	
Vol per Firm vs. Regulation Index	-0.14	0.09	-0.49	**Legal + Accountancy + Technical grouped**
Vol per Employment vs. Regulation Index	-0.21	-0.28	-0.37	-0.36

Source: IHS

The link between output on a per firm basis and regulation shows only one correlation coefficient meriting further attention: in *technical services*, the value of –0.49 (significant at the 5% level) indicating higher values of regulation index being associated with lower values of volume per firm, or more saliently, that firm size, i.e. expressed as volume of business, is higher in less regulated countries. This relationship conforms with the findings on enterprise size and organisational forms described in the case studies in Part 2.

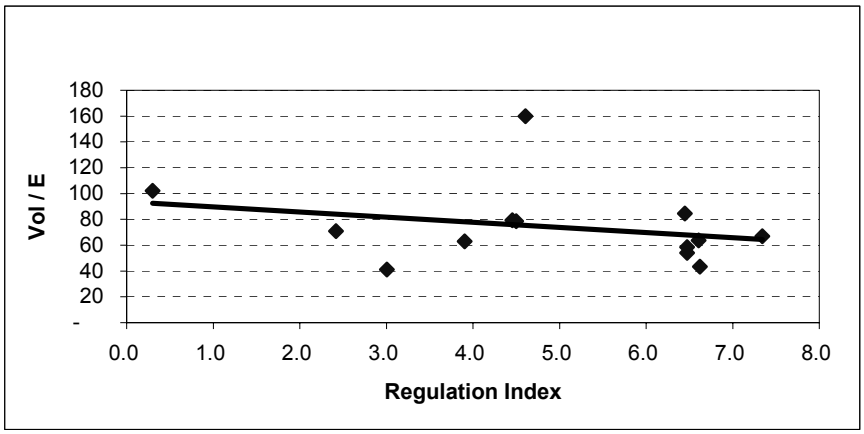
It is interesting that we find for *legal services, accounting services and technical services* a negative correlation between regulation and volume per employed person. Whereas each sample size on its own is too small for the values to be statistically significant, other tests show that differences between each of the three groups in volume per employee and

regulation index are complementary.[13] So, when the data for these three professions are grouped together, the sample size is 38 and the correlation between productivity and degree of regulation is -0.356, which is highly significant, even at a 2% level. A similar methodology for analysing (un/employment) data with respect to its bivariate association with a constructed index (strictness of employment protection legislation) has been reported in OECD (1999). We return to this discussion in a following section ('GAP' Analysis').

Leaving aside pharmacy services (which is set apart from the other three professional fields by conducting business in retail trading) this points in the first analysis to lower productivity in higher regulated countries. (See corresponding charts below, where the trend line is shown).

If we take as a starting point an assumption that the technology used in producing legal services is the same in each member state in the survey (and make similar assumptions for technical services, and for accounting services, separately), then there would be no reason to expect any such trend in productivity differences. It should be noted here, once more, that the measure of volume already factors out differences in price levels and general (overall) output levels of the economies. Thus these negative correlations can indicate a shortfall in potential output. That is to say, we can hypothesise that a reduction in regulation for a currently highly regulated profession would lead to an increase in branch volume, and therefore (*ceteris paribus* – without affecting employment levels) a productivity increase will be recorded. This hypothesis that 'regulation stifles development' has often been referred to in the theory of professional services (c.f. following chapter).

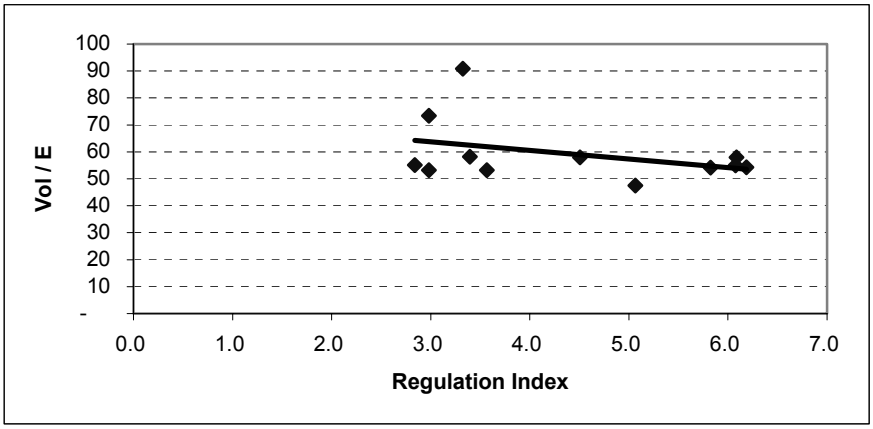
Chart 5-5 Productivity vs. Regulation Index - Legal Services



Source: IHS

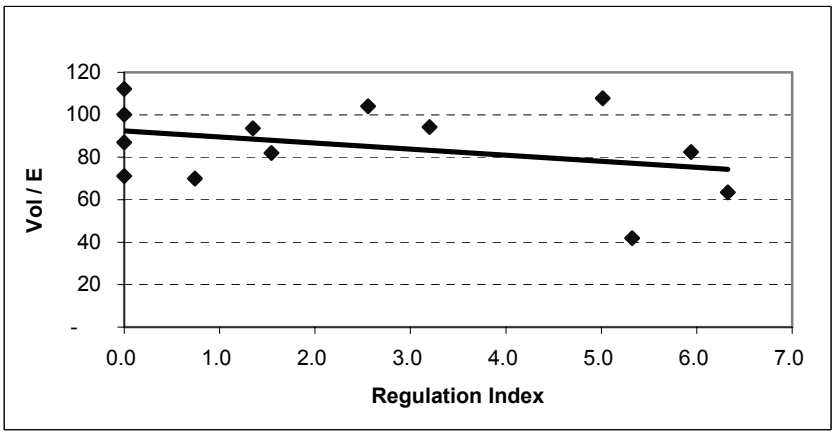
[13] Kruskal-Wallis test and non-parametric median test, which do not assume Normal distribution.

Chart 5-6 Productivity vs. Regulation Index - Accountancy Services



Source: IHS

Chart 5-7 Productivity vs. Regulation Index - Technical Services



Source: IHS

Example: Spain

The case of Spain, where certain reforms liberalising (conduct) regulation were carried out during the 1990s, may be illustrative of the hypothesised connection between deregulation and increases in productivity and output.

The table below shows that in the legal, accounting and technical professional services steady annual gains in productivity - the level of volume per employment – were achieved, and, especially, that even higher rates of per annum compound growth were achieved in terms of volume per capita.

Table 5-6 Productivity and Volume per capita growth in Spain

	1992	1993	1994	1995	1996	1997	1998	1999	2000	growth (p.a. compound)	Range*
Legal services											
F in units					71 802			79 565		3,5	1996-99
T in Mio EUR					3 998			5 041		8,0	1996-99
E in units					119 832			127 812		2,2	1996-99
Vol per cap. in EUR*					154			190		**7,2**	1996-99
Vol per E in 1000 EUR*					50			58		**5,0**	1996-99
Accountancy											
F in units								37 064			
T in Mio EUR		2 522						5 041		12,2	1993-99
E in units		79 408						128 490		8,4	1993-99
Vol per cap. in EUR*		96						190		**12,0**	1993-99
Vol per E in 1000 EUR*		47						58		**3,6**	1993-99
Technical services											
F in units	57 634		61 020			70 841		77 378	79 679	4,1	1992-2000
T in Mio EUR	6 644					7 824		10 457	11 911	7,6	1992-2000
E in units	124 491					151 195		170 232	184 682	5,1	1992-2000
Vol per cap. in EUR*	231					307		393	441	**8,4**	1992-2000
Vol per E in 1000 EUR*	72					80		91	94	**3,4**	1992-2000

* relevant start and end years for which compound growth applies

Sources: EUROSTAT, Instituto Nacional de Estadística, IHS

There are indeed considerable annual gains in productivity and per capita volume, matched or exceeded during (parts of) the 1990s in our sample only: for legal services - in Italy and UK, in Sweden (volume only), and in France (productivity only); for accountancy services - (productivity only) in Netherlands, Denmark and Sweden; and for technical services over the second half of the 1990s - in UK (productivity only) and Austria (volume only). The lack of complete data in our survey for the period 1990 to 2000 means that no comparisons with Germany, Ireland, Belgium and Luxembourg are possible.

More specifically, our data allows a comparison of the architects and consulting engineering branch for two periods, before and after 1997, in which year fixed tariffs were eliminated (c.f. chapter on case studies in Part 2 for technical services). The table below shows that growth rates in productivity (turnover per employment) accelerated after 1997, almost entirely due to an enormous growth in turnover, far in excess of the improvement in the general economic situation alone, while employment in the branch almost kept pace with GDP.

Table 5-7 Spain, Technical Services

	Technical Services	
Growth p.a. *(compound)*	**1992-97**	**1997-2000**
GDP	1,3	7,1
T per E in 1000 EURO	-0,6	7,6
E per Mio. of Pop	3,8	6,8
T per cap. in EURO	3,1	14,9

Whereas we cannot conclude that tariff liberalisation in Spain is the only factor that led to performance growth in Spain in the late 1990s, the example certainly lends credence to the hypothesis that suitable deregulation can induce productivity increases and result in an overall faster growth in business volume.

5.4 Findings revisited using GAP-Analysis

Introduction

We take the analysis of the previous section a step further with what we call GAP-analysis. In this phase, we control for the presence of specific characteristics that apply to the data at the member state level.

The values for key indicators and variables used in our analysis are based either on 4-digit or 3-digit level data of the Eurostat's NACE classification (Rev.1). Legal services (K7411), accountancy (K7412) as well as architectural and engineering activities (K742) are located within the 2-digit K74-sector together with other branches supplying business services. The k74 sector includes the business and management consulting branch, which like legal, accountancy and technical services employs many highly qualified persons, but which is in general not subject to similar restrictions regarding competition; k74 also includes many trade services not subject to the same degree of self- and/or government regulation as professional services (although specific branch regulation may exist). All branches in the k74 sector have in common that they are business services subject to common business conditions, social systems and commercial law of the particular member state in question.

The 'Other business activities' classification of k74 is the lowest statistical level that includes the three professional business services in this study. The values for the variables F, T, and E on the 2-digit level equal the sum of the appropriate values for the branches within the K74-sector as indicated in the following diagram

Table 5-8 Embedding of surveyed professions within the K74-sector

2-digit level	*3-digit level*	*4-digit level*
K74 Other business activities		
	K741 Legal, accounting, book-keeping and auditing activities; tax consultancy; market research and public opinion polling; business and management consultancy; holdings	
		K7411 Legal activities
		K7412 Accounting, book-keeping and auditing activities; tax consultancy
		K7413 Market research and public opinion polling
		K7414 Business and management consultancy activities
		K7415 Management activities of holding companies
	K742 Architectural and engineering activities and related technical consultancy	
	K743 Technical testing and analysis	
	K744 Advertising	
	K745 Labour recruitment and provision of personnel	
	K746 Investigation and security activities	
	K747 Industrial cleaning	
	K748 Miscellaneous business activities n.e.c.	
		K7481 Photographic activities
		K7482 Packaging activities
		K7483 Secretarial and translation activities
		K7484 Other business activities n.e.c.

Thus, it is possible to relate the values for the surveyed branches to the totality of the K74-sector and to put this into a comparative context. In other words: For a subset of key indicators and key variables[14] and for all the countries that took part in the benchmarking survey we calculated the proportion of 4-digit and 2-digit-values:

$$X^{GAP}=(X^{4\text{-digit}}/X^{2\text{-digit}}) *100$$

This procedure aims to correct for influences that result from different market or production conditions (and macroeconomic conditions) as well as from general regulations like fiscal or labour legislation. All these factors lead to differences between countries that cannot be attributed to the branch-specific regulation of market-entry and market–behaviour. Comparative values for key variables are potentially distorted by such influences. With regard to the intervening variables like those mentioned above, it is assumed that the branches within the K74-sector are generally subject to equal treatment. The new comparison of key variables thus obtained differs from that of the previous analysis of the legal, accountancy and technical services respectively on their own, by instead being based on ratios between 2-digit and 4-digit values. All of the values discussed in this section are relative to the appropriate values on the K74-level.

By this method, we can measure the extent of any 'gap' between the structural meso- or microeconomic variables of each professional service and the k74 class of other business services. For variables taking on absolute values (e.g. number of firms, turnover, employment) or ratios with a common denominator[15] (e.g. employment per million of population) the gap figures in each country represents the percentage of the k74 sector ascribed to the 2-digit category in question. Regardless of how these vary from country to country, each value is always less than 100; for all other ratios (e.g. volume per firm), on the other hand, the greater the deviation of the gap value from 100 (smaller *or* larger) the more the professional service is differentiated from the general class members within the particular country under scrutiny. For example, the volume per (1000) firms in the accountancy branch is generally less than the overall level in the k74 sector (i.e. the gap value is less than 100), except in Luxembourg where the gap value is 119.7, reflecting the exceptionally high level of accountancy business there (see Gap Analysis table).

Evaluation of the calculated gap ratios across member states now enables a cross-country comparison of the relative 'strength' that the professional services exhibit within their 'own' k74 sector economy.

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[14] Number of firms, turnover in Mio. EUR, number of persons employed, turnover per firm in Mio. EUR, employment per 1000 firms, turnover per person employed in 1000 EUR, employment per Mio. of population, firms per Mio. of population, turnover per cap. in EUR, turnover in % of GDP, volume per cap. in EUR, volume per 1000 firms in Mio. EUR, volume per person employed in 1000 EUR;

[15] For this reason, there are only 6 different sets of gap values for each profession in the GAP analysis tables.

Table 5-9 GAP-Analysis Table

Legal Serv. (k7411)	Aut 2000	Lux 2000	Fr 2000[2]	Sp 1999	Ger 2000	It 2000	Bel 2000	Irl 1999	UK 2000	Nl 1999	Dk 2000	Swe 2000	Fin 2000	Median	corr. with reg. ind.[1]	
F in units	9.31	12.12	9.86	26.51	13.12	15.30	42.29	17.99	8.05	2.99	5.40	4.13	5.62	9.86	0.56	*
T in Mio EUR	7.45	7.02	7.18	10.00	6.91	12.37	44.90	16.69	9.88	4.69	5.83	4.29	4.48	7.18		
E in units	8.11	6.06	7.54	9.78	8.38	10.28	23.03	14.19	8.97	3.56	7.14	4.61	2.59	8.11		
T per Firm in 1000 EURO	79.95	57.88	72.77	37.71	52.66	80.89	106.17	92.79	122.84	156.86	108.02	103.87	79.66	80.89	-0.47	*
E per 1000 firms	87.08	49.97	76.43	36.88	63.89	67.20	54.46	78.90	111.51	119.04	132.39	111.59	46.02	76.43		
T per E in 1000 EURO	91.81	115.85	95.21	102.24	82.43	120.37	194.96	117.60	110.16	131.77	81.59	93.08	173.11	110.16		
E per Mio. of Pop	8.11	6.06	7.54	9.78	8.38	10.28	23.03	14.19	8.97	3.56	7.14	4.61	2.59	8.11		
F per Mio. of Pop	9.31	12.12	9.86	26.51	13.12	15.30	42.29	17.99	8.05	2.99	5.40	4.13	5.62	9.86		
T per cap. in EURO	7.45	7.02	7.18	10.00	6.91	12.37	44.90	16.69	9.88	4.69	5.83	4.29	4.48	7.18		
T in % of GDP	7.45	7.02	7.18	10.00	6.91	12.37	44.90	16.69	9.88	4.69	5.83	4.29	4.48	7.18		
Vol in PPI-adjusted Mio. EUR*	7.45	7.02	7.18	10.00	6.91	12.37	44.90	16.69	9.88	4.69	5.83	4.29	4.48	7.18		
Vol per cap. in EUR*	7.45	7.02	7.18	10.00	6.91	12.37	44.90	16.69	9.88	4.69	5.83	4.29	4.48	7.18		
Vol per firm in 1000 EUR*	79.95	57.88	72.77	37.71	52.66	80.89	106.17	92.79	122.84	156.86	108.02	103.87	79.66	80.89	-0.47	*
Vol per E in 1000 EUR*	91.81	115.85	95.21	102.24	82.43	120.37	194.96	117.60	110.16	131.77	81.59	93.08	173.11	110.16	-0.53	*
Entry Index	**4.08**	**3.82**	**3.88**	**3.40**	**3.70**	**2.56**	**2.52**	**2.40**	**3.28**	**2.08**	**2.08**	**1.98**	**0.00**	**2.56**		
Conduct Index	**3.26**	**2.80**	**2.73**	**3.08**	**2.78**	**3.89**	**2.09**	**2.10**	**1.18**	**1.83**	**0.93**	**0.44**	**0.30**	**2.10**		
REGULATION INDEX	**7.34**	**6.62**	**6.61**	**6.48**	**6.48**	**6.45**	**4.61**	**4.50**	**4.46**	**3.91**	**3.01**	**2.42**	**0.30**	**4.61**		

Accounting (k7412)	Aut 2000	It 2000	Ger 2000	Fr 2000[2]	Lux 2000	Nl 1999	Fin 2000	Sp 1999	Swe 2000	UK 2000	Irl 1999	Dk 2000		Median	corr. with reg. index	
F in units	11.78	15.75	14.75	5.14	19.14	15.29	15.31	12.35	12.55	9.01	16.70	13.36		14.05	-0.04	
T in Mio EUR	8.31	10.38	9.83	4.85	22.90	9.71	6.94	10.00	7.12	7.76	11.81	9.16		9.43		
E in units	11.17	12.60	11.84	6.99	18.08	7.99	7.70	9.83	5.96	7.62	14.83	8.56		9.19		
T per Firm in 1000 EURO	70.57	65.92	66.61	94.43	119.65	63.50	45.35	80.94	56.74	86.09	70.72	68.58		69.58	0.20	
E per 1000 firms	94.85	79.98	80.25	136.17	94.46	52.26	50.31	79.59	47.50	84.54	88.77	64.07		80.12		
T per E in 1000 EURO	74.40	82.41	83.00	69.35	126.67	121.50	90.13	101.70	119.45	101.83	79.66	107.04		95.92		
E per Mio. of Pop	11.17	12.60	11.84	6.99	18.08	7.99	7.70	9.83	5.96	7.62	14.83	8.56		9.19		
F per Mio. of Pop	11.78	15.75	14.75	5.14	19.14	15.29	15.31	12.35	12.55	9.01	16.70	13.36		14.05		
T per cap. in EURO	8.31	10.38	9.83	4.85	22.90	9.71	6.94	10.00	7.12	7.76	11.81	9.16		9.43		
T in % of GDP	8.31	10.38	9.83	4.85	22.90	9.71	6.94	10.00	7.12	7.76	11.81	9.16		9.43		
Vol in PPI-adjusted Mio. EUR*	8.31	10.38	9.83	4.85	22.90	9.71	6.94	10.00	7.12	7.76	11.81	9.16		9.43		
Vol per cap. in EUR*	8.31	10.38	9.83	4.85	22.90	9.71	6.94	10.00	7.12	7.76	11.81	9.16		9.43		
Vol per firm in 1000 EUR*	70.57	65.92	66.61	94.43	119.65	63.50	45.35	80.94	56.74	86.09	70.72	68.58		69.58	0.35	
Vol per E in 1000 EUR*	74.40	82.41	83.00	69.35	126.67	121.50	90.13	101.70	119.45	101.83	79.66	107.04		95.92	-0.43	
Entry Index	**4.16**	**3.16**	**3.60**	**4.00**	**3.84**	**3.08**	**2.64**	**1.92**	**2.40**	**2.68**	**2.68**	**2.24**		**2.88**		
Conduct Index	**2.03**	**2.93**	**2.48**	**1.83**	**1.23**	**1.43**	**0.93**	**1.48**	**0.93**	**0.30**	**0.30**	**0.60**		**1.33**		
REGULATION INDEX	**6.19**	**6.09**	**6.08**	**5.83**	**5.07**	**4.51**	**3.57**	**3.40**	**3.33**	**2.98**	**2.98**	**2.84**		**4.04**		

Techn. Serv. (k7420)	It 2000	Ger 2000	Lux 2000	Aut 2000	Sp 1999	Bel 2000	Fr 2000[2]	Fin 2000	Nl 1999	Dk 2000	Swe 2000	UK 2000	Irl 1999	Median	corr. with reg. index	
F in units	34.18	29.40	19.85	26.46	25.78	23.05	16.37	22.88	16.52	18.61	23.15	18.49	19.62	22.88	0.75	**
T in Mio EUR	17.40	18.74	16.71	27.25	20.74	13.49	15.94	32.46	13.24	25.25	22.84	15.62	14.94	17.40		
E in units	19.25	15.07	14.98	18.43	13.02	10.63	14.85	20.45	9.03	14.95	15.50	11.25	14.02	14.95		
T per Firm in 1000 EURO	50.89	63.74	84.15	102.99	80.43	58.50	97.36	141.84	80.16	135.68	98.64	84.52	76.16	84.15	-0.47	*
E per 1000 firms	56.33	51.25	75.44	69.63	50.51	46.11	90.69	89.38	54.65	80.32	66.95	60.84	71.46	66.95		
T per E in 1000 EURO	90.35	124.37	111.55	147.90	159.24	126.86	107.35	158.70	146.66	168.92	147.34	138.91	106.57	138.91		
E per Mio. of Pop	19.25	15.07	14.98	18.43	13.02	10.63	14.85	20.45	9.03	14.95	15.50	11.25	14.02	14.95		
F per Mio. of Pop	34.18	29.40	19.85	26.46	25.78	23.05	16.37	22.88	16.52	18.61	23.15	18.49	19.62	22.88		
T per cap. in EURO	17.40	18.74	16.71	27.25	20.74	13.49	15.94	32.46	13.24	25.25	22.84	15.62	14.94	17.40		
T in % of GDP	17.40	18.74	16.71	27.25	20.74	13.49	15.94	32.46	13.24	25.25	22.84	15.62	14.94	17.40		
Vol in PPI-adjusted Mio. EUR*	17.40	18.74	16.71	27.25	20.74	13.49	15.94	32.46	13.24	25.25	22.84	15.62	14.94	17.40		
Vol per cap. in EUR*	17.40	18.74	16.71	27.25	20.74	13.49	15.94	32.46	13.24	25.25	22.84	15.62	14.94	17.40		
Vol per firm in 1000 EUR*	50.89	63.74	84.15	102.99	80.43	58.50	97.36	141.84	80.16	135.68	98.64	84.52	76.16	84.15	-0.47	*
Vol per E in 1000 EUR*	90.35	124.37	111.55	147.90	159.24	126.86	107.35	158.70	146.66	168.92	147.34	138.91	106.57	138.91	-0.42	*
Entry Index	**3.30**	**2.74**	**2.66**	**3.84**	**3.20**	**1.18**	**1.08**	**1.35**	**0.74**	**0.00**	**0.00**	**0.00**	**0.00**	**1.18**		
Conduct Index	**3.03**	**3.20**	**2.66**	**1.18**	**0.00**	**1.38**	**0.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		
REGULATION INDEX	**6.33**	**5.94**	**5.32**	**5.02**	**3.20**	**2.56**	**1.54**	**1.35**	**0.74**	**0.00**	**0.00**	**0.00**	**0.00**	**1.54**		

[1] correlations for legal services excluding Belgium

[2] based on extrapolated values (see Part 2)

Source: EUROSTAT, national statistics, IHS

* Correlation is significant at the 0.05 level (1-tailed)

** Correlation is significant at the 0.05 level (2-tailed)

Check of previous findings

Productivity: Gap analysis is used first to test the inverse relationship between the level of regulation and the productivity (volume per employment) indicated by the preceding analysis of the original data. The results not only corroborate the previous analysis, but also show the existence of the relationship more clearly.

Productivity in the surveyed member states is negatively correlated with regulation in legal, accountancy and technical services: the correlation coefficients are -0.53, -0.43, and -0.42, respectively, whereby the figures for technical and legal are both (1-tailed) statistically significant .

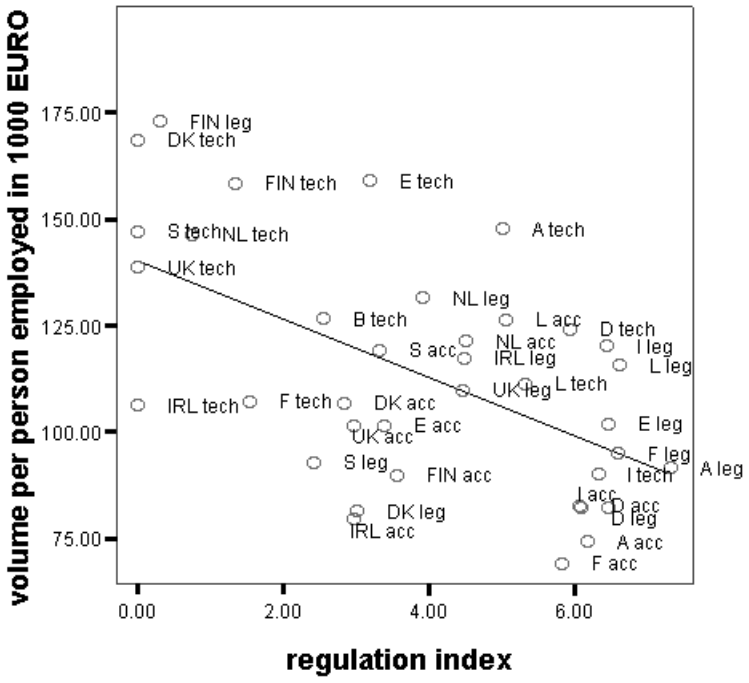
When the data for legal, accountancy and technical services are grouped together, the corresponding trend is corroborated (which is not an automatic result of grouping, but instead a confirmation of the effect). A highly significant correlation between productivity and regulation index of -0.5 exists for the totality of all 38 cases (see below), independent of the affiliation to one of the three surveyed branches (and this correlation rises further, to -0.6 if the outlier case of Belgium, legal services, is excluded).

Correlations		regulation index	
volume per person employed (in 1000 euro)	Pearson Correlation	-0.485	**
	Sig. (2-tailed)	0.002	
	N	38	
	Nonparametric test		
volume per person employed (in 1000 euro)	Spearman's rho	-0.427	**
	Sig. (2-tailed)	0.007	
	N	38	

** Correlation is significant at the 0.01 level (2-tailed).

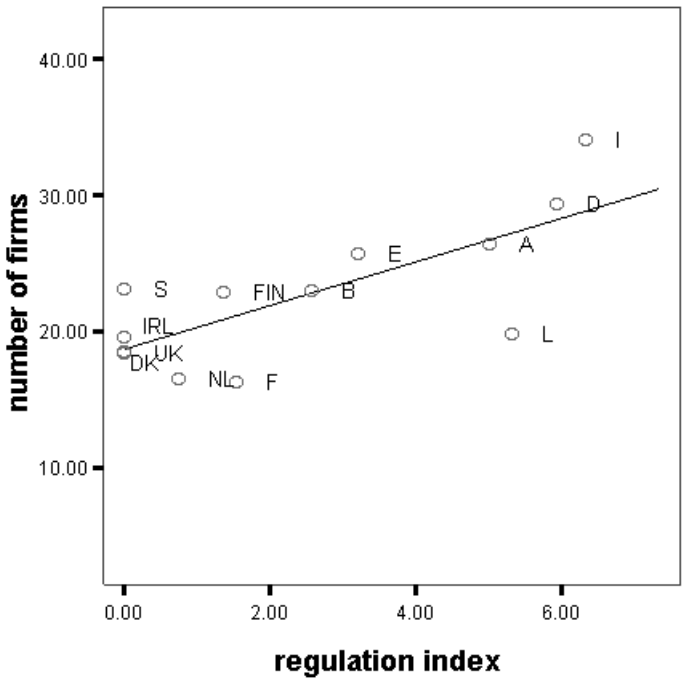
Note: Belgium, (legal services) is omitted from the scatter plot below.)

Chart 5-8 Productivity vs. Regulation index (legal+accountancy+technical)



Concentration effects: With regard to legal[16] and technical services (shown in the graphic below) there seems to be a linkage between the number of firms and the level of regulation. Correlation coefficients of +0,56 and +0,75 (both significant), respectively, indicate that the number of firms - relative to the number of firms at the K74-level - increases with the value of the regulation index.[17] In countries with more restrictive branch-specific regulation in the fields of legal and technical services, the number of firms within the K74-sector from the K7411- and K742-branches is generally greater than in countries with less regulation.

Chart 5-9 Relative number of firms vs. Regulation Index – Technical services



These relationships lead to the hypothesis that advantages which would result from an optimal size of firms (economies of scale) are not utilized fully in more regulated branches on account of missing incentives - with less competition there is less incentive to exploit a potential increase of productivity.[18] This hypothesis is also supported by the fact that the volume (turnover) per firm is negatively correlated with the index of regulation in the legal and technical services branches (significant), i.e. the average size of firms (by turnover) is smaller in markets that are more restrictive (see charts below).

There are no statistically significant results of the kind discussed here for accountancy services, which is not surprising. Due to the presence of a few very large accounting firms (‘big four’), this branch already exhibits a very high degree of concentration, whereas

[16] The exceptional case of Belgium (where according to our data 42% of enterprises in the k74 sector are legal firms) has been left out for the following analysis

[17] An examination of number of firms per million of population leads to similar results.

[18] c.f.: Felderer et alt. (1998); Part II, page: 38;

concentration levels are much lower in legal technical services, even in member states where the degree of regulation is low.

Chart 5-10 Volume per firm in 1000 EUR vs. Regulation index – Legal services

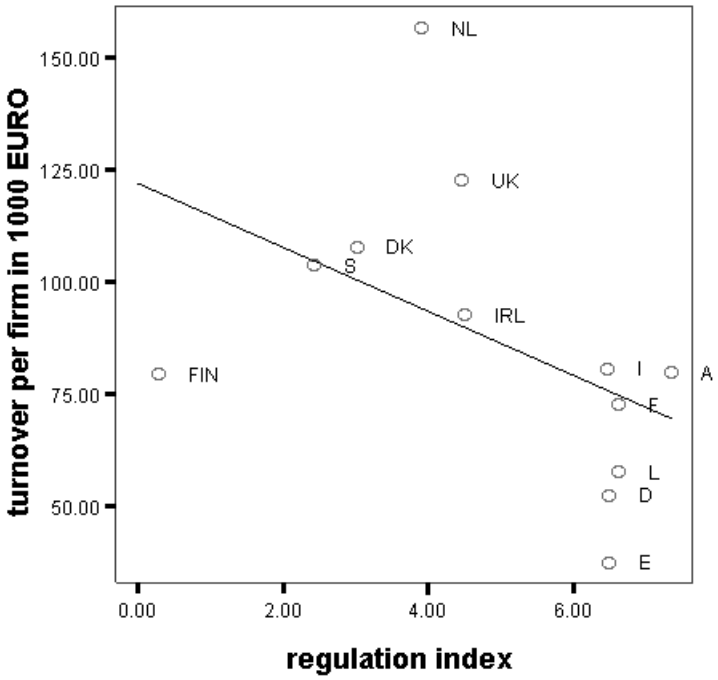
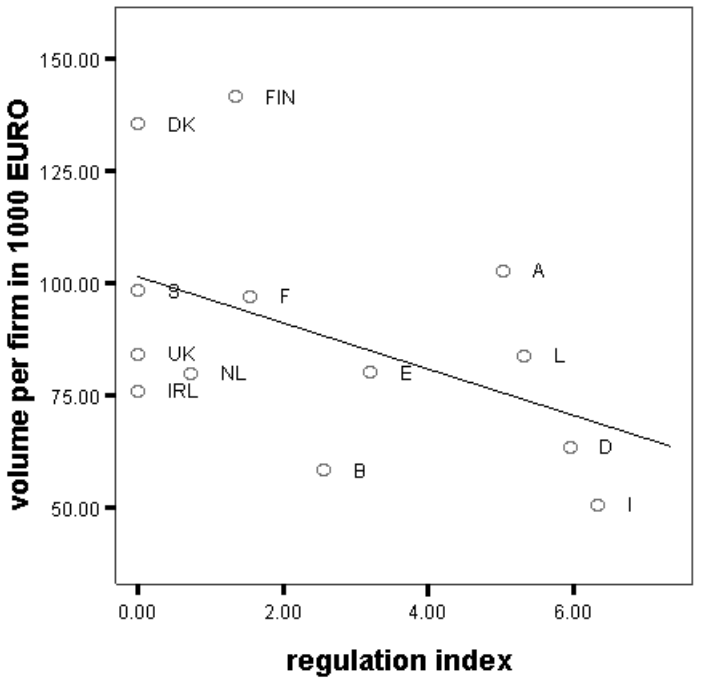


Chart 5-11 Volume per firm in 1000 EUR vs. Regulation index –Technical services

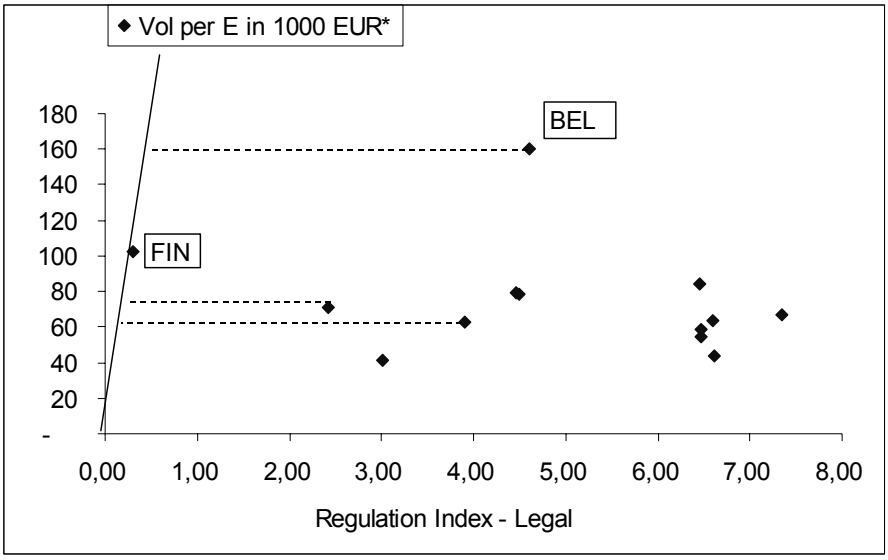


Other findings: Due to the lack of comparator at the k74 level equivalent to the number of professionals, an investigation of the relationship between volume per professional and degree of regulation examined in the benchmark analysis cannot be repeated with the GAP methodology.

5.5 Excursus: Scope for liberalisation by comparison with peers

The following chart shows once again the distribution of volume per employee (or productivity) for legal services. The purpose here is illustrative of a line of reasoning, so the choice of legal services is arbitrary, and the following arguments could apply equally to accountancy, technical and pharmacy professional services. Likewise the situation shown can be repeated for other variables e.g. volume per capita, volume per professional etc.

Chart 5-12 Scope for reducing regulation – assuming constant returns-to-scales (legal services, illustrative)



As the starting point we make here the assumption that no major 'market breakdown'[19] has been reported in any of the countries examined in the survey. There is thus no reason to expect that lower regulation strategies which work in one member state could not be made to work in another. The highest ratio of volume per employee to degree of regulation in the sample is exhibited by Finland[20], which is the most 'efficient' in this sense and thus the benchmarking peer in this case. Allowing now, that the positive effects of regulation may in part account for the current state, we can imagine that a liberalisation strategy that results in

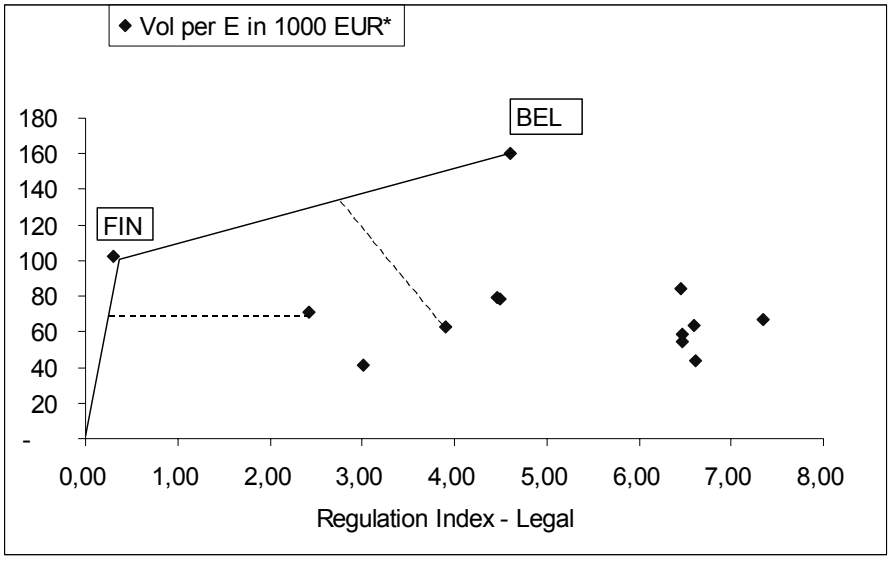
[19] 'Market breakdown' is used here in a general sense, not in the narrower technical sense of 'market failure' -see Chapter 2 on Theory.

[20] Corresponding to the line through the origin with the highest gradient.

a reduction in the degree of regulation could be implemented, at least up to the limit of being comparable with the peer(s). The chart 5-12 indicates, for example, that the volume per employee takes on its highest value in Belgium, but that this high level could still be attained in conjunction with a sizeable reduction in regulation, to the extent indicated by the relation between productivity and degree of regulation of the benchmark peer, in this case Finland. Obviously in this case, unless there are contravening factors, each other member state could likewise reduce its degree of regulation in legal services, at least to match on a pro-rata basis the benchmark set by the peer.

We could conjecture, on the other hand, there are effects resulting from some regulations which actually enable certain results to be achieved. Perhaps, following this reasoning, certain high levels of volume per employee are, hypothetically, in part a product of the existence of higher degrees of regulation. In this case we would not assume that the (producer) benefits of less regulation are constantly scalable. The new situation under this assumption is shown in the chart 5-13 – Belgium exhibits a higher degree of regulation than Finland, but also has a higher volume per employee. In this case both Belgium and Finland would be benchmark peers[21], and together they delimit a 'benchmark boundary' with respect to productivity in the sample of countries surveyed.

Chart 5-13 Scope for reducing regulation – assuming decreasing returns-to-scales (legal services, illustrative)



[21] N.B.: the discussion in this *excursus* is intended as being illustrative, and the arguments hypothetical. No overall assessment of performance is implied. In the case of legal services in Belgium, there is also uncertainty concerning the accuracy of the data.

By similar reasoning we can surmise that the degree of regulation in any other member state can *still* be reduced by any ‘leftwards’ and/or ‘upwards’ movement up to a point on a ‘boundary’ delimited by the peers. Thus it may be supposed that a reduction in the degree of regulation in other countries can still result in an equal performance in productivity as exists at present, at least, once again based on comparison with the situation of ‘peers’.

While the arguments presented here are illustrative and no exact calculation of the benefits or appropriate extent of ‘regulation reduction’ is being claimed, due to situational differences between countries, the diagrams highlight the scope for liberalisation, *ceteris paribus*, as suggested by peer comparison, which lies at the root of the approach taken throughout this study.

For the kinds of comparisons with peers indicated here, it is indeed not germane to the argument whether or not the negative correlations between productivity and degree of regulation for legal, accountancy and technical services, as calculated in the previous section, are statistically significant. The existence of a peer or peers having comparable or superior performance, in terms of key outcomes like productivity and volume per capita at least, is by itself the starting point for questioning whether suitable liberalisation strategies that improve economic outcomes without detriment to professional values and quality of service can be found for other, more restrictively regulated, member states.

6. Summary and Conclusions

This study has been based on a survey of the rules, regulations and statutory laws governing the practise of professional services in the legal, accountancy, technical and pharmacy fields in EU member states. Most of the information concerning the regulations themselves, and their interpretation within a unified framework was enhanced by the results of a Survey Questionnaire sent out to over 200 professional bodies in 15 member states.

The return of questionnaires varied by country, profession, and organisation. In the Annexes E are included a list of returning and non-returning bodies, and a summary of the sections completed, as well as the actual questionnaire itself.

The information on regulations has been gathered into a 'compendium' which summarises the rules governing the range of services provided, regulations on entry to the profession, and regulations in respect of conduct in the profession. Summary tables of these regulations have been compiled.

The detail of regulation may to a certain extent be slightly obscured in the tabular summary (without distorting the basic facts). For this reason detailed information concerning regulation has been provided for a subset of member states in each professional field; in parallel, economic data concerning the 'subset countries' have been presented, in order to gain insights into the actual performance of the professions. In addition to a common denominator of basic data on total branch output, employment and enterprises of each professional field, the dynamics of each branch were investigated. Together with other available economic data, and information sourced from professional bodies via the Survey Questionnaire, these are juxtaposed to the findings on the state of regulation in each case study.

Arising out of the compendium of regulations, which has been completed to the maximum extent possible within the resources of this project, indices of regulation have been calculated for each profession and each professional field. As well as an overall index, separate indices in respect of entry regulations, and of conduct regulations, have been compiled. There is wide divergence in the state of regulation of professional services in the European Union, and the extent of this variance is reflected succinctly, and we intend, fairly, in the numerical value of the indices.

Independently of the formation of regulation indices, comparable basic economic data has been gathered for each country. The resulting dataset covers between 12 to 14 of the 15 member states. As with the data on regulations, a maximum coverage was sought. Missing data is due to non-availability. In the study we would have preferred to be able to draw on a wider range of economic performance statistics, but these are simply not available on a

general basis. A serious comparison of country data has, however, to be based on comparable data definitions. The absence of more detailed information implies that comparison has to be made at the lowest level of aggregation possible. Fortunately, some such data has in recent years been made available at the level of professional field (4-digit NACE classification).

A "snapshot" comparison of the branch structure of each of the four professional fields studied in or near to the year 2000 was interpreted in conjunction with the respective indices of regulation. Because data are aggregated over (related) professions, and because of existing differences in systems (and in business, governmental and professional culture) between different countries, the effects of regulation cannot be expected to be regular throughout the EU. Nevertheless it has been possible to distinguish basic trends associated with highly regulated professions in member states, and trends associated with professions in countries that are subject to a low degree of regulation.

Overall the spectrum of regulation intensity is broad in all four professional fields. In general regulations on conduct are less restrictive than those concerning entry, and it is this former area that the most significant moves towards liberalisation have taken place in recent years. Nearly half of the member states in the EU can be said to have very restrictive regulations governing entry and conduct to the legal professions. Accountancy services are only slightly less restrictive regarding entry in a similar number of countries, the level of conduct regulation being at a general lower level.

The general level of regulation in the technical services is lower than in legal services and accounting services, but a relatively high level still exists in nearly half of all states. In absolute terms, the pharmacy professional services are the most highly regulated of the professions covered in this study, many regulations stemming from rules made at state governmental level. Correspondingly, this profession is to a lesser extent self-regulated.

The Results of the Study in the context of Economic Theory

As outlined in Section 5 in the case studies of Part 2, the study concentrated on the cross-member-state analysis of basic economic outcomes, and associated indicators and ratios. These data were cross-analysed against our regulation indices. Four overall indices have been produced, composed of indices of entry and conduct for each of the professions, combined into an index relating to one of the four professional fields.

The literature has long bemoaned the scarcity of empirical studies of professional services. This lack of studies is perhaps not surprising, given the difficulty of gathering data on this subject. The most valuable economic data for testing hypotheses derived from the theories outlined above, would involve prices, costs, and earnings. Obtaining data for even one

country on these variables is fraught with difficulties, including non-availability as a time-series (or in most cases, at all) and non-disclosure policies. Nevertheless, the study has been able to demonstrate the existence of trends in the data:

- The study shows that there is a tendency for highly regulated professions to be associated with relatively low numbers of professionals, and that in those member states where this obtains, the volumes of output in the branch attributable per professional tend to be higher than would be expected given the economic strength of the branch in that country. Equally the reverse tendencies were noted in lowly regulated professions. This effect was noticed in all four professional areas studied – legal, accounting, technical and pharmacy, but was least observable in the pharmacy branch.

This result supports the hypothesis arising out of contra-regulation theories, namely that economic benefits are being gained by highly regulated professions at the expense of consumer welfare. Whereas no direct information on earnings is available, higher fees will ,*ceteris paribus*. lead to higher turnover (volume). In this connection, it was often noted that countries associated with high levels of volume per professional seldom corresponded to the countries where volume per employed person was classed as high, etc.

The most dynamic branches, in terms of growth and market consolidation, have been found in member states where professions are less regulated. Furthermore, there is a negative correlation between the degree of regulation and the productivity of the branch, measured by volume per employee..

The relationship between higher productivity and less restrictively regulated professional services was also found to hold after filtering the data to control for specific country effects (GAP analysis). The relationship was shown to be statistically significant for legal, accountancy and technical services of the surveyed member states grouped together, and separately for legal services and technical services.. Indeed the economic data linked with the degree of regulation indices are ratios of volume to employment, firms and professionals. This finding also lends credence to theoretical predictions that output could be increased in some countries and professions, on account of higher productivity levels, if regulation intensity were to be reduced.

It seems fair to point out that the study does not deal with the quality and range of services provided in member states – no information is available – so this is assumed homogeneous enough for a fair comparison of economic outcomes to be made.

In the absence of evidence to the contrary, it is assumed that none of the markets for professional services has experienced the dire consequences of market breakdown predicted by theories based on the presence of conditions known as ‘market failure’. Indeed, since the economic outcomes of professional services in those member states where they

are subject to lower degrees of regulation are comparable with professional services in more highly regulated member states, the predictions of public interest theory seem wide of the mark, and that, on the contrary, regulation could be reduced - at least to the level of their peers in other member states of the EU.

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Title: Economic impact of regulation in the field of liberal professions in different Member States

Research Report

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