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Regulatory Reform in Road Freight and Retail Distribution

Olivier Boylaud

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by
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ABSTRACT/RÉSUMÉ

The purpose of this paper is to analyse regulatory developments in the road freight and retail distribution industries of OECD Member countries. For each industry, the analysis is divided into four parts. First, structural developments in the industry are outlined. Second, the main features of the regulatory framework are reviewed. The third part compares regulatory approaches on the basis of quantitative indicators of the degree of restrictions placed on market mechanisms. The last part summarises the main outcomes of regulatory reform. The data on regulation and market structure are taken primarily from the OECD International Regulation Database.

The main findings of the analysis are the following:

- Both industries are currently undergoing sweeping changes, with, in particular, the rapid growth of new forms of competition;
- The pace and scale of liberalisation vary widely from one country and one industry to another, and in many countries there are still regulatory impediments to competition and to the operation of market mechanisms (especially in retail distribution);
- The empirical findings available suggest that liberalisation has promoted efficiency and consumer welfare in the countries that have implemented reforms.

JEL classification: C81, K23, L81, L92, L51.
Keywords: data collection, regulation, liberalisation, road freight, retail trade.

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L’objet de ce document est d’analyser l’évolution du cadre réglementaire dans les pays membres de l’OCDE pour le secteur du transport routier de marchandises et pour le secteur du commerce de détail. Pour chacun des secteurs, l’analyse s’articule en quatre parties. La première partie présente l’évolution de la structure du secteur dans les différents pays Membres de l’OCDE. La seconde partie s’intéresse aux principales caractéristiques du cadre réglementaire. La troisième partie propose de comparer les approches réglementaires à partir d’indicateurs quantitatifs exprimant le degré de restrictions imposé aux mécanismes de marché. La quatrième partie présente les principaux résultats de la réforme de la réglementation. Les données sur la réglementation et la structure de marché sont pour la plupart issues de la *Base de Données Internationale de l’OCDE sur la réglementation.*

Les principaux résultats de l’analyse sont les suivants :

- Les deux secteurs connaissent actuellement de profondes mutations avec notamment le développement rapide de formes concurrentielles nouvelles ;
- Le rythme et l’ampleur de la libéralisation ont été très variables d’un pays à l’autre et d’un secteur à l’autre et, dans un grand nombre de pays, il existe encore des obstacles réglementaires à la concurrence et au fonctionnement des mécanismes du marché (surtout dans le secteur du commerce de détail) ;
- Les résultats empiriques disponibles suggèrent que la libéralisation a été bénéfique pour l’efficience et le bien être du consommateur dans les pays qui ont procédé à des réformes.

Classification JEL : C81, K23, L81, L92, L51.
Mots-clés : collecte de données, réglementation, libéralisation, transport routier de marchandises, commerce de détail.

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REGULATORY REFORM IN ROAD FREIGHT AND RETAIL DISTRIBUTION

Olivier Boylaud[1]

Introduction

1. Since the early 1980s, the tendency in OECD Member countries has been to implement major structural reforms in service industries consisting of both liberalisation and new approaches to regulating for external effects (Gonenc *et al.*, 2000). This paper analyses regulatory developments across OECD Member countries in the road freight and retail distribution industries,[2] with a focus on how these developments have affected competition and thus performance. While both industries involve externalities which may justify a certain amount of government intervention, in many countries regulations still unduly restrict market entry and the choices of firms.

2. For both road freight and retail distribution, the analysis is divided into four parts. First, structural developments in the industry are outlined. Second, the main features of the regulatory framework are reviewed. The third part compares regulatory approaches on the basis of quantitative indicators of the degree of restrictions placed on market mechanisms. The last part summarises the main outcomes of regulatory reform. The data on regulation and market structure are taken primarily from the OECD International Regulation Database.[3]

3. The main findings of the analysis are the following:

- Both road freight and retail distribution are currently undergoing sweeping changes, with, in particular, the rapid growth of new forms of competition;
- The pace and scale of liberalisation vary widely from one country and one industry to another, and in many countries regulatory impediments to competition and to the operation of market mechanisms remain (especially in retail distribution);
- The available empirical findings suggest that liberalisation has promoted efficiency and consumer welfare in the countries that have implemented reforms.

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1. Consultant, OECD Economics Department. The author would like to give special thanks to Giuseppe Nicoletti for valuable suggestions throughout the writing of this paper and for his help in revising a preliminary version. I am also grateful for useful comments from Mike Feiner, Dirk Pilat, Ignazio Visco and Sally Van Siclen. Martine Levasseur and Anne-Claire Saudrais provided able statistical and technical assistance. The opinions expressed in the paper are those of the author and do not engage the OECD or its Member countries.

2. It should be noted at the outset that due to data limitations, the analysis is generally unable to distinguish among several different segments that constitute the retail distribution industry. However, distinction is made, in some cases, between food and non-food distribution.

3. See Nicoletti *et al.* (1999) and OECD (2000).

1. The road freight industry

1.1 Structure of the industry

4. The road freight industry is geared to distribution, logistics and basic physical transport. It is a key sector of the economy, playing a major role in market integration and having a direct impact on transaction costs for economic agents. Furthermore, there is an important link between economic growth and growth in demand for road transport (EC, 1997*a*). In 1996, the sector accounted for 92 per cent of all inland freight transport (on rail, road, inland waterways and pipelines measured in tonne-kilometres) in Japan, 73 per cent in the European Union and 29 per cent in the United States (Table 1).[4,5]

[Table 1. Road freight: selected statistics, 1996]

5. The industry also has considerable economic weight. Statistically, in 1996, road freight transport accounted for about 1 per cent of GDP and employment in the European Union and the United States and a larger percentage in Japan and some European countries. However, these figures underestimate its economic weight since part of the road freight industry (own-account transport for example)[6] is not included in the sectoral statistics. For example, while in the United States in 1997, sectoral statistics showed that it employed 1.7 million people, employment statistics (which include own-account transport) showed that on the whole there were more than 3 million truck drivers.[7]

6. The internationalisation of the road freight transport sector varies widely across countries. In 1996, Austria, Belgium, Denmark, Luxembourg, the Netherlands and the Czech Republic were the only countries in which domestic hauliers had more international than domestic business. Apart from geographical location and country size (international traffic will be generally biased downwards in island countries and upwards in small continental countries), restrictions to cabotage in shaping trade patterns (see below) and organisational and service quality factors played an important role.[8]

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4. Large shares of road haulage in total can be partly associated with the low degree of efficiency of other transport modes (Italy), the lack of rail and inland waterways (Denmark, Greece and Japan), or topography (Greece) (EC, 1994). Similarly, small shares can be related to the distances involved (United States, Canada) or historical factors (Czech Republic, Poland).

5. If domestic maritime transport (intra-Community for the European Union) is taken into account, the share of road haulage is smaller: 53 per cent for Japan, 44 per cent for the European Union and 26 per cent of the United States (EC, 2000*a*).

6. In EU countries, own-account transport accounts for 26 per cent of road freight haulage and almost 45 per cent in the United States (Hamelin, 1999). There is a tendency for own-account operators to reduce their fleets as part of a general trend towards contracting out of non-essential activities. The reduction in fleet size has been stimulated by greater competition between road hauliers, the fall in costs and the improvement in quality that has resulted (EC, 1997*b*; ECMT 1999*a*). Thus, between 1990 and 1998 the number of employees in transport for hire or reward in Europe rose by 30 per cent, while the number in own-account transport fell by 25 per cent (ECMT, 1999*a*). Between 1979 and 1994, the number of tonne-kilometres carried by own-account transport fell by 2 per cent whereas the number of tonne-kilometres carried by transport undertakings grew by 64 per cent (Lawton-Smith 1995).

7. The figure of 1.667 million is provisional and corresponds to employment in transport for hire or reward in the SIC 42 sector (trucking and warehousing). The figure of 3.075 million is provisional and corresponds to the number of people employed as truck drivers (BTS, 1999*a* and *b*).

8. For example, in the European Union, the countries that have the busiest international hauliers are not those with the lowest payroll costs, but those with the most efficient firms. In 1997, for instance, Greece, Portugal and Spain accounted for 18 per cent of permits but only 2 per cent of cabotage, whereas firms

7. As Table 2 shows, the road freight industry is characterised by the predominance of small firms in Spain, Italy, Finland and Portugal and by larger firms in Mexico, Japan and the United States.[9] Despite increasing co-operation among road freight companies, the industry is not highly concentrated: the market share of the top three firms seldom exceeds 5 per cent of tonne-kilometres transported.[10]

[Table 2. Road freight: structure, 1996]

8. Labour productivity (measured as value added per employee in current US dollars) varies greatly from one country to another. Belgium and Sweden appear to have the highest productivity, followed by the United States, Austria and Finland. In contrast, Ireland, Italy and Spain have relatively low productivity. It should be noted, however, that this measure of productivity is imperfect because it does not account for differences in purchasing power across countries and, due to data limitations, the reference year is not always the same across countries.

9. Currently, there is a tendency for the industry to divide into two segments, with a large number of small firms providing basic transport services and a limited number of major hauliers providing more sophisticated logistics services. Firms in the first segment compete mainly on price and have little room for economies of scale. Barriers to entry are low because little start-up capital is needed. Firms in the second segment compete both on price and the range and quality of services. Economies of scale and scope are important. Increasing use is being made of information and communications technologies such as electronic data transfers and tracking systems as they enable hauliers to provide better quality services ("just-in-time" deliveries, reliability, flexibility) to a much wider range of destinations thanks to improved productivity. Greater competition and the need to innovate seem to be leading to a process of concentration and co-operation with, for example, the creation of firm networks. At the same time, greater demand for special services is leading to greater specialisation.

1.2 The regulatory framework in OECD countries (1975-1998)

10. Given that the road freight industry is a structurally competitive sector dominated by competition on price and service quality, the main rationales for regulating the road freight business relate to road safety, the environment (air and noise pollution, etc.) and infrastructure congestion. There are two broad categories of regulations: regulations on traffic and vehicles and regulations on the operation of the market. The first category includes the highway code, labour regulations, European regulations on social conditions, regulations on the carriage of hazardous substances and traffic restrictions. The second category, the focus of this paper, covers mainly market access conditions and price regulations.

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from the Benelux countries accounted for 60 per cent of all such operations (the Netherlands for 35 per cent) (Inland Transport Directorate, 1999).

9. Data for Mexico may be affected by a large number of unreported small road freight businesses.

10. According to the *OECD International Regulation Database*, the market share held by the three largest transport undertakings for hire or reward (tonnes/kms) is as follows: 6 per cent in the Netherlands (1997), 5 per cent in Finland (1997, market share by turnover), 3.8 per cent in Canada (1995, in 1985 the three largest firms accounted for 7.2 per cent), Mexico (1993) and Portugal (1997), 1.5 per cent in France (1995, compared with 3.5 per cent in 1986) and close to 0 per cent in the United Kingdom and Japan (1997).

1.2.1 Historical developments

11. Historically, regulation of the road freight industry has been often motivated by the wish to protect the regulated rail industry, as well as by “public service”’ considerations[11] (OECD, 1990). According to the US Bureau of Transport Statistics (1999*a*), in the past the regulation of market access and prices has also been motivated by concerns within the industry that cut-throat competition would cause instability, would lead to road haulage firms going bankrupt and would worsen working conditions.

12. Regulatory reform aims to ease the conditions of entry to the sector and to liberalise prices and the supply of transport services. Greater competition between road hauliers can promote efficiency gains, overall productivity and the quality of services while at the same time lowering prices. The time-scale of liberalisation has varied across countries. For example, in Australia it began with the constitutionality of federal regulations being called into question (OECD, 1990). In the United States, the 1980 Trucking Act transformed the sector and abolished most of the economic regulations (OECD, 1997). In Japan, heavy goods vehicles have been subject to less stringent regulation since 1989 (Yamauchi, 1995). In the EU countries, liberalisation has been gradual and spread over the period between 1989 (freeing of international haulage rates) and 1998 (total liberalisation of cabotage) (Burckhardt *et al*., 1998). In the Central and Eastern European countries, the adoption of market economy principles at the start of the 1990s led to a complete reorganisation of the transport sector, with gradual liberalisation and privatisation of state transport undertakings (ECMT, 1996). Figure 1 shows the dynamics of deregulation in OECD Member countries between 1975 and 1998. Member countries are classified according to the degree of regulation (high, medium, low) on four criteria: public ownership, barriers to entry, price regulation and constraints on services (for a description of these indicators, see OECD, 1992, and Table A1.1 in the Annex).

[Figure 1. Road freight: regulatory reform in OECD countries]

13. This wide-scale liberalisation has involved the elimination of quantitative restrictions (limits on market entry, etc.) in favour of qualitative criteria (minimum standards), and the gradual liberalisation of domestic and international markets accompanied by a reduction in price controls (see below). In federal countries, deregulation at federal level has usually preceded liberalisation at State level (for example, in Australia, Canada and the United States).[12]

1.2.2 The situation in 1998

14. So as to afford the widest possible overview of the current state of regulatory reform in the road freight industries of OECD Member countries in 1998, different types of regulation will be addressed separately: procedures and criteria for market entry; restrictions affecting foreign hauliers; restrictions affecting certain activities; price regulations and driving time regulations.[13] The role of industry bodies or

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11. The broad idea can be summarised as follows. To ensure that shippers in small communities are not deprived of transport services or obliged to pay higher rates than shippers in big towns, the best way of serving the general interest is to regulate the sector so that profitable routes cross-subsidise unprofitable ones (OECD, 1990).

12. The scale and extent of regulations continues to depend on several factors. First, the type of transport concerned (for hire or reward or own-account transport, national transport, international transport or transit haulage) and the company providing the transport (transport operator or otherwise, national or foreign haulier). Second, the size of the vehicle concerned (light or heavy goods vehicle) and the type of product it is carrying (dangerous product, livestock, fresh produce or other). For example, road freight haulage in light vehicles comes under very few of any of the regulations (Defoug and Pfalzgraf, 1998).

13. Although driving time regulations are usually considered to be a form of regulation of traffic and vehicles, they are mentioned here because they can also affect the operation of the sector, for instance, international

commercial lobbies in defining and implementing the regulations and the impact of government supervision of certain companies are also considered.[14] The country coverage of the analysis differs between these different types of regulation and is detailed in Table A1.2 in the Annex.

Market access

15. In the vast majority of countries, a licence or permit is required to set up a new road freight company, as is registration (Figure 2, Panel A). In many cases, the operation can start only once approval is obtained. On the other hand, the permits are usually open-ended and valid throughout the entire country.[15] In Italy, the United Kingdom, Mexico, New Zealand and Spain, the entry regulations also apply to own-account transport. One point to note is that the regulations on access to the road freight business described here come on top of administrative procedures which apply to all firms.[16]

[Figure 2. Road freight: entry regulations, 1998]

16. In many countries criteria other than technical requirements, financial soundness, moral soundness and public safety requirements are still taken into consideration in deciding on the entry of new operators. However, these additional requirements do not exist in common-law countries, some North European countries, Greece and Portugal. In several countries (Germany, Italy, Belgium, Greece, Spain, the Czech Republic, Hungary, Poland and Korea), the regulator also has the power to limit sector capacity.

17. Apart from some island countries in which restrictions on foreign hauliers do not have much meaning, in most OECD Member countries, foreign firms do not have the same rights as domestic firms.[17] A number of limitations apply (Figure 2, Panel B). Generally there are still limitations on cabotage.[18] For example, in the European Union, cabotage was fully liberalised in July 1998 (the liberalisation process had begun in July 1990, with the introduction of a limited number of cabotage licences), but applies only to EU member states and excludes hauliers from Central European countries. The obligation to use domestic hauliers for government contracts still existed in 1998 in five countries: Greece, Mexico, Norway, Hungary and Poland.

18. In the context of liberalisation of the sector, most transport activities have been opened up to domestic competition and restrictions are increasingly rare (Figure 3). However, own-account transport is still restricted in several countries (Germany, Finland, Greece, Mexico, the Netherlands and Switzerland). Return freight[19] and contract transport are now limited in only a few countries (for example, Finland and

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trade in road freight services can be affected by driving restrictions in third party countries that trucking companies need to cross. Similarly, innovations in the area of network organisation (such as the use of satellite tracking systems) may be hindered by the lack of driving time flexibility.

14. The information cited is from the *OECD International Regulation Database* and generally relates only to transport for hire or reward (regulations on own-account transport depend on the business sector in which the firm operates). Changes in the regulatory framework since 1998 are not taken into account.

15. In Germany, France, Italy, Belgium, Denmark, Portugal, the Czech Republic and Hungary, permits are issued for limited periods. In Austria, Canada and Greece, they are valid for only part of the country.

16. For an assessment of the burden of administrative formalities that have to be completed in order to start a business in the OECD countries, see Nicoletti *et al*. (1999).

17. Foreign discrimination can also be relevant in island countries members of regional trade agreements and/or with intense traffic connections with neighbouring countries.

18. Cabotage is the possibility for hauliers to carry freight in a country of which they are not residents.

19. Freight transport to avoid an unladen return journey.

Greece), and intermodal operations are still restricted in only three countries (Finland, Hungary and Mexico).

[Figure 3. Road freight: constraints on business operation, 1998]

Market operation

19. Price controls, even partial ones, are also increasingly rare. However, in 1998 controls still applied in four OECD Member countries (Greece, Japan, Italy and Spain). Furthermore, in several European countries there have been calls to reintroduce minimum prices (ECMT, 1998).

20. While state ownership is becoming a relatively minor phenomenon in the road freight haulage industry,[20] there are nevertheless several countries with state-controlled companies operating in the road freight haulage sector (Australia, Belgium, the Czech Republic, Denmark, Germany, France, Finland, Norway, Poland and Turkey). Often they are subsidiaries of state-owned companies in other sectors, such as the railways or post office and concentrate on only a few activities.

21. Except for Mexico and Korea, all of the other OECD Member countries have specific regulations on driving and rest times.[21] Authorised daily driving time is fairly similar across countries (8 to 9 hours).[22] But the allowed times for activities other than driving varies a great deal. For example, in 1998 the working hours for drivers absent for at least three nights a week varied between 67 hours in Germany and 52 hours in Italy.[23]

The role of industry bodies

22. It is not easy to analyse the role of industry bodies or commercial interests in shaping and implementing the regulations applicable to the sector. In fact, it can be interpreted in two diametrically opposite ways: firstly as part of a consultative effort to involve stakeholders in the decision-making process; and, secondly, as a way of protecting firms already in the market (acting as their own judge and jury). In this study, the latter interpretation is retained and participation of industry bodies in the definition of criteria for market access or price setting will be viewed on balance as jeopardising the competitive process. As shown in Figure 4, the situation varies widely among OECD Member countries.

[Figure 4. Road freight: involvement of professional associations in decisions concerning entry and prices, 1998]

23. In common-law countries, some Nordic countries and Korea, industry bodies have no part in defining or implementing the regulations. In contrast, in four countries (Spain, Hungary, Italy and the Czech Republic) they are involved both in setting and regulating fares and in regulating market access. In

20. Even in the former centrally-planned economies. For example, private companies accounted for 99.5 per cent of the total number of transport undertakings in Poland and 99.9 per cent in the Czech Republic (Rydzkowski 1996). In Hungary, in 1994 they accounted for 86 per cent (Rydzkowski, 1996) and by 1998 there were no longer any road haulage companies in public ownership (OECD International Regulation Database).

21. In Turkey, the regulations do not apply to transit traffic.

22. In EU countries, Community legislation provides for a daily driving time of no more than 9 hours. In Japan, Turkey and Switzerland, the maximum driving time is also 9 hours. In Poland, the period is 8 hours.

23. For an analysis of the social aspects of road transport, see ECMT, 1999.

Germany, Belgium, France, the Netherlands, Poland and Switzerland, they are involved in defining market entry conditions.

1.3 Indicators of regulation in the road freight transport industry (1998)

24. In order to be able to compare regulatory approaches in the OECD countries, summary quantitative indicators were constructed of the various aspects of road freight transport regulations (on a scale from 0 to 6) and aim to illustrate the degree of restrictions on market mechanisms. These composite indicators were constructed by aggregating detailed information on regulation (including information described earlier) using data analysis techniques (see Box 1). The detailed indicators (and their composition) are shown in Tables A1.3 and A1.4 in the Annex.

Box 1. **Using multivariate data analysis to assess regulation patterns**

Factor analysis is used to summarise patterns of regulation in the road freight (retail distribution) industry. Factor analysis is a statistical technique aimed at finding the minimum number of "latent" variables which explain the maximum amount of the overall variance of the observed variables. The factors, which are linear combinations of the observed variables, can be interpreted in economic terms (*e.g.* barriers to entry in road freight haulage). Each factor is characterised by a set of coefficients (factor loadings) expressing its correlation with the observed variables and the variables are assigned to the factor in which they are most "loaded". As a result, the detailed regulatory indicators are split into disjoint sets, each of which is associated with one factor. The estimated factor loadings applied to the detailed country-specific regulation indicators make it possible to "score" countries according to each of the factors, so that rankings of countries can be obtained in terms of factor-specific scores. It is standard practice to retain a number of factors which cumulatively explain a substantial part of the overall covariance.

For more details on the use of factor analyses for studying cross-country patterns in regulation and market structure see Nicoletti *et al*. (1999).

25. Table 3 shows the findings obtained by a factor analysis of the detailed regulatory indicators. These findings allow regulations to be grouped into three main categories, the factors of which explain 68 per cent of the total variance in the data: i) barriers to entry (licence restrictions, price controls, involvement of industry bodies in regulating entry and prices); ii) involvement in business operation (administrative burden, simplification of administrative formalities, regulations restricting certain activities and driving times); iii) discrimination against foreign firms.

[Table 3. Road freight: results of factor analysis]

26. Using the estimated weights, three summary indicators of regulation were constructed. Those indicators were used to rank countries along the different dimensions of regulation identified by factor analysis (Table 4).[24,25] The summary indicators of barriers to entry, involvement in business operation and foreign discrimination were further aggregated into an overall summary indicator of regulation in the industry. The aggregation was made by weighting each summary indicator by the extent to which it explains the overall variance in the three factors. Figure 5 shows country rankings for the overall summary indicator as well as the contribution of each summary indicator to the overall ranking.

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24. In this table, the intervals correspond to estimates obtained by using the minimum and then the maximum for the values that were missing.

25. For more details about how the indicators are constructed, see Nicoletti *et al*. (1999).

[Table 4. Road freight: country scores]
[Figure 5. Road Freight: summary indicators, 1998]

27. In 1998, Italy and Greece were the countries with the most restrictive regulation overall.[26] The least regulated countries were Korea, New Zealand, the United Kingdom and the United States. The relatively restrictive overall stance of regulation in Italy and Greece reflects not least the stances as regards access and involvement in business operation. Also, in 1998 the countries that discriminated most against foreign firms were Austria and Portugal and to a lesser extent other European countries and North America. Of those countries that have a large amount of border traffic, the least discrimination was in Spain and the Czech Republic. It should be pointed out however that this ranking does not take account of regulations affecting traffic and vehicles, and that it relates to the situation in 1998. Lastly, it should be stressed that there is a difference between regulatory practice and the regulatory framework, and the most regulated countries are also those with the largest number of very small firms - which are usually subject to less stringent traffic and vehicle regulations than larger firms (see Table 2).

1.4 The impact of regulatory reform in the road freight industry

28. The experience of countries that have reformed their regulatory framework indicates a major impact of liberalisation on the efficiency of the sector and the costs of freight transport. For example, in a 1987 study, the Mexican authorities estimated the cost of regulating the sector at 0.5 per cent of GNP (OECD, 1999*b*) and it is estimated that in Germany - prior to liberalisation - regulation accounted for excess costs of 30 to 40 per cent for long-distance transport [Lieb (1999), quoted in McKinnon (1996)]. Table 5 illustrates the economic outcomes of the reform of road freight transport regulation on the basis of the findings of several empirical studies. It shows that, as a general rule, full liberalisation of the sector has had a beneficial impact on business entry rates (up), prices (down) and service quality (up), and has improved industry efficiency.[27] By increasing competition, opening up the market promotes innovation and encourages firms to improve their services and develop a wide range of specialist and sophisticated transport services (OECD, 1997).

[Table 5. Road freight: product market liberalisation and performance]

29. Liberalisation has also increased trade. In Mexico for example, liberalisation lowered prices significantly and increased traffic volume by 50 per cent between 1989 and 1995 (OECD, 1999*b*).[28] Within the European Union too there was an increase in cross-border traffic once trade barriers affecting road freight came down, but the impact of liberalisation is more difficult to gauge as it is recent and has been introduced against the background of the creation of the Single Market.

30. In countries in which barriers to entry and restrictions on price competition had created rents for the employees of firms already in the market, these rents are tending to disappear (for the United States, see Rose, 1987; Boyer, 1991; Hirch and MacPherson, 1998). This last fact could explain European road hauliers' fear that their working conditions would deteriorate when the road haulage market was opened fully on 1 July 1998.[29]

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26. The influence of the regulatory framework in Italy is also confirmed by Ponti (2000).

27. The survey in Table 5 does not cover the little evidence available on the effects of liberalisation on congestion, safety and pollution.

28. Part of the increase can also be explained by the implementation of the NAFTA.

29. See, for instance, EC (1998).

2. The retail distribution industry

2.1 Structure of the industry

31. Distribution is the principal link between the producer and the end-consumer and plays a major role in price formation. Comparable data on value added and employment of retail distribution is hardly available at the international level. The closest available national accounts aggregate, wholesale and retail trade (including hotels and restaurants), accounts for between 9 and 21 per cent of GDP and 15 to 28 per cent of total employment (Table 6). It is a sector with a mostly competitive structure that typically has a large number of firms and high entry and exit rates.[30] In 1990, the proportion of firms in the distribution industry as a proportion of the total number of firms was little less than 20 per cent in the United States and Denmark, and 40 per cent in Greece, Portugal and Korea (Pilat, 1997). Indeed, the indicators in Table 7 show that the structure of the retail distribution industry varies widely from one country to another. The industry is highly dynamic and is changing rapidly. Currently, there is a differentiation in the trends towards concentration in some segments (at national and international level) and the rapid development of new forms of competition, related chiefly to the growth of electronic commerce.[31]

[Table 6. Wholesale and retail trade, restaurants and hotels]
[Table 7. Retail distribution: selected statistics on economic structure]

32. Four recent trends in mass distribution are: the increasing concentration of groups; the formation of joint purchasing groups; the frequent vertical integration of the wholesale and retail trades, with growing sales of own-brand products; and the increasing internationalisation of groups. In markets in which price competition is the norm, firms need to be large to compete, as this allows them to achieve economies of scale and scope. Large firms, or firms which have co-operative arrangements, tend to innovate more than small independent firms[32] (OECD, 1997; Pilat, 1997; Reardon *et al.*, 1996).

33. The trend towards concentration is more marked in the food trade than in other distribution sectors (Figure 6 and Table A2.1 in the Annex). In Norway, Switzerland, Australia, Canada, Finland and Sweden, the three largest distributors account for at least 60 per cent of the retail food trade. At the other extreme, in Poland, the Czech Republic, Korea and Italy,[33] the ten largest retail distributors represent less than 20 per cent of the sector. Given the scale of concentration in individual countries, the small market share of the largest groups in the European Union (viewed as one "country") suggests that, in Europe, concentration in 1997 was still primarily national. These differences in industry structure across countries are explicable not only by the play of competition and by the stage of development of the industry, but also by differences in national regulations and business practices in the different types of retail trade.

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30. For example, according to the OECD International Regulation Database, in France the entry rate (*i.e.* the share of new firms in the total number) and the exit rate (percentage of firms that went out of business) were 15 per cent in 1995.

31. Further information on aspects relating to these new forms of commerce which are not dealt with here can be found in OECD (1999) and OECD (2000*a*).

32. There is also a trend towards specialisation and fragmentation of the market in response to customer needs (EC, 1997). Distribution groups are therefore tending to operate under different names for different target customers and different types of distribution. Firms have also substantially increased the services they offer in addition to traditional sales. Mass distribution is steadily diversifying its operations (Pilat, 1997). For instance, taking advantage of the liberalisation of the electricity market in Germany, the distribution group METRO decided to offer electricity supply contracts to customers of its shops.

33. Excluding purchasing groups.

[Figure 6. Retail distribution: market concentration]

34. Food retailers tend to strengthen their contractual position by signing co-operative agreements with other retailers in order to counter the market power of major food producers and compete more effectively with other large-sited retailers (EC, 1996). These networks of independent firms are mainly organised into consumer or retailer co-operatives, purchasing groups and voluntary chains consisting of a wholesaler and several retailers, which may take out franchises[34] (Dobson, 1999). For the food distribution sector, Figure 7 shows that if purchasing groups are taken into account, the concentration index is significantly higher for several countries.

[Figure 7. Retail distribution: five firm concentration ratios, adjusted for buying group, 1996]

35. The traditional distinction between wholesale and retail distribution is becoming increasingly difficult to make, as the main actors are becoming steadily more integrated. The adoption of just-in-time methods in distribution has transformed the relationships between manufacturers, wholesalers and retailers, which were traditionally ones of independence, and they now increasingly co-operate, especially in logistics (EC, 1997*a*). The upshot of this trend towards vertical integration has been to strengthen the power of large distributors over their suppliers and to encourage the growth of own-brand product distribution (Figure 8).

[Figure 8. Retail distribution: private label penetration]

36. The process of concentration and internationalisation often proceeds as follows. To achieve economies of scale, commercial groups try to increase their size primarily in their domestic markets. Once a certain level of concentration has been reached, development on domestic markets becomes difficult and distribution groups tend to look for markets abroad. Given that regulatory barriers to entry are often high (see below), it is frequently easier to penetrate a market by purchasing or teaming up with groups that are already established. Between 1991 and 1998, the annual amount of mergers and acquisitions in international retail trade rose from US$ 1 729 to 17 967 million (ILO, 1999).[35] As a result in 1998 in the European Union, about 1 million employees in retail distribution were working for firms wholly- or majority-owned by non-residents (WTO, 1998). The arrival and expansion of major internationalised distribution groups and their related distribution methods have promoted the modernisation of the sector (Poland, Korea) and fostered competition (United Kingdom, Germany).[36] Countries which traditionally had very restrictive regulations have hindered the development of large national distribution groups (Italy, for example) as well as the internationalisation of their industry.

37. Table 8, which covers some of the main food retailing groups world-wide, shows, on the one hand, the rapid growth and increased internationalisation of groups, and, on the other, the importance of own brands and the diversification into non-food products. It should be stressed that, when there is a large number of producers and no dominant brand, there is a risk that international alliances between retail firms

34. Franchising, which emerged later than other types of networks, has grown rapidly, especially in the non-food sector (EC, 1997*b*).

35. In 1996, the top hundred groups world-wide averaged growth of 19.5 per cent at the international level compared with 1.1 per cent at the national level (FCD, 1999).

36. For example, according to the ILO (1999), the arrival of the US group Wall Mart in the United Kingdom and Germany increased competition in those countries. In both countries, the company entered the market by buying a national distribution network and practising aggressive pricing.

could reduce competition between retailers and give them monopsony powers over producers. Broadly speaking, these developments strengthen the buying and market power of the major distributors.[37]

[Table 8. Food retail distribution of the main groups in the world]

2.2 The regulatory framework in OECD countries (1998)

38. As suggested by the above discussion, despite its generally competitive nature, retail distribution is sometimes subject to regulations restricting market access and business operation. However, in 1998 the strictness and scope of the regulations varied, sometimes substantially, across OECD Member countries. This section reviews regulations relating to market access and the operation of retail trade based on a country coverage that is as broad as possible but varies between areas of regulation.[38,39]

Market access

39. With a large number of entries and exits, the distribution sector is, in most cases, a sector in which there are few regulations on entry. The main restrictions relate to requirements for setting up and opening a business, which include entry formalities (trade register), regulations on the establishment, extension and location of commercial premises, regulations on specific operations and products, the existence of local monopolies for some products and legal impediments to the establishment of large outlets (Figure 9).

[Figure 9. Retail distribution: market access]

40. In most of the countries considered, registration in the trade register is not a requirement for operating a business (Figure 9: Panel A). In countries in which it is a requirement, there can be long administrative delays before being able to start a business. Being a fit and proper person is frequently a requirement (Austria, the Czech Republic, France, Hungary, Italy, Korea and the Netherlands). In contrast, training and diplomas are less frequent requirements (only in Belgium, France, Hungary and Iceland). More stringent requirements apply to certain types of shops or businesses (for instance involving health or safety hazards).

41. The regulations concerning commercial real estate and zoning are among the greatest barriers to the development of retail services (OECD, 1999*c*). In most OECD countries, special regulations over and above urban planning regulations apply to retail premises (Figure 9: Panel B). Only five countries (Australia, Finland, Ireland, Norway and Switzerland) do not have special measures. In the European Union, the trend is toward stricter regulations in countries that have traditionally been more liberal (EC, 2000*b*). Unduly restrictive regulations generally lead to rigidities and hamper modernisation of the sector. There is a danger that quantitative limits on retail floor space in a given geographical area can be used to restrict competition, especially when endorsed by existing firms.

42. Besides permission for outlet siting, in most countries a licence or permit is needed to operate a retail business. Further licences or permits may also be required for retailing certain products. The more

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37. For a discussion of the impact of buying power and market power, in particular at the level of competition policy, see Dobson (1999), Hewitt (2000) and OECD (1999*e*).

38. As sufficient comparable data are not available, the United States has been omitted from the statistical tables and is mentioned only in the text.

39. The countries examined are listed in Table A2.2 in the Annex.

permits are required, the greater the risk of restricting competition by increasing the costs of formalities for new entrants on the market.

43. By definition, local monopolies are an impediment to competition and limit consumer choice. Currently, a majority of OECD Member countries maintain local monopolies for the sale of certain products (Figure 9: Panel C). These restrictions apply to pharmaceutical products in ten countries (Austria, Belgium, Denmark, France, Italy, the Netherlands, Spain, Sweden and the United Kingdom), and to the sale of alcohol in several countries (Finland, Iceland, Norway, Poland, Sweden and Turkey) and tobacco in five countries (Australia, France, Hungary, Italy and Spain). In the Nordic countries, some such outlets are under state control. These restrictions are traditionally justified on the grounds of externalities such as public safety and health.

44. The main restrictions on market entry in the commercial distribution sector are linked to regulations on large stores. Three concerns have generally motivated the regulation of large stores. Firstly, the expansion of large stores could conflict with urban planning. Secondly, large stores often require access by private cars, as well as large car parks, both leading to substantial impacts on the environment (EC, 1996). Thirdly, restrictions on large stores have often been designed to protect small shops from competition, with the aim of safeguarding the employment and the amenities that they provide (such as proximity services).

45. The restrictions on large-scale outlets have several consequences. Firstly, they limit and ration the services that new retail formats can offer consumers. Secondly, they also slow down consolidation and modernisation of the sector (Hoj *et al*., 1995). Thirdly, they reduce firms' market power over their suppliers (Pellegrini, 1999). Restrictions on large-scale outlets may also benefit incumbent firms (making it difficult for a new competitor to enter the market, and in some cases helping to maintain dominant positions) and may speed tendencies towards concentration at national level (in search of the critical size) or international level (to penetrate a market, firms may have to form alliances with others already established in the country).

46. The frequency of restrictions on large-scale outlets (according to the relevant legal threshold on retail floor space) is shown in Figure 10.[40] The threshold floor areas above which regulatory requirements apply differ widely from one country to another (from 300 m^2 in France to 5000 m^2 in Switzerland and Mexico). In many countries, the threshold is relatively low (less than 1 000 m^2). The countries with the most restrictive regulations are France, Japan, Poland, Austria, Belgium and Italy. In contrast, Australia, Canada, the Czech Republic, the Netherlands and Sweden, have no specific legislation.[41] Table A2.3 in the Annex shows a trend towards more stringent legislation (only Germany, Italy, Japan, Korea and Turkey have not tightened up their legislation in the past five years). The statutory period within which the authorities must process an application highlights still further the restrictive nature of the regulations in the countries concerned: those with fairly low thresholds are also the countries with the longest statutory response periods. For instance among countries in which such regulations apply at low threshold levels, the statutory period is a year in Japan, about six months in Italy, Austria and Belgium, and four months in France, while in countries with a higher threshold, such as Mexico and Korea, the period is only 20 days.

[Figure 10. Retail distribution: specific regulations of large outlets]

47. The restrictive nature of national legislation masks differences between countries. Large-scale outlets are not very common in Japan, whereas France gradually tightened up its legislation as large-scale

40. For more details, see Table A2.3 in the Annex.

41. It should be underscored, however that in some countries restrictions can exist at the local level, even in the absence of specific national or state regulations.

outlets became widespread. Decisions are often taken at local level and in some cases involve representation by industry bodies and commercial interests, which means that the choices made by the authorities are often influenced by local pressure groups (in particular, small retailers).

48. Restrictions on large outlets are being relaxed in three countries. In Japan, the law on large stores, which substantially restricted the development of large retail outlets, was replaced by new regulations on 1 June 2000. Korea, which is proceeding with the liberalisation of the sector, withdrew the main regulatory restrictions on the operation of large-scale outlets over 3 000 m^2 in 1998. In both countries, the main difficulties have been the scarcity of sites, and zoning policies (OECD, 1999*c*). Lastly, Italy substantially overhauled its legislation on retailing in 1998.[42]

Regulations affecting the operation of the sector

49. The main restrictions affecting operations in the retail sector are on shop opening hours and the freedom to set prices. Regulations on shop opening hours have frequently been put in place for religious reasons or to protect employees. In some countries, for example France, opening hours are regulated indirectly through labour legislation. Cultural and historical differences account for the big differences from one country to another even today (see below and Table A2.4 in the Annex).

50. There is now a marked trend towards liberalising opening hours, largely in response to consumer demands (EC, 2000*b*). Large outlets have used the new opening hours to develop additional services. This suggests that the main beneficiaries of these reforms have indeed been consumers, whose choice has been widened. While the impact on sales has on the whole been less significant than expected, liberalisation is generally seen to have had a favourable impact on employment (Burda, 1994; Cette *et al*., 1992; Gradus, 1996; Pilat, 1997).

51. Figure 11 gives an overall picture of the 1998 situation in OECD countries. It shows that a number of countries have no regulations on opening hours (the Czech Republic, Hungary, Ireland, Korea, Mexico, Poland, Sweden) and that the main restrictions relate to Sunday opening. However, it should be noted that a lack of restrictions on opening times does not necessarily mean that shops do actually use the opportunity to open at a broader range of times.

[Figure 11. Retail distribution: regulations concerning shop opening hours]

52. Price controls exist in most OECD countries but generally concern only a few products (Figure 12). Price restrictions apply mainly to pharmaceuticals, tobacco and petrol. Only four countries maintain price controls on certain food products (Belgium, Iceland, Mexico and Turkey). Temporary controls, it should be added, are sometimes implemented in response to specific situations.

[Figure 12. Retail distribution: price controls]

53. Regulation of promotional activities, on the other hand, is frequent (Figure 13). Such regulations, when they exist, are justified by considerations relating to consumer protection and measures to counter unfair practices (OECD, 1979), and need to be set alongside the development of regulations relating to product safety and hygiene, labelling and quality standards. There is no consensus as to whether or not it is justifiable to regulate promotional activities, and there are major differences in the way such activities are regulated. Some countries have no specific regulations (Austria, Canada, the Czech Republic, Hungary, Switzerland, United Kingdom), while others have regulations covering all areas (Germany, Belgium,

42. The data used in this paper take account of the reform.

Denmark, Finland) and still others apply regulations to just some aspects. Loss-leading is restricted or prohibited in half of the countries considered (several European countries and Mexico).

[Figure 13. Retail distribution: limitations on promotion]

2.3 Indicators of regulation in the retail distribution industry (1998)

54. Using the same procedure as for road freight, and starting from the regulatory information presented above, factor analysis makes it possible to rank regulations governing access to the retail distribution sector, and its operation, by three categories (Table 9):[43] i) general restrictions on access (formalities which have to be completed in order to start a business, authorisations required to sell certain products, and restrictions on large stores); ii) regulations on operation (opening hours, involvement of industry bodies, local monopolies); iii) price regulations. The three factors account for 74 per cent of the total variance in the data.

[Table 9. Retail distribution: results of factor analysis]

55. The indicators in Table 10 were constructed by weighting each component of the regulatory framework by the extent to which it explains the total variance (see Box 1 and Nicoletti *et al*., 1999). Figure 14 shows the score for each country.

[Table 10. Retail distribution: country scores]
[Figure 14. Retail distribution: summary indicators]

56. Based on the overall summary indicators, the countries which in 1998 had the most stringent regulation were France, Japan, Greece and Austria. The countries with the most liberal environment were the Czech Republic, Switzerland and Australia. The findings for some countries (in particular those with a federal structure) may be biased when the regulations are solely local and are not national. Regulatory constraints on prices and activity are relatively high in France and Belgium, whereas as regards access, the countries with the tightest regulation are Austria, Poland, France, Greece and Japan. It should be pointed out however that a country can have regulations which are constraining on paper but flexible in practice. Furthermore, these rankings do not take account of other regulations governing the location of sales outlets and promotional activities.[44]

2.4 The impact of regulation in the retail distribution industry

57. In the retail trade sector, restrictions on opening hours, excessive restrictions on the siting of outlets and the powers of veto which existing retailers are often taken to have impeded the creation of those types of stores with higher valued added and which create jobs, as well limiting the range of consumer choice (McKinsey, 1994; Burda, 2000). Table 11 summarises the cost of retail trade regulation from the findings of several empirical studies. It shows on the one hand that an easing of regulations on opening hours and of restrictions on large-scale stores has overall positive effects on the sector's performance and efficiency, and on the other, that over-regulation can damage the consumer's purchasing power and impede the modernisation of the sector. The latter aspect is brought out by Figure 15, which shows that the degree of concentration (percentage of the sector represented by the three largest groups) is

43. The basic indicators (and their composition) are listed in Tables A2.5 and A2.6 in the Annex.

44. The regulations regarding promotional activities are particularly stringent in Germany (see Table A2.5 in the Annex).

inversely related to the overall degree of regulation. However, as argued above, excessive concentration is not positive either if it reduces competition.

[Table 11. Retail distribution: product market liberalisation and performance]
[Figure 15. Retail distribution: index of concentration and regulation]

Concluding remarks

58. Mostly using data from the OECD International Regulation Database, this paper highlighted the main cross-country patterns of regulation in two structurally competitive industries focusing on the situation in (or around) 1998. In many areas, large differences in approach exist among OECD countries, for instance in regulating business start-ups or access to domestic markets by certain types of operators (non-resident hauliers, large-sized outlets). It is important to note that regulations in both industries are evolving rapidly in OECD countries and, to some extent, these differences may have been reduced by reforms implemented after 1998, on which however only scattered information are available.

59. The economic implications of differences in regulatory approaches, which are likely to shape industry structures and competitive developments across the OECD, were only mentioned briefly here and deserve to be explored more fully in the future. To this end, two major data problems need to be overcome. First, the data on regulation should be extended to cover several time periods (*e.g.* pre and post regulatory reform), a feature that could only be partially achieved for road freight in this paper. Second, comparative measures of economic performance in the road freight and retail distribution industries should be identified, a difficult task in view of the conceptual problems involved and the few data available at the international level.

BIBLIOGRAPHY

ILO (1999), *Human resource implications of globalization and restructuring in commerce*, International Labour Organization, Geneva.

ILO (1999*a*), *Symposium on the social and labour consequences of technological developments, deregulation and privatization of transport*, International Labour Organization, Geneva.

BOYER, K.D. (1991), "Deregulation of the trucking sector: Specialization, concentration, entry, and financial distress", Annual meeting of the Southern Economic Associations in Nashville, Tennessee, November.

BTS (1997), "Transportation in the United States: a review", US Department of Transportation, Bureau of Transportation Statistics Washington.

BTS (1999*a*), "Pocket guide to transportation", US Department of Transportation, Bureau of Transportation Statistics, Washington.

BTS (1999*b*), "Transportation statistics annual Report 1999", US Department of Transportation, Bureau of Transportation Statistics, Washington.

BURCKHARDT, P., S. ELHENCE and M.C.W. Van ROOIJEN (1998), "European freight forwarders: which way to turn", The McKinsey Quarterly, No. 2, Washington.

BURDA, M. (2000), "Product market regulation and labour market outcomes: How can deregulation create jobs?", CESifo Forum.

BURNEWICZ, J. (1996), "Case study: Poland", Privatisation and regulation of road freight transport, ECMT Seminar, Paris, September.

CENTRAAL PLANBUREAU (1995), "Economic effecten van liberalisering van winkeltijden in Nederland", (The economic effects of liberalised shop opening hours in the Netherlands), Working Paper, No. 74, The Hague.

CETTE., G. *et al*. (1992), "L'impact de l'ouverture des commerces le dimanche", Travail et Emploi, No. 51.

CIVILDEPARTEMENT (1991), "Betannken av 1989 ars affarstidsuredning" (1989 Report of the Committee on opening hours), Stockholm.

DEFOUG. H. and M. PFALZGRAF (1998), "Rapport d'analyse et de propositions sur la réglementation applicable au transport léger routier de marchandises pour compte d'autrui (véhicules ne dépassant pas 3.5 tonnes)", Conseil Général des Ponts et Chaussées, Paris.

DIRECTION DES TRANSPORTS TERRESTRES (1999), "L'Europe, une chance pour le transport routier de marchandises", Ministère de l'Équipement, des Transports et du Logement, Paris.

DIRECTION DES RELATIONS ECONOMIQUES EXTERIEURES (1999), “La distribution alimentaire au Canada ”, Ministère de l’Économie, Publication des Postes d’Expansion Économique, Paris (available at www.dree.org/canada/_private/abstract.cfm ?Numero=156).

DOBSON CONSULTING (1999), “Buyer power and its impact on competition in the food retail distribution sector of the European union”, prepared for the European Commission- DG IV – Study Contract, No. IV/98/ETD/078.

EC (1994), Panorama of EC industry, Brussels.

EC (1996), Green paper on commerce, Brussels, November.

EC (1997*a*), Panorama of EC industry , Brussels.

EC (1997*b*), Green paper on vertical restraints in EC competition policy, Brussels.

EC (1998), Transports routiers : la Commission européenne presse les partenaires sociaux de conclure un accord sur le temps de travail, Communiqué de presse.

EC (2000*a*), EU Transport in Figures, Statistical Pocket Book, EC, Energy and transport DG, Brussels.

EC (2000*b*), Economic Reform: Report on the functioning of Community product and capital markets, Commission of the European Communities, Brussels.

EUROPEAN CONFERENCE OF MINISTERS OF TRANSPORT (1996), Privatisation and Regulation of Road Freight Transport, ECMT Seminar, Paris, September.

EUROPEAN CONFERENCE OF MINISTERS OF TRANSPORT (1998), Regulatory reform in road transport, CEMT/CS/TR(98)18, OECD, Paris.

EUROPEAN CONFERENCE OF MINISTERS OF TRANSPORT (1999), Social Aspects of Road Transport, OECD, Paris.

EUROPEAN CONFERENCE OF MINISTERS OF TRANSPORT (1999*a*), Road Transport for own account in Europe - Conclusions of Round Table 115, OECD, Paris, 4-5 November.

FCD (1999), “L’internationalisation de la distribution alimentaire”, available at: www.fcd.asso.fr/24-right.htm.

GONENC, R. *et al.* (2000), “The implementation and the effects of regulatory reform: past experience and current issues”, *OECD Economics Department Working Papers*, No. 251.

GRADUS, R. (1996), “The economic effects of extending opening hours”, Journal of Economics, Vol. 64.

HAMELIN, P. (1999), “Social aspects of road transport drivers working hours”, Social Aspect of Road Transport, ECMT, Paris.

HAFFNER, C.G. and P.A.G. VAN BERGEIJK (1997), “Regulatory reform in the Netherlands - Macroeconomic Consequences and Industry Effects”, Directie Martwerking, Ministerie va Economische Zaken, October.

HEWITT, G. (2000), "Buying power of multiproduct retailers", Background note, *OECD Journal of Competition Law and Policy*, Vol. 2, No. 1, Paris.

IFO Institute (1995), "Überprufung des Ladenschussgesetzes vor dem Hintergrund der Erfahrungen im In- und Ausland - Zusammenfassung der Untersuchungsergebnisse des IFO Institute", IFO Schnelldienst, Vol. 48, 24/1995, pp. 11-25.

HIRCH, B.T. and D.A. MACPERSON (1998), "Earning and employment in trucking: Deregulation a naturally competitive industry", in *Regulatory Reform and Labor Markets*, J. Peoples (ed.), Norwell, Massachusetts: Kluwer Academic Publishers.

HOJ, J., T. KATO and D. PILAT (1995), "Deregulation and privatisation in the service sector", *OECD Economic Studies*, No. 25, Paris.

LAWTON-SMITH, H. (1995), "Deregulation and privatization in the UK freight, bus and coach industries", in *Privatization and deregulation in the United Kingdom*, Tokyo, Discussion Papers No. 60, Economic Research Institute, Economic Planning Agency.

LIEB, R.C. (1991), "Logistics as a strategic variable in post-1992 Europe", *Transportation Journal*, Vol. 30, No. 4.

MCKINNON, A. (1996), "Is complete deregulation possible? Which regulations should be kept?", Privatisation and Regulation of Road Freight Transport, ECMT Seminar, Paris, September.

McKINSEY GLOBAL INSTITUTE (1994), *Employment performance*, Washington DC, November.

MOLNAR, E. (1996), "Case study: Hungary", Privatisation and Regulation of Road Freight Transport, ECMT Seminar, Paris, September.

NICOLETTI, G., S. SCARPETTA and O. BOYLAUD (1999), "Summary indicators of product market regulation with an extension to employment protection legislation", *OECD Economics Department Working Paper* No. 226, OECD, Paris.

OECD (1979), *Bargain price offers and similar marketing practices*, Paris.

OECD (1990), *Competition Policy and the Deregulation of Road Transport*, Paris.

OECD (1992), *Regulatory Reform, Privatisation and Competition Policy*, Paris.

OECD (1997), *OECD Report on Regulatory Reform*, Volume II, Thematic Studies, Paris.

OECD (1999), *OECD Forum on Electronic Commerce*, Report on the Forum, SG/EC(99)12.

OECD (1999*a*), *Regulatory Reform in the United States*, Paris.

OECD (1999*b*), *Regulatory Reform in Mexico*, Paris.

OECD (1999*c*), *Retail Trade Services*, TD/TC/WP(99)41, Paris.

OECD (1999*d*), *Regulatory Reform in Japan*, Paris.

OECD (1999*e*), *Roundtable: Buying power of multiproduct retailers*, DAFFE/CLP(99)21, Paris.

OECD (2000), *OECD Economic Outlook* 67, Paris.

OECD (2000*a*), "E-Commerce: Impacts and policy challenges", *OECD Economic Outlook* 67, Paris.

OPLETAL, J. and RYBA (1996), "Case study: Czech Republic", Privatisation and regulation of road freight transport, ECMT Seminar, Paris, September.

PELLEGRINI, L. (2000), "Regulations and the retail trade", in G. Galli and J. Pelkmans (eds), *Regulatory reform and competitiveness in Europe*, 2, *vertical issues*, Edward Edgar Publishing Limited, Northampton, Massachusetts.

PILAT, D. (1997), "Regulation and performance in the distribution sector", *OECD Economics Department Working Paper* No. 180, OECD, Paris.

PONTI, M. with the collaboration of M.A. CAPIELLO (2000), "Road transport", in G. Galli and J. Pelkmans (eds), *Regulatory reform and competitiveness in Europe*, 2, *vertical issues*, Edward Edgar Publishing Limited, Northampton, Massachusetts.

REARDON, HASTY and COE (1996), "The effect of information technology on productivity in retailing", *Journal of Retailing*, Vol. 72, No. 4, pp. 445-461.

ROSE, N.L. (1987), "Labor rent sharing and regulation: Evidence from the trucking industry", *Journal of Political Economy*, Vol. 95, No. 6.

RYDZKOWSKI, W. (1996), "Synthesis", *Privatisation and regulation of road freight transport*, ECMT Seminar, Paris, September.

TRANSPORTS CANADA (1996), "The socio-economic context of Canadian Road and Highway System", Research report (available on the internet at the following address www.tc.gc.ca/pol/fr/reportFra/fsip-con/TOC.htm).

TRANSPORTS CANADA (2000), "Trucking data", (available on the internet at the following address: www.tc.gc.ca/pol/fr/T-FACTS_F/Menu_des_statistiques_sur_le_camionnage.htm).

WINSTON, C. (1993), "Economic deregulation: Days of reckoning for microeconomists", *Journal of Economic Literature*, Vol. XXX1, pp. 1263-1289, September.

WINSTON, C. (1998), "US industry adjustment to economic deregulation", *Journal of Economic Perspectives*, Vol. 12, No. 3, pp. 89-110, Summer.

WTO (1998), "Distribution services: Background Note", Geneva.

YAMAUCHI, H. (1995), "Regulatory Reform and changes in the Japanese Trucking Industry", *Economic Analysis*, No. 143, Economic Research Institute, Economic Planning Agency, Tokyo, December.

YING, J.S. (1990), "The inefficiency of regulating a competitive industry: productivity gains in trucking following reform", *The Review of Economics and Statistics*, Vol. LXXII, No. 2, May.

YING, J.S. and T.E. KEELER (1991), "Pricing in a deregulated environment: the motor carrier experience", *The Rand Journal of Economics*, Vol. 22, No. 2, Summer.

TABLES AND FIGURES

Table 1. **Road freight: Selected statistics, 1996**

	Road freight employment as a percentage of total employment	Road freight (tkm) as a percentage of the total inland freight (tkm)	Share of each country in total OECD road freight per cent	Road freight GDP as a percentage of total GDP	Share of international haulage by domestic hauliers* per cent
Austria	1.0	41	0.5	0.9 [3]	59
Belgium	1.2	68	0.9	1.2 [3]	55
Canada		25	3.2		21
Czech Republic	4.1	54	0.9		53
Denmark	1.5	73	0.4	1.5 [4]	55
Finland	1.4	72	0.7	1.3 [3]	10
France	1.2	75	6.7	0.7 [3]	14
Germany	0.7	66	8.2		15
Greece	2.7	98	0.5		6
Hungary	1.6	52	0.4		44 [5]
Ireland	0.7	90	0.2	0.4	4
Italy	1.2	86	5.8	0.9 [3]	7
Japan	1.8	92	8.9		
Luxembourg	1.9	70	0.1	1.1 [3]	87
Mexico	1.8 [1]	80 [2]	5.0		
Netherlands	1.9	50	1.3	1.3 [3]	58
Poland		40	1.6		11
Portugal	0.7	87	0.4		14
Spain	1.9	85	2.7	1.6 [4]	25
Sweden	1.1	62	0.9	1.1 [3]	9
Turkey		93 [2]	3.6		10
United Kingdom	1.0	85	4.4	1.0	10
United States	1.4 [1]	29	42.0	1.2 [1]	
European Union	1.2	73	33.5	1.0 [3]	19

* Based on haulage in tkm.
1. 1997
2. Total freight is only road plus railways.
3. 1995
4. 1993
5. 1994

Sources : European Commission, "Transport in figures, january 2000" ; Eurostat, "Memo No 5/99, 21 mai 1999"; OECD International Regulation Database; Eurostat; Transport Canada; BTS 1999.

Table 2. **Road freight: Structure, 1996**

	Number of employees per company	Labour productivity* (000s US$)	Turnover per employee (000s US$)[4]	Turnover per company (000s US$)[4]	Tons km per employee (000)
Austria	7.8	59 [4]	118	921	0.45
Belgium	4.6	65 [4]	238	1102	0.74
Canada				1039	-
Czech Republic	6.2				0.15
Denmark	3.8	58 [5]	82	309	0.39
Finland	2.5	59 [4]	113	289	0.85
France	7.4	42 [4]	109	803	0.85
Germany	4.3		145	622	
Greece	9.7		14	131	0.15
Hungary	3.2		8	26	0.25
Ireland	4.8	32	89	423	0.60
Italy	2.4	36 [4]	107	261	0.74
Japan	25.4		92	2346	0.26
Luxembourg	10.9	52 [4]	138	1504	0.48
Mexico	50.5 [1]		13 [1]	641	0.54
Netherlands	12.8	50 [4]	95	1212	0.43
Poland	3.4 [2]				0.30
Portugal	2.8		57	157	0.44
Spain	2.0	32 [5]	61	119	0.38
Sweden	5.1	61 [4]	122	618	0.69
United Kingdom	6.3	47	101	640	0.61
United States	22.2 [3]	59 [1]			0.86
European Union	3.9	52 [4]	101	392	0.68

* Value added per employee.
1. 1997
2. 1994
3. 1998
4. 1995
5. 1993

Sources : European Commission, "Transport in figures, January 2000" ; Eurostat, "Memo No 5/99, 21 mai 1999"; OECD International Regulation Database; Transport Canada; BTS 1999.

Table 3. **Road freight: Results of factor analysis**[1]

	Factor 1		Factor 2		Factor 3	
Interpretation	Barriers to entry		Involment in business operation		Foreign discrimination	
Detailed indicators[2]	Factor loadings	Weights of variables in factor[3]	Factor loadings	Weights of variables in factor[3]	Factor loadings	Weights of variables in factor[3]
Involvement of professional associations[4]	0.85	0.37	0.13	0.01	0.14	0.02
Licencing requirements	0.83	0.36	-0.37	0.08	-0.03	0.00
Price controls	0.65	0.22	0.40	0.09	-0.13	0.02
Restrictions on behaviour	-0.03	0.00	0.82	0.38	-0.04	0.00
Coverage of licences	-0.08	0.00	0.66	0.25	0.28	0.07
Simplification of rules and procedures	0.30	0.05	0.58	0.19	-0.15	0.02
Discriminatory procedures	0.03	0.00	0.05	0.00	0.95	0.87
Weight of factors in summary indicator[5]		0.41		0.37		0.22
Selection criteria :						
Eigenvalues		2.03		1.68		1.02
Total variance explained			67.6			
Test-statistics						
Bartlett's test of sphericity	Chi-2		20.9			
	Df		21			

1. Based on rotated component matrix.
2. See Table A1.4 for the precise definition of the indicators.
3. Normalised squared factor loadings.
4. In decisions concerning entry and prices.
5. Normalised sum of squared factor loadings.

Table 4. **Road freight: Country scores**[1]
Summary indicators[2]

	Overall	Barriers to entry	Involvement in business operation	Foreign discrimination
Austria	2.8	2.3	2.7	3.6
Belgium	3.2	3.4	3.0	3.2
Canada	2.0	0.8	2.6	3.2
Czech Republic	3.0	4.5	3.0	0.4
Germany	3.0	3.3	2.7	3.1
Finland	1.7	0.8	3.6	0.3
France	2.5	2.6	2.2	2.7
Greece	3.6	4.0	4.0	2.4
Hungary	3.4	3.9	3.5	2.3
Italy	4.6	6.0	4.1	3.0
Korea	1.1	2.2	0.5	0.0
Mexico	2.2	2.6	1.6	2.6
Norway	2.2	1.6	2.9	2.2
New Zealand	1.3	0.8	2.4	0.3
Poland	2.7	3.3	2.0	2.8
Portugal	2.3	1.8	2.1	3.5
Spain	3.0	5.0	2.3	0.3
Sweden	2.2	1.6	2.6	2.8
United Kingdom	1.3	0.8	2.4	0.3
United States	1.5	0.8	1.5	2.8
Australia	0.4-1.1	0.0-0.0	1.1-2.6	0.0-0.4
Japan	0.8-3.4	0.7-5.3	1.4-3.1	0.1-0.3
Netherlands	1.8-3.0	1.9-1.9	2.6-2.6	0.2-5.4
Switzerland	2.6-4.9	2.2-4.7	1.8-4.9	4.9-5.5
Turkey	1.5-3.8	0.0-2.5	1.1-4.3	4.8-5.3

1. Computed using weights in table 3.
2. The scale of indicators is 0-6 from least to most restrictive. The intervals correspond to estimates obtained by using the minimum and the maximum for values that were missing.

Table 5. **Road freight: Product market liberalisation and performance**

Author	*Country/period*	*Explanatory variable*	*Performance variable*	*Effects found*
Burnewicz, 1996	Poland	Privatisation and liberalisation	Traffic Productivity Efficiency	Increases Increases Increases
Haffner and van Bergeijk, 1997	Netherlands	Liberalisation of cabotage, driving periods	Prices	Decline by 1%
Hoj et al, 1995	Australia	Liberalisation of entry and prices (1950 and 1960s)	Prices Quality	Decline Improves
	Canada	Liberalisation of entry and prices	Prices Quality	Decline Improves
	France	Liberalisation of entry and prices (1979 and 1989)	Prices	Decline
	New Zealand	Liberalisation of entry, services and prices (1983)	Quality	Improves
	Norway	Liberalisation of entry, services and prices (1987)	Entry	Positive
	Sweden	Liberalisation of entry (1964)	Entry	Positive
	United Kingdom	Liberalisation of entry, services and prices (1968)	Quality	Improves
Molnar, 1996	Hungary	Privatisation and liberalisation	Traffic Productivity Efficiency	Increases Increases Increases
McKinnon, 1996	United Kingdom (1987-1990) United States (1970-1978) New Zealand (1984-1987) France (1987-1990)	Road haulage deregulation	Prices	Decline by 25% Decline by 12-25% Decline by 25% Decline by 15%
OECD, 1999a	United States	Liberalisation of entry and prices	Prices Efficiency Quality Employment	Decline by 75% (TL) and 35% (LTL) Increases Improves Increases by 16%

Table 5. **Road freight: Product market liberalisation and performance** (continued)

Author	*Country/period*	*Explanatory variable*	*Performance variable*	*Effects found*
OECD, 1999b	Mexico	Liberalisation of entry and prices	Prices Quality Employment Efficiency	Decline by 37% Improves Increases by 5% Increases
OECD, 1999c	Japan	Liberalisation of entry and prices	Entry Profit Prices Quality Productivity	Increases Increases Decline Improves Increases
Opletal-Ryba, 1996	Czech Republic	Impact of privatisation and liberalisation	Traffic Productivity Efficiency	Increases Increases Increases
Rose, 1997	United States	Labour rent sharing and regulation	Rent sharing	Declines
Winston, 1993	United States	Liberalisation of entry and prices	Consumer welfare	Gain of 16 billion of 1990 US $
Winston, 1998	United States	Deregulation less than-truckload trucking	Prices Efficiency Quality	Decline Increases Increases
		Deregulation truckload trucking	Prices Efficiency Quality	Decline Increases Increases
Yamauchi, 1995	Japan	Liberalisation of domestic road haulage	Consumer welfare	Gains between 2.5 billion and 8.2 billion of US $
Ying, 1990	61 firms United States 1975-84	Deregulation	Technological progress Cost Productivity	Increases Declines Increases
Ying and Keeler, 1991	56 firms United States 1975-83	Liberalisation of entry and prices	Prices	Decline by 25% to 35%

Table 6. **Wholesale and retail trade, restaurants and hotels**
As a percentage of total employment and GDP

	Employment		GDP	
	1997	1990	1997	1990
Australia	25	25	19.9 [1]	18.7
Austria	21	19	17.0 [1]	17.3
Belgium	..	18	17.4	17.5
Canada	24	24	11.6 [2]	12.7
Czech Republic	17	..	14.7 [3]	10.9 [5]
Denmark	16	15	10.0	11.6
Finland	15	16	9.5 [1]	11.1
France	16	16	14.5	15.0
Germany	17	14	8.9 [7]	8.9 [6,7]
Greece	23	18	9.0 [4]	8.7
Hungary	17	15	..	..
Iceland	17	18	10.3 [4]	10.2
Ireland	20	18	10.5 [4]	11.3
Italy	21	21	18.1	18.2
Japan	23	23	12.2	13.6
Korea	28	23	..	..
Luxembourg	..	..	12.3	15.0
Mexico	21	20	19.5 [1]	22.6
Netherlands	20	17	13.5 [4]	14.1
New Zealand	22	21	16.2 [3]	15.7
Norway	18	18	10.2	11.2
Poland	15	..	..	..
Portugal	19	20	15.9 [4]	17.0
Spain	23	20	21.6 [3]	19.9
Sweden	15	15	9.4 [3]	9.9
Switzerland	23	24	..	..
Turkey	15	11	20.8	19.1
United Kingdom	20	20	12.3 [1]	12.3
United States	21	21	16.1	15.6

1. 1996.
2. 1993.
3. 1994.
4. 1995.
5. 1992.
6. 1991.
7. Excluding restaurants and hotels.

Sources: BIT, 1999; OECD National accounts, 1998.

Table 7. **Retail distribution: Selected statistics on economic structure**[1]

	Years	Turnover per employee (million US$)[2]	Employment per retail enterprise	Employment per retail outlet	Inhabitants per outlet (thousands)	Sales per inhabitants (million US$)[2]
European Union countries						
Austria	1996	163	6.6	8.5	3.7	5158
Belgium	1996	201	2.2	2.0	13.8	5449
Denmark	1995	166	6.1	5.8	6.3	6086
Finland	1997	210	4.2	2.6	7.6	4105
France	1996	221	3.7	3.7	6.7	5484
Germany	1996	150	9.2	6.7	4.9	4962
Greece	1993	45	2.9	3.1	17.7	2504
Ireland	1997	114	6.4	2.5	14.4	4118
Italy	1996	138	2.1	2.7	9.8	3634
Netherlands	1996	118	6.8	5.1	7.4	4483
Portugal	1996	94	3.1	2.4	15.2	3508
Spain	1992	74	2.7	2.7	14.2	2873
Sweden	1993	162	5.2	6.5	5.0	5269
United Kingdom	1993	99	14.6	15.4	3.4	5161
Other OECD countries						
Australia	1992	104		10.8	4.0	4533
Canada	1985	63		8.4	6.9	3624
Czech Republic	1996	26		13.3	6.8	2366
Hungary	1997	80		1.6	12.1	1553
Iceland	1995	208	2.5	4.6		
Japan	1997	166	5.7	5.2	11.3	9678
Korea	1995	86		2.3	18.6	3586
Mew Zealand	1990			4.5	9.5	
Mexico	1993	42		2.1	13.1	1154
Norway	1996	212	4.9	4.6	9.3	9142
Poland	1997	36		2.0	24.8	1805
Switzerland	1996	182		6.5	7.8	9190
Turkey	1996	40		0.9	5.1	184
United States	1992	139	11.6	11.8	6.1	10031
European Union[3]	1996	142	4.4	3.1	10.6	4735
European Union[4]	1996	168	3.8	5.3	7.8	6980

1. Retail statistics are only provided on a national basis by statistical offices that use different definitions and methods.
2. Current exchange rate.
3. Excluding sales of motor vehicles.
4. Including sales of motor vehicles.

Source: see Table A2.7.

Table 8. **Food retail distribution of the main groups in the world**[1]

		Turnover in billion US$		Share of international turnover in total turnover (per cent)		Share of food product turnover in total turnover (per cent)	Share of private label turnover in total turnover (per cent)
		1998	1994	1997/98	1995	1995	1993/94
Wall Mart	United States	131	83	2.9		40[3]	15[4]
Metro	Germany	52	47	35.0	24		33
Kroger	United States	41	23				15[4]
Intermarché	France	38	23	36.0		80	23
Rewe	Germany	37	29	16.7	1	83	11[5]
Promodes[2]	France	36	26	38.6	35	76	
Carrefour[2]	France	35	27	43.4	37	55	22
Albertson's	United States	34					15[4]
Kmart	United States	32	34	3.5			15[4]
Tengelsman	Germany	31	30	50.5	51	77	18
Edeka	Germany	30	24	2.4	2	85	11[5]
Ahold	Netherlands	29	16	68.5		90	16[5]
Aldi	Germany	29	25	24.0	30	88	90
Tesco	United Kingdom	27	17	5.8		77	46
Auchan	France	26	16	27.0	9	60	19
Sainsbury	United Kingdom	25	17	12.3	12	85	55
Leclerc	France	24	23	2.0		65	10
Casino	France	19	13	16.8	8	75	25
Lidl	Germany	13		19.7			11[5]

1. Groups have been classified according to the first 10 groups with the biggest world turnover in 1998 and of the 14 European groups according to there market share in 1996.
2. Carrefour and Promodes merged in 1999.
3. Share observed in Canada (DREE 1999).
4. Share of total private label turnover in the total turnover in 1996, in the United States (OECD 2000).
5. Share of total private label turnover in the total turnover in 1995, in Germany or in the Netherlands (BIT 1999).

Sources: Fortune Global 500 (1998); FCD; LSA (mai 1999); Dobson Consulting (1999); Panorama de l'Industrie (1996); www.commerceenligne.com (10/10/99).

Table 9. **Retail distribution: Results of factor analysis**[1]

	Factor 1		Factor 2		Factor 3	
Interpretation	Barriers to entry		Operations restrictions		Prices	
Detailed indicators[2]	Factor loadings	Weights of variables in factor[3]	Factor loadings	Weights of variables in factor[3]	Factor loadings	Weights of variables in factor[3]
Registration in commercial register	0.78	0.33	-0.54	0.19	-0.01	0.00
Licences or permits needed to engage in commercial activity	0.77	0.32	0.32	0.07	-0.14	0.02
Specific regulation of large outlet	0.73	0.29	0.23	0.03	0.36	0.12
Protection of existing firms	0.32	0.05	0.80	0.42	-0.11	0.01
Regulation concerning shop opening hours	-0.01	0.00	0.66	0.29	0.13	0.02
Price controls	0.04	0.00	0.03	0.00	0.94	0.83
Weight of factors in summary indicator[4]	0.42		0.34		0.24	
Selection criteria :						
Eigenvalues		1.99		1.40		1.04
Total variance explained			73.94			
Test-statistics						
Bartlett's test of sphericity	Chi-2		27.12			
	Df		15			

1. Based on rotated component matrix.
2. See Table A2.6 for the precise definition of the indicators.
3. Normalised squared factor loadings.
4. Normalised sum of squared factor loadings.

Table 10**. Retail distribution: Country scores**[1]

Summary indicators[2]

	Overall	Barriers to entry	Operations restrictions	Prices
Australia	1.1	0.7	2.4	0.1
Austria	4.1	5.5	4.6	0.8
Belgium	3.1	2.3	3.3	4.0
Canada	1.3	0.6	1.1	2.6
Czech republic	0.8	1.1	0.4	0.9
Finland	3.0	3.0	4.0	1.4
France	4.7	5.0	5.3	3.5
Germany	1.2	1.2	1.7	0.6
Hungary	1.9	2.4	1.0	2.2
Ireland	1.4	1.0	1.3	2.1
Italy	3.1	2.8	3.9	2.4
Korea	1.3	1.9	0.7	1.2
Mexico	1.9	1.7	1.6	2.7
Netherlands	1.4	0.8	3.0	0.2
Norway	2.2	1.1	3.6	2.2
Poland	3.6	5.3	2.7	1.7
Portugal	2.6	2.8	2.0	3.1
Spain	2.5	2.0	2.7	3.0
Sweden	1.7	1.6	2.8	0.1
Switzerland	1.1	1.0	1.8	0.2
United Kingdom	2.5	2.1	3.8	1.5
Denmark	2.4-3.4	1.5-3.4	4.2-4.6	1.5-1.6
Greece	3.2-4.4	3.8-5.8	2.9-4.0	2.6-2.6
Iceland	2.0-2.9	1.5-3.3	3.2-3.4	1.0-1.8
Japan	3.6-4.5	3.9-5.8	4.2-4.6	2.1-2.2
Turkey	2.5-3.5	2.6-4.3	3.0-3.2	1.9-2.6

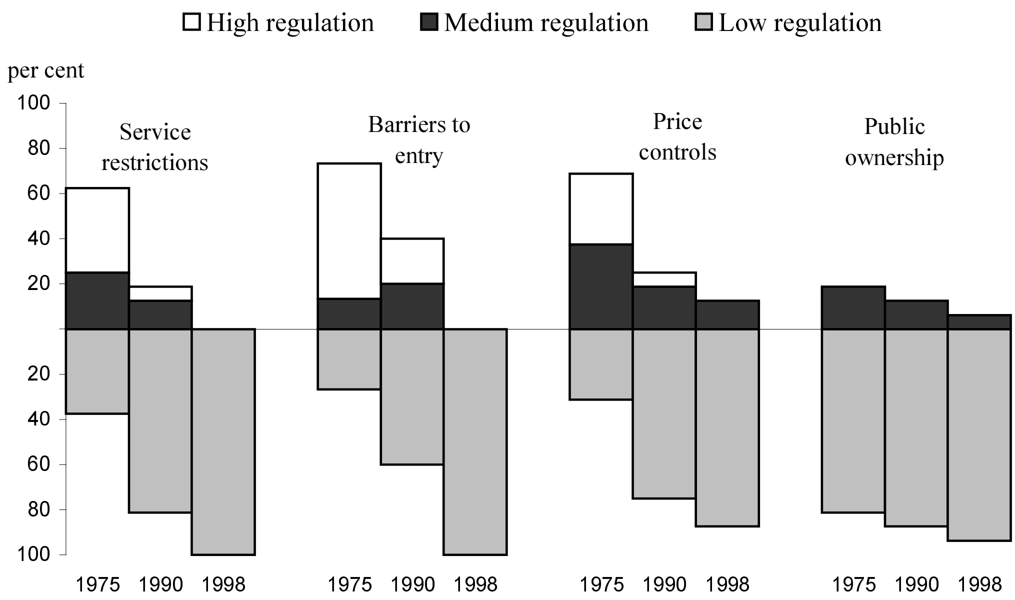
1. Computed using weights in table 9.
2. The scale of indicators is 0-6 from least to most restrictive. The intervals correspond to estimates obtained by using the minimum and the maximum for values that were missing.

Table 11. **Retail distribution: Product market liberalisation and performance**

Author	*Country/period*	*Explanatory variable*	*Performance variable*	*Effects found*	*Method*
Centraal Planbureau, 1995	Netherlands	Liberalization of shop opening hours	Employment Volume of sales Turnover and price	Increase 15000 jobs (11000 full time equivalent) Expand by 0.2 per cent Effect moderate	Simulation
Civildepartement, 1991 (Pilat, 1997)	Sweden	Liberalization of shop opening hours	Turnover Prices Profits	Rise by 5 per cent Fall by 0.6 per cent Rise by 3.6 per cent	Simulation
Haffner and van Bergeijk, 1997	Netherlands	Liberalisation of entry, shop opening hours and zoning	Prices	Decline by 2%	Simulation
Hoj et al., 1995	22 OECD countries, 1990 8 OECD countries, 1960-90	Large outlets restrictions	Average size Outlet density	Negative Positive	Econometric
IFO (Pilat 1997 - OECD,1997)		Liberalization of shop opening hours	Turnover Employment	Increase 2-3 per cent over a three year period (large store, turnover increase 5-7 per cent, smaller stores Increase 1.3 per cent (full time equivalent)	Simulation
OECD, 1997	Japan	Revision of the LSRS (Large Store and Retail Store) law	GDP deflator for the distribution sector	During 1992 and 1993, the GDP deflator for the distribution sector fell by 2 per cent each year	Descriptive
Pellegrini, 2000	Italy, 1997	Cost of regulations	Computation of potential savings (Using France as a benchmark and margin differentials across store type)	The lower and upper estimates obtained in way amount to L 17.022B (incluing super and hypermarkets) and L26.858B (excludind super and hypermarkets) respectively	
Pilat, 1997	10 countries (United States, Japan, Germany, France, United Kingdom, Canada, Austarlia, Austria, Netherlands and Sweden) and 10 categories of goods, 1987;1993	Impact of distribution margins on price levels	Distribution margins and comparative price levels	"The equation suggests that a 1 percentage point increase in the distribution margin in a particular category of goods would lead to almost a 0.5 percentage point increase in the (relative) price level of that category of goods"	Econometric

Figure 1. **Road freight: Regulatory reform in OECD countries**[1]

Percentage of countries in each category



Notes :

High regulation : Entry is restricted, public ownership is substantial and/or prices or services are set or approved by a regulatory authority.

Medium regulation : Some limited entry is allowed, public ownership is limited and/or businesses have some freedom to set prices or services.

Low regulation : There is no public ownership, businesses are free to enter and/or have full control over prices and services they supply.

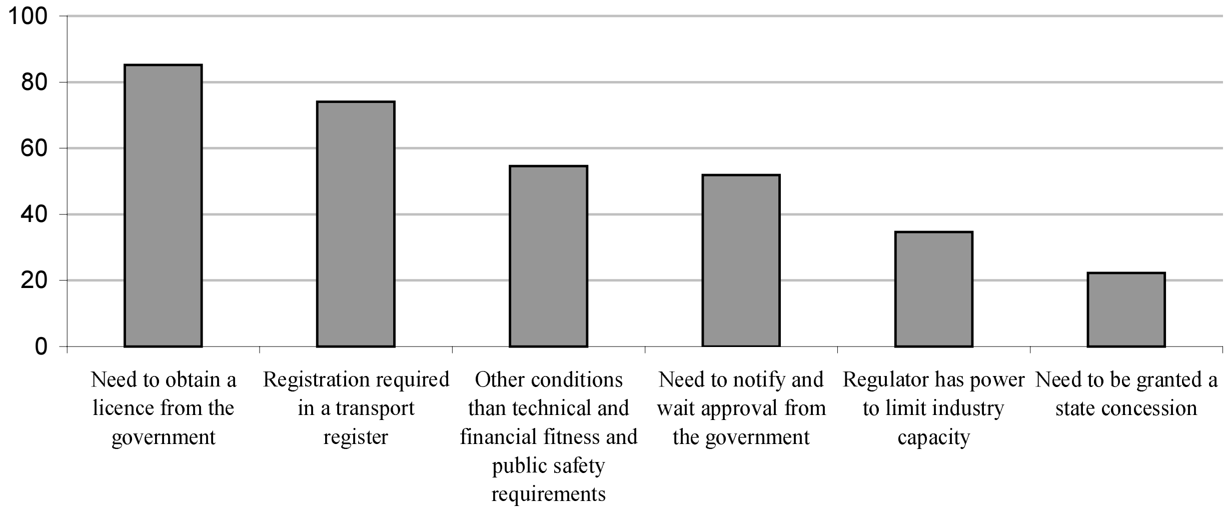
1. See Table A1.1 for details on the construction of the indicators.

Source: OECD, Regulatory reform, privatisation and competition policy, 1992; and OECD International Regulation Database.

Figure 2. **Road freight: Entry regulations, 1998**

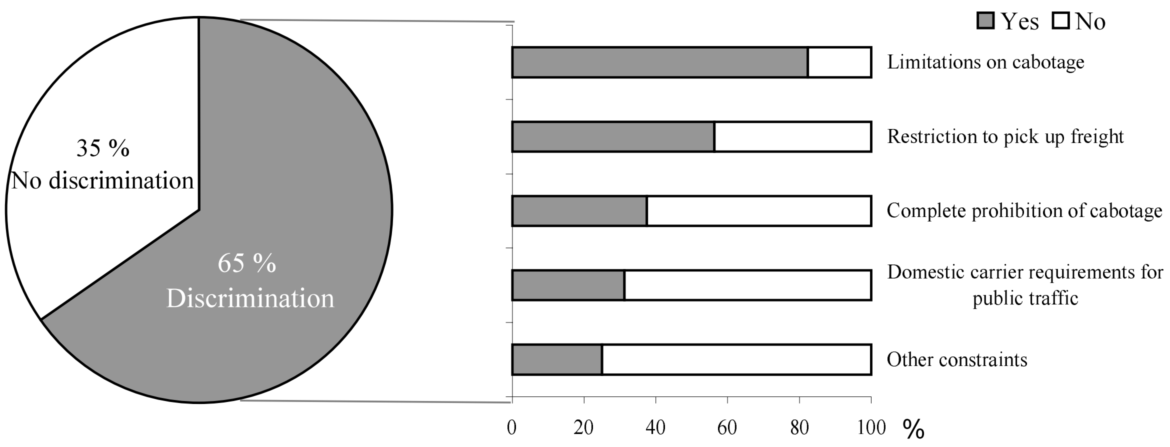
Percentage of countries concerned by regulations

A. Conditions to start a new business



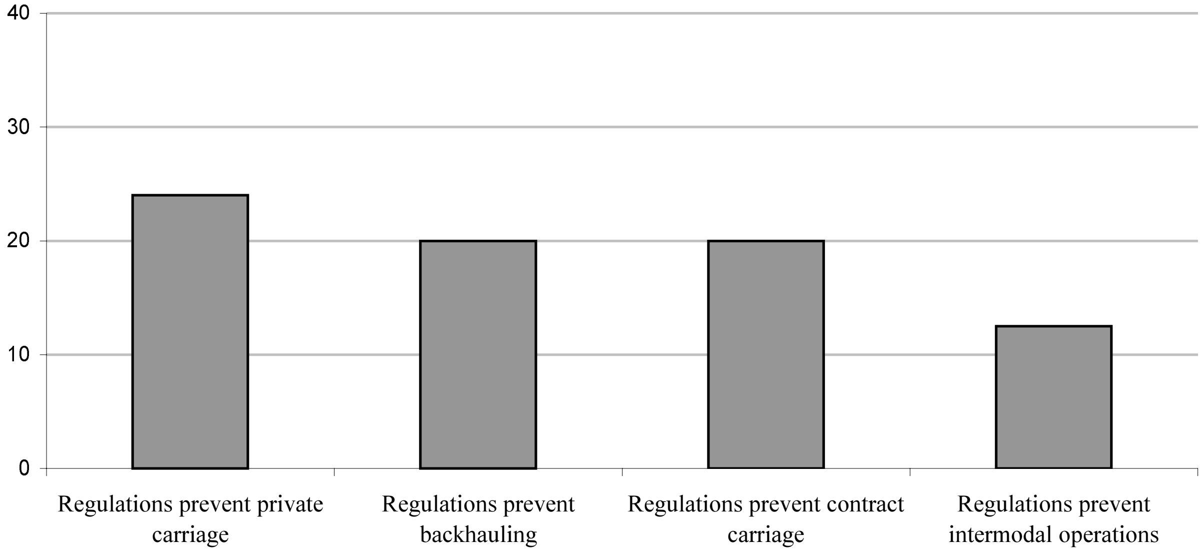
B. Conditions for foreign firms

Right for foreign firms to operate in the domestic market



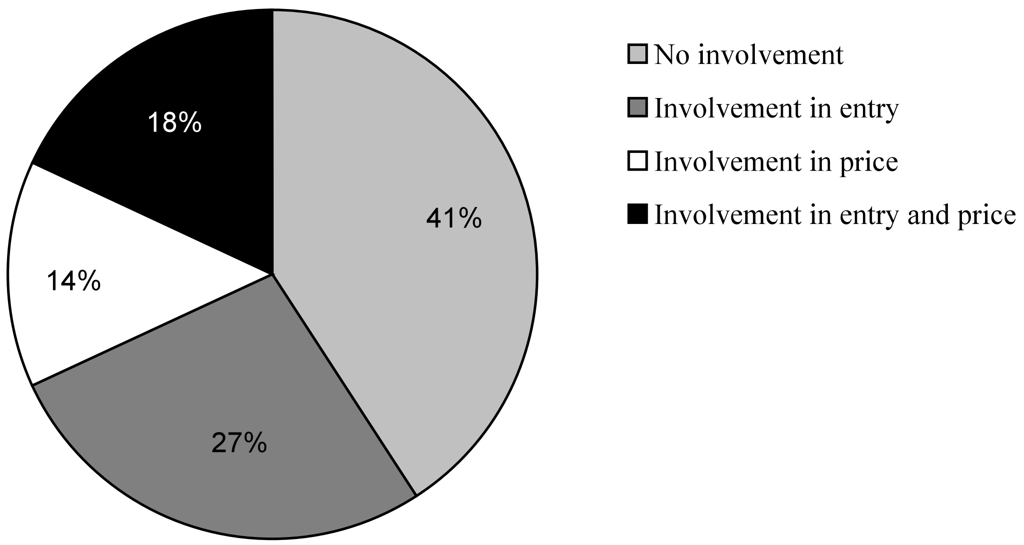
Source: OECD International Regulation Database.

Figure 3. **Road freight: Constraints on business operation, 1998**
Percentage of countries concerned by regulations



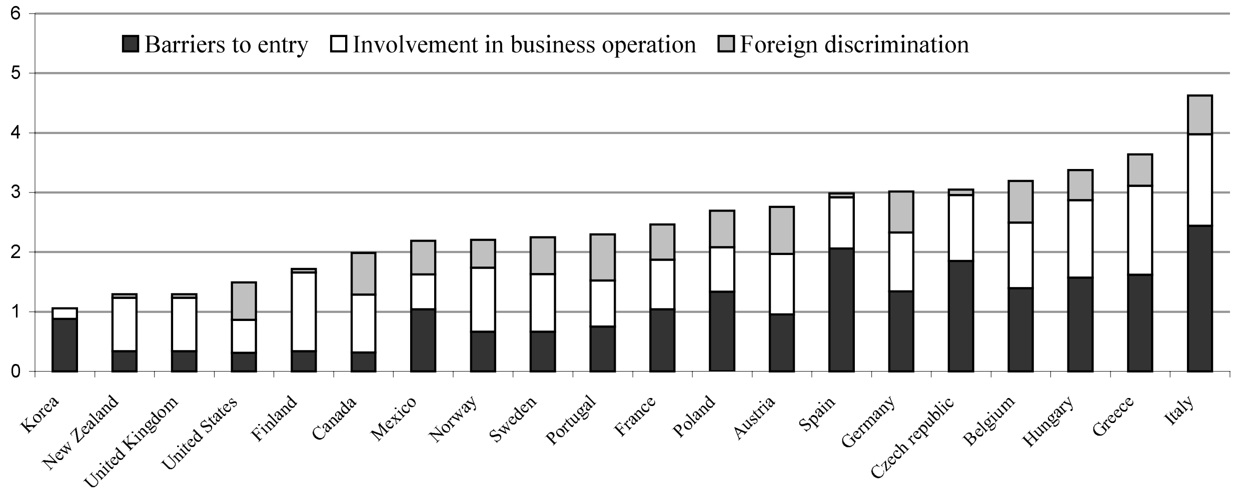
Source: OECD International Regulation Database.

Figure 4. **Road freight: Involvement of professional associations in decisions concerning entry and prices, 1998**
Percentage of countries concerned



Source: OECD International Regulation Database.

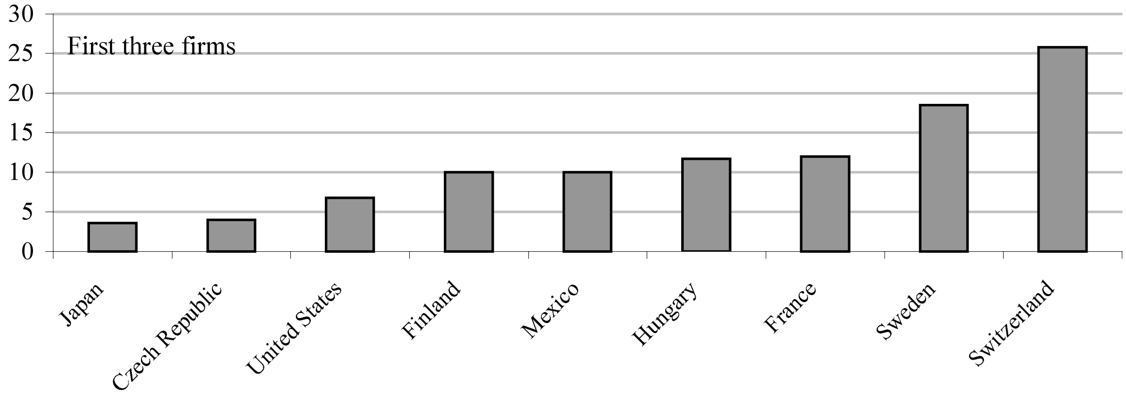
Figure 5. **Road freight : Summary indicators, 1998**



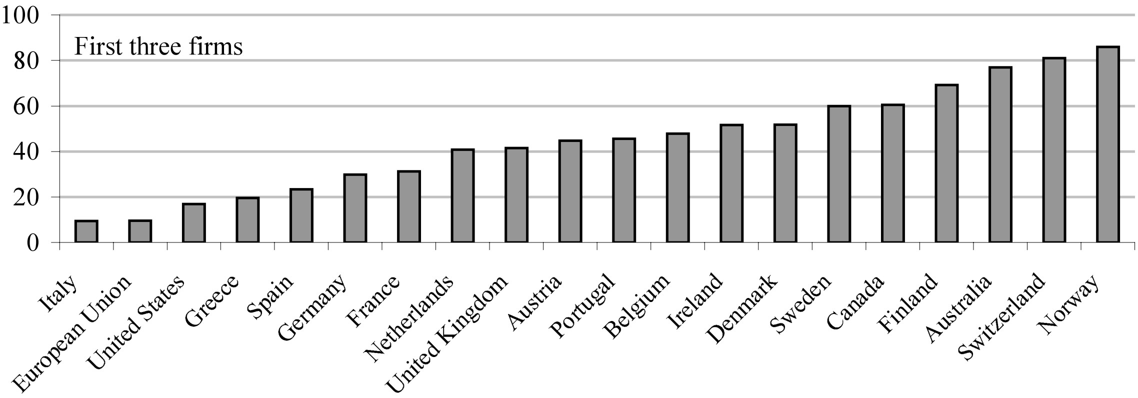
1. The scale of indicators is 0-6 from least to most restrictive.

Figure 6. **Retail distribution: Market concentration**
Percentage shares of turnover

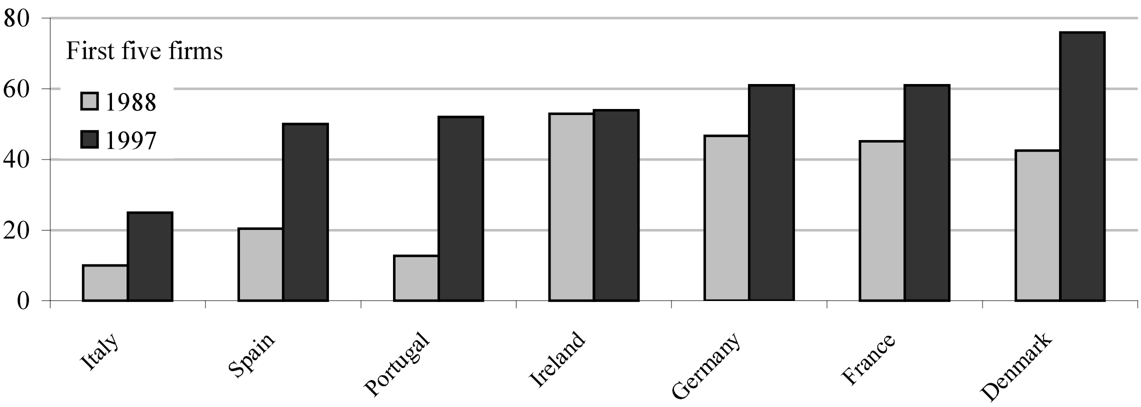
Retail distribution, 1997



Food retail distribution, 1996

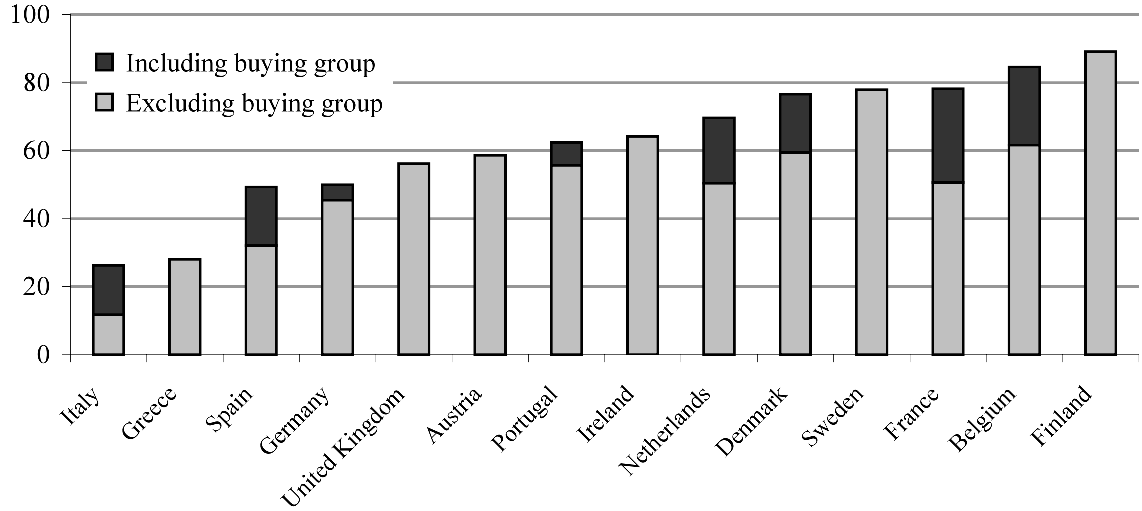


Food retail distribution evolutions 1988/1997



Sources: DREE, 1999; Dobson, 1999; OECD, 1999c; OECD, 1999e; OECD International Regulation Database; Pilat, 1997; EC, 2000b; Pellegrini, 2000.

Figure 7. **Retail distribution: Five firm concentration ratios, adjusted for buying group[1], 1996**



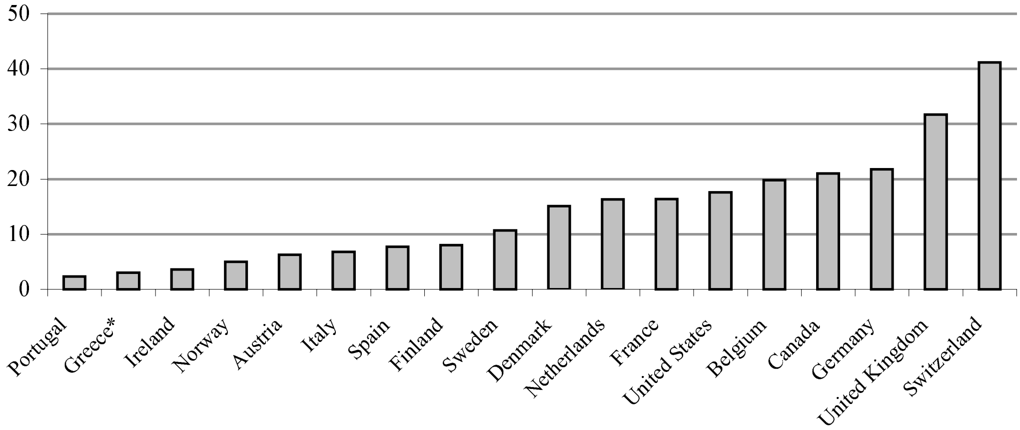
1. In some countries the adjustment for the buying group is not possible because the latter do not constitute a separate entity.

Source: Dobson, 1999.

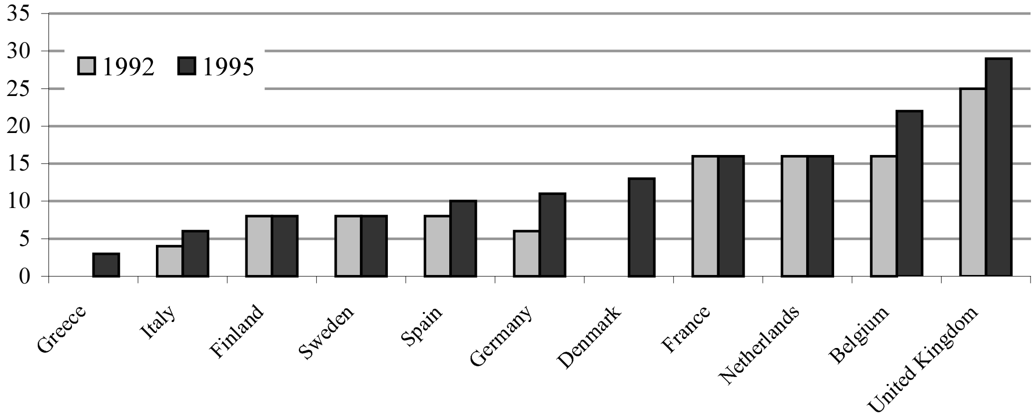
Figure 8**. Retail distribution: Private label penetration**

Percentage of sales

Private label penetration, 1994



Evolution 1995 / 1992



Notes: * 1995.

The two figures are not comparable (methodology and timing are not identical).

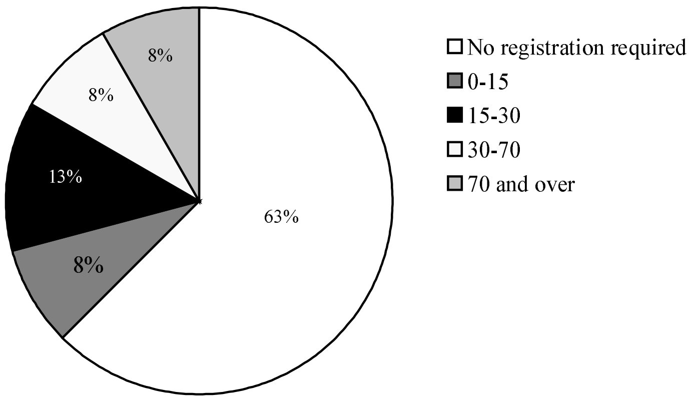
Sources: Dobson, 1999 (AC Nielsen "Private label european share and price trends, 1992-1995);
BIT, 1999 (Financial times, London, 26/10/98)

Figure 9. **Retail distribution: Market access**

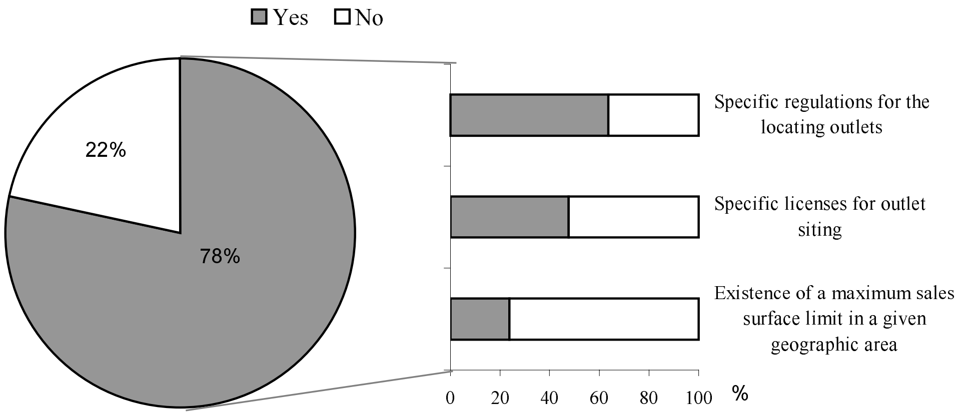
Percentage of countries in each category, 1998

A. Registration in commercial register

Maximum deadline for approving business startup (in days)

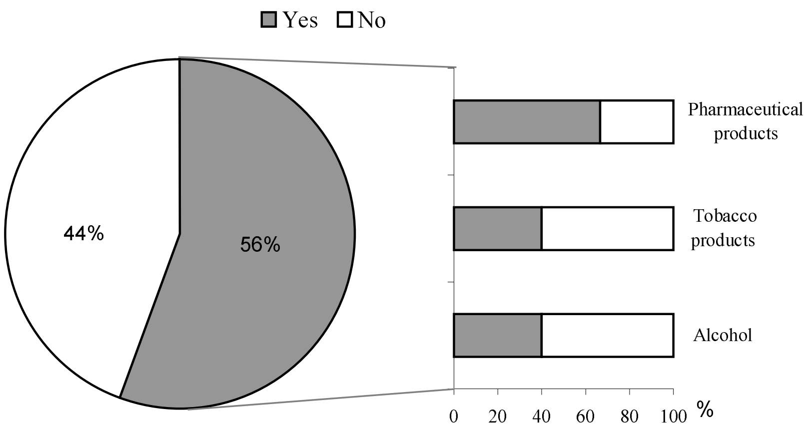


B. Licences or permits needed for outlet siting[1]



C. Monopoly

Outlets operating under a statutory local or national legal monopoly

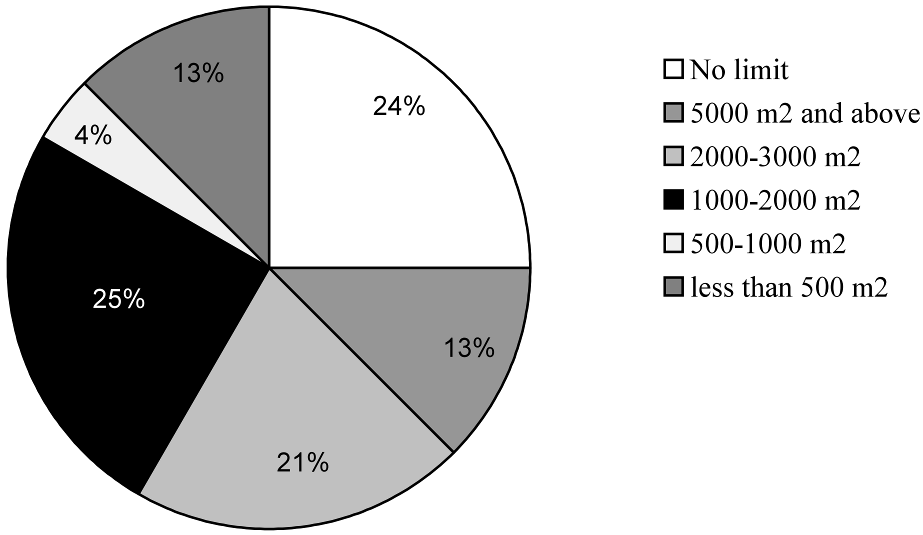


1. In addition to zoning restrictions.

Source: OECD International Regulation Database.

Figure 10. **Retail distribution: Specific regulations of large outlets**
(according to surface thresholds)

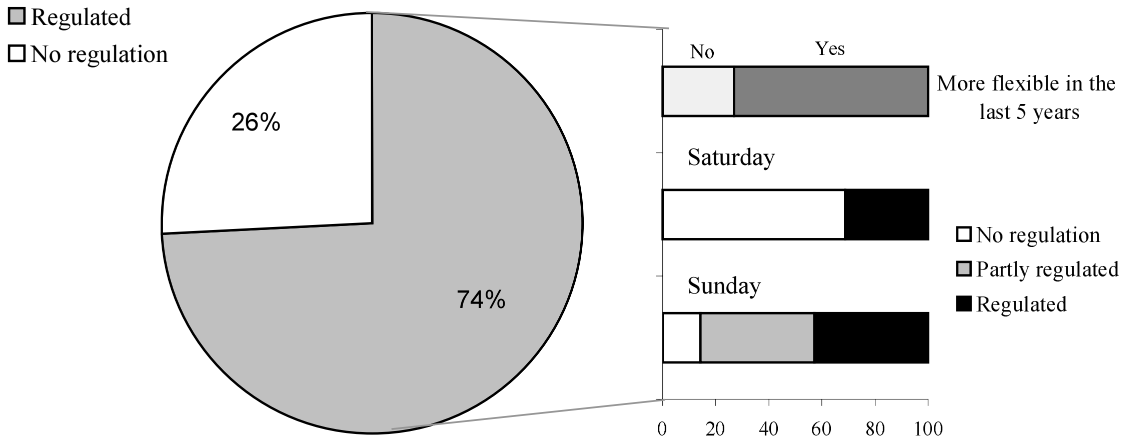
Percentage of countries in each category, 1998



Source: OECD International Regulation Database.

Figure 11. **Retail distribution: Regulations concerning shop opening hours**

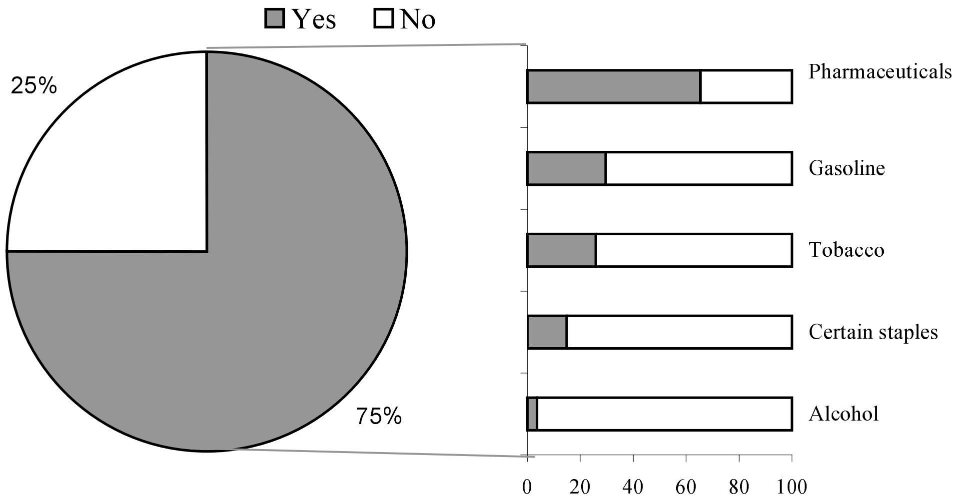
Percentage of countries in each category, 1998



Source: OECD International Regulation Database.

Figure 12. **Retail distribution: Price controls**

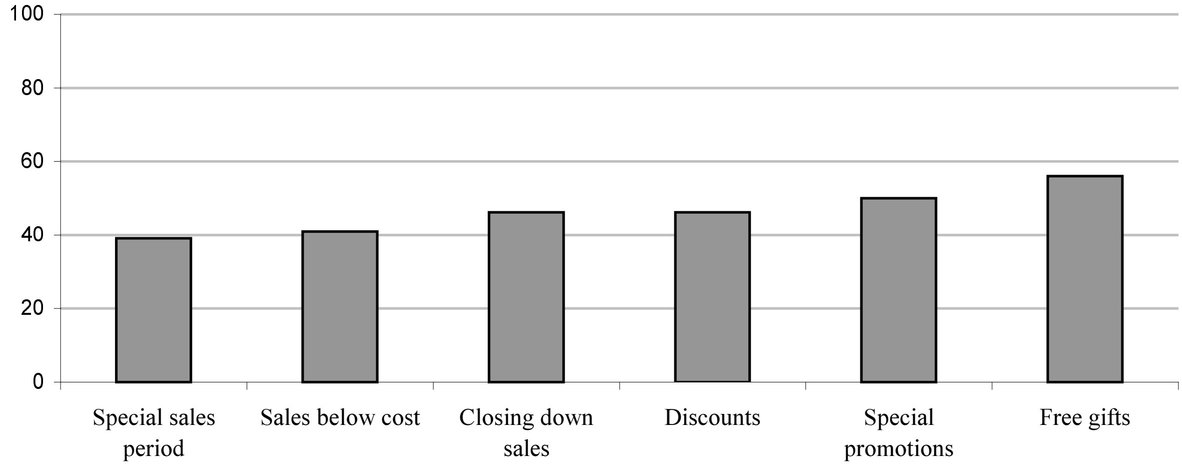
Percentage of countries in each category, 1998



Source: OECD International Regulation Database.

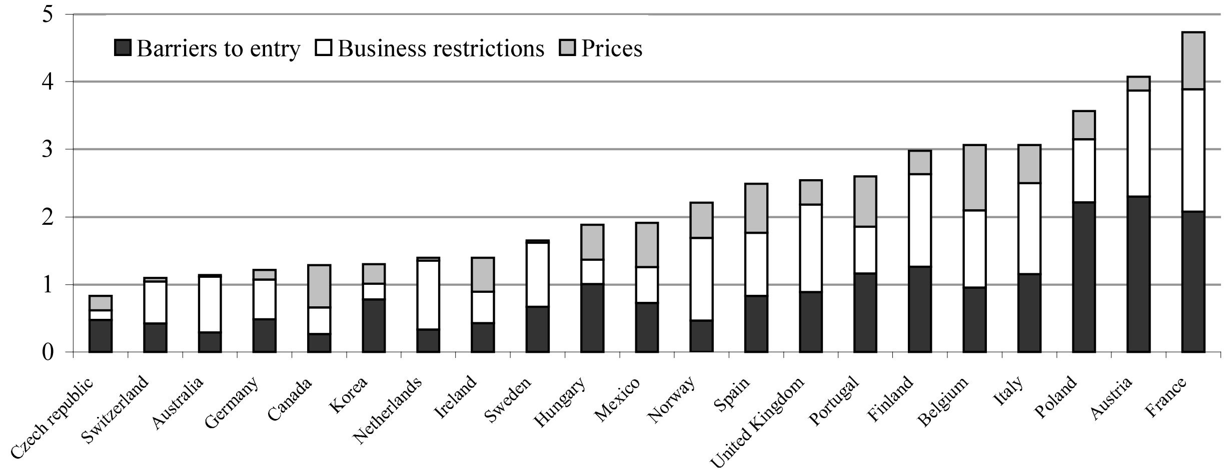
Figure 13. **Retail distribution: Limitations on promotion**

Percentage of countries having limitations, 1998



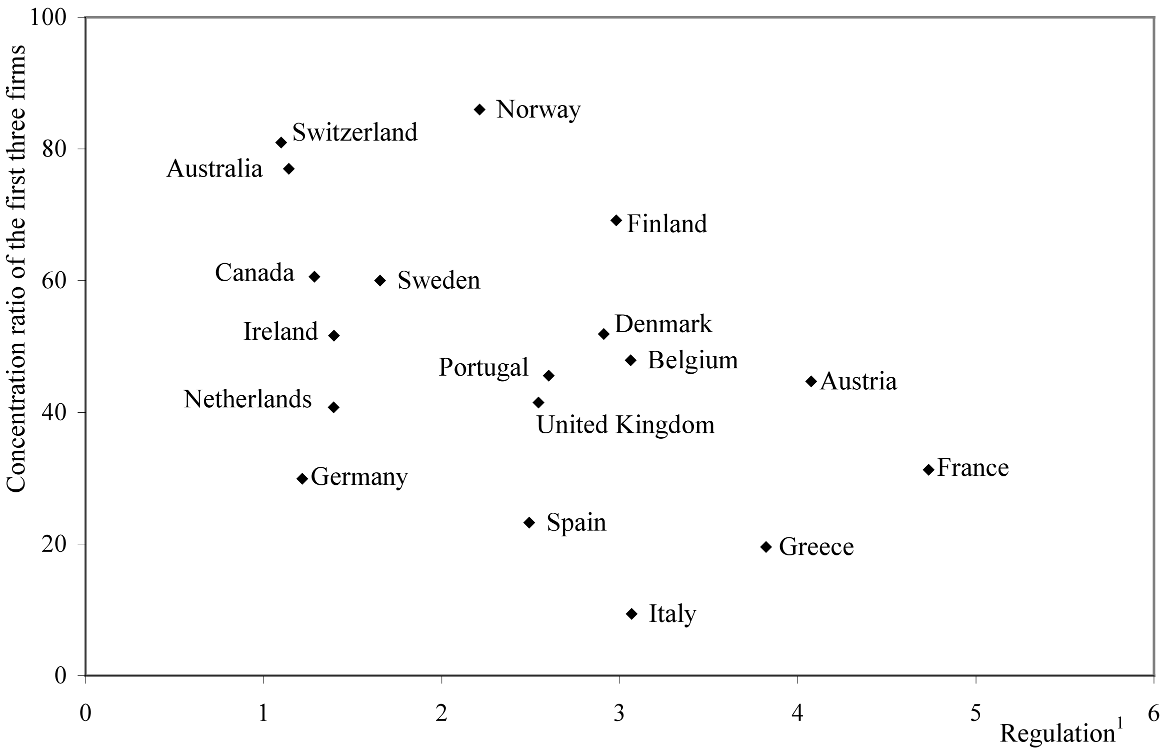
Source: OECD International Regulation Database.

Figure 14. **Retail distribution: Summary indicators**[1]



1. The scale of indicators is 0-6 from least to most restrictive.

Figure 15. **Retail distribution: Index of concentration and regulation**



1. The scale of indicators is 0-6 from least to most restrictive.

ANNEX TABLES

Table A1.1 **Road freight: Regulatory reform in OECD countries**

Key for high, medium and low regulation categories[1]

Indicator	Regulation		
	High	***Medium***	***Low***
Barriers to entry	The number of firms is legally restricted	Substantial liberalisation has occurred but entry is not free	Liberalised entry
Price controls	Fares or rates are set or approved by the regulatory authority	The firm is given some but not complete freedom in setting price	The firm has complete freedom in setting price
Service restrictions	Routes, capacity and scheduling are set or approved by the regulatory authority	Firms are given some but not complete freedom in selecting services they supply	Firms have complete freedom in choosing the services they supply
Public ownership	The firm is either fully or majority-owned by the government	A publicly-owned firm is in competition whith privately-owned firms or the government has a minority stake in at least one or several firms in the market	Marginal public share or fully privately owned

Countries covered in each indicator

Barriers to entry	Price controls	Service restrictions	Public ownership
Australia	Australia	Australia	Australia
Austria	Austria	Austria	Austria
Canada	Canada	Canada	Canada
Denmark	Denmark	Denmark	Denmark
Finland	Finland	Finland	Finland
Germany	Germany	Germany	Germany
Ireland	Ireland	Ireland	Ireland
New Zealand	New Zealand	New Zealand	New Zealand
Norway	Norway	Norway	Norway
Spain	Spain	Spain	Spain
Sweden	Sweden	Sweden	Sweden
Switzerland	Switzerland	Switzerland	Switzerland
Turkey	Turkey	Turkey	Turkey
United Kingdom	United Kingdom	United Kingdom	United Kingdom
United States	United States	United States	United States
	Japan	Japan	Japan

1. Indicator for 1975 and 1990 from OECD (1992). Indicator for 1998 from OECD International Regulation Database.

Table A1.2 **Road freight: Coverage of OECD countries in detailed indicators**

Countries excluded in each indicator

Conditions to start a new business, 1998		**Conditions for foreign firms, 1998**	
All indicators	Iceland Luxembourg	All indicators	Denmark Iceland Ireland Luxembourg
Other conditions than technical and financial fitness and public safety requirements	Australia Ireland Japan Switzerland Turkey	Right for foreign firms to operate in domestic market	Netherlands Switzerland
Regulator has power to limit industry capacity	Ireland	All indicators except "Right for foreign firms to operate in domestic market"	Australia Czech Republic Finland Japan Korea New Zealand Spain United Kingdom
		Restriction to pick up freight and Complete prohibition of cabotage	Netherlands
		Domestic carrier requirements for public traffic	Netherlands
		Other constraints	Netherlands Poland Portugal Sweden

Constraints on business operation, 1998		**Involvement of professional associations in decisions concerning entry and prices, 1998**	
All indicators	Denmark Iceland Ireland Luxembourg	All indicators	Australia Denmark Iceland Ireland Japan Luxembourg Switzerland
Regulations prevent contract carriage	Switzerland		
Regulations prevent intermodal operations	Switzerland Korea		

Table A1.3 **Road freight : Detailed indicators[1,] 1998**

	Price controls	Restrictions on behaviour	Licencing requirements	Coverage of licences	Simplification of rules and procedures	Discriminatory procedures	Involvement of professional associations[2]	Public ownership
Australia	0.0	3.0	0.0	-	0.0	0.0	0.0	yes
Austria	0.0	3.0	3.0	3.0	3.0	3.8	3.0	no
Belgium	0.0	3.0	6.0	3.0	3.0	3.3	3.0	yes
Canada	0.0	3.0	2.0	4.5	1.0	3.3	0.0	no
Czech republic	0.0	3.0	6.0	3.0	3.0	0.0	6.0	yes
Germany	0.0	3.8	6.0	3.0	0.0	3.3	3.0	yes
Denmark	-	-	2.0	3.0	-	-	-	yes
Finland	0.0	6.0	2.0	3.0	2.0	0.0	0.0	yes
France	0.0	3.0	4.0	3.0	0.0	2.8	3.0	yes
Greece	6.0	5.3	4.0	3.0	2.0	2.3	3.0	no
Hungary	0.0	5.3	4.0	1.5	4.0	2.3	6.0	no
Iceland	-	-	-	-	-	-	-	-
Ireland	-	-	-	-	-	-	-	no
Italy	6.0	3.0	6.0	3.0	6.0	2.8	6.0	no
Japan	3.0	3.0	-	0.0	-	0.0	-	no
Korea	0.0	0.0	6.0	0.0	0.0	0.0	0.0	no
Luxembourg	-	-	-	-	-	-	-	-
Mexico	0.0	2.3	4.0	1.5	0.0	2.8	3.0	no
Netherlands	0.0	4.5	2.0	1.5	2.0	-	3.0	no
Norway	0.0	3.8	4.0	1.5	4.0	2.3	0.0	yes
New Zealand	0.0	3.0	2.0	3.0	2.0	0.0	0.0	no
Poland	0.0	3.0	6.0	1.5	0.0	3.0	3.0	yes
Portugal	0.0	3.0	2.0	3.0	0.0	3.8	3.0	no
Spain	3.0	3.0	6.0	1.5	0.0	0.0	6.0	no
Sweden	0.0	3.0	4.0	1.5	4.0	3.0	0.0	no
Switzerland	0.0	4.5	-	-	-	5.5	6.0	no
Turkey	0.0	3.0	-	-	-	5.5	0.0	yes
United Kingdom	0.0	3.0	2.0	3.0	2.0	0.0	0.0	no
United States	0.0	3.0	2.0	0.0	1.0	3.3	0.0	no

1. The scale of indicators is 0-6 from least to most restrictive. See Table A1.4 for the precise definition of the indicators.
2. In decisions concerning entry and prices.

Table A1.4 **Road freight: Construction of the detailed indicators[1], 1998**

Price controls

Categorical data on:	*Question weights (c_k)*	Coding of answers[2] *Yes*	*No*
Retail prices of road freight services are regulated	1/2	6	0
Government provides pricing guidelines to road freight companies	1/2	6	0

Restrictions on behaviour

There are regulations setting conditions for driving periods and rests		1/2	6	0
Regulations prevent or constrain:	backhauling	1/8	6	0
	private carriage	1/8	6	0
	contract carriage	1/8	6	0
	intermodal operations	1/8	6	0

Coverage of licences

Does an authorization to operate extend to the entire territory of the country?	1/4	0	6
Is the authorization to operate limited in duration?	1/4	6	0
Are authorizations to operate transferable?	1/4	6	0
These entry regulations apply also if a firm wants to transport only for its own account	1/4	6	0

Involvement of professional associations in decisions concerning entry and prices

Are professional bodies or representatives of trade and commercial interests involved in specifying or enforcing entry regulations?	1/2	6	0
Are professional bodies or representatives of trade and commercial interests involved in specifying or enforcing pricing guidelines or regulations?	1/2	6	0

1. The scale of indicators is 0-6 from least to most restrictive.
2. Country scores: $\Sigma_k c_k$ answer$_{jk}$

Table A1.4 **Road freight: Construction of the detailed indicators**[1,] **1998** (continued)

Discriminatory procedures

Categorical data on:	Coding of answers[2]			
	Yes	*Question weights (c_k)*	*No*	
Foreign firms have the same right to operate in the domestic market as domestic firms	*0*			
			Yes	*No*
Restriction on Cabotage		3/4	Prohibition= 6	Limitation =3
Domestic carrier requirements for public traffic		1/12	6	0
Restrictions on the possibility for foreign firms to pick up freight		1/12	6	0
Other constraints		1/12	6	0

Simplification of rules and procedures

	Overall weight	*Question weights (c_k)[3]*	*Yes*	*No*
Within the last five years, have laws or regulations removed restrictions on: Own-account shipments ?	Normalised value of the indicator of "entry : licence" (w)	1/2	0	6
Within the last five years, have laws or regulations removed restrictions on: Commercial, for-hire shipments ?		1/2	0	6

Licencing requirements

	Question weights (c_k)[3]	*Yes*	*No*
In order to operate a national business you need to obtain a license (other than a driving license) or a permit from the government or a regulatory agency	1/3	6	0
There are criteria other than technical and financial fitness and compliance with public safety requirements considered in decisions on entry of new operators	1/3	6	0
Does the regulator, through licenses or otherwise, have any power to limit industry capacity?	1/3	4	0

1. The scale of indicators is 0-6 from least to most restrictive.
2. Country scores: 0 or $\Sigma_k c_k$ answer$_{jk}$
3. Country scores: $\omega\Sigma_k c_k$ answer$_{jk}$

Table A2.1 **Retail distribution: Concentration**

	Food retail 1996		Retail distribution 1997	
	First three firms	First ten firms	First three firms	First ten firms
Australia	77			
Austria	45	63 [4]		
Belgium	48	67 [5]		
Canada[1]	61	84 [4]		
Czech Republic		16	4	11
Denmark	52	61 [4]		
Finland	69	88 [6]	10	
France	31	59	12	
Germany	30	55 [5]		
Greece	20	33 [4]		
Hungary		53	12	25
Ireland	52	65 [6]		
Italy	9	15		
Japan			4	7
Mexico			10	
Netherlands	41	52 [7]		
Norway[2]	86			
Poland		2		1.5
Portugal	46	61 [4]		
Spain	23	36		
Sweden	60	78 [6]	19	
Switzerland[2]	81		26	
United Kingdom	41	58 [8]		
United States	17 [3]	38 [3]	7 [9,10]	10 [5,9]
European Union	10	25		

1. 1998.
2. 1995.
3. 1997.
4. First 7 firms.
5. First 8 firms.
6. First 5 firms.
7. First 6 firms.
8. First 9 firms.
9. 1992.
10. First 4 firms.

Sources: Dobson 1999; OCDE 1999, 2000; OECD International Regulation I
Pilat 1997; Pelegrini 1999; DREE.

Table A2.2 **Retail distribution: Coverage of OECD countries in detailed indicators**

Countries excluded in each indicator

Market access, 1998	
A. Registration in commercial register	
All indicators	Greece Iceland Luxembourg New Zealand United States
B. Licences or permits needed for outlet siting	
All indicators	Greece[1] Japan Korea Luxembourg Netherlands New Zealand United States
C. Monopoly	
All indicators	Luxembourg New Zealand United States
Pharmaceutical and tobacco products[2]	Australia Canada Czech Republic Germany Greece Hungary Ireland Japan Korea Poland Portugal Switzerland

Price controls, 1998	
All indicators	Luxembourg United States
Pharmaceuticals	Canada Japan
Tobacco and Gasoline	Canada
Certain staples	Japan

Specific regulations of large outlets, 1998	
All indicators	Greece Iceland Luxembourg New Zealand United States

Regulations concerning shop opening hours, 1998	
All indicators	Luxembourg United States
Saturday and Sunday	Canada Czech Republic Hungary Ireland Korea Mexico New Zealand Poland Sweden Turkey
Saturday	Greece
Sunday	Austria Germany
More flexible in the last 5 years	Poland

Limitations on promotions, 1998	
All indicators	Japan Luxembourg NewZealand United States
Free gifts	Netherlands
Special sales period and sales below cost	Netherlands Poland Turkey
Sales below costs	Germany

1. Greece is included in the general indicator only.
2. For alcohol, the same countries are exluded except Poland.

Table A2.3 **Retail distribution : Specific regulation of large outlets, 1998**

	Compliance with regulation especially designed for large outlets	Laws and regulations became stricter in the last 5 years	Surface limit for laws or regulations to apply	Laws or regulations are enforced	Establishment of a large outlet requiries a specific application process, substituting or supplementing the Type 2 licensing procedures	Maximum deadline (in days) for answering to the license application (Type2 and 4)	Existing outlets wanted to expand their sale surface are subject to the same procedures as new large outlets	Refusal to allow the engagement (Type 2, Type 3 or Type 4 procedures) are based on a discretionary assessment of market needs by the competent licensing office
Australia	No	-	-	-	-	-	-	..
Austria	Yes	Yes	800 m2	Nationally and locally	Yes	180	Yes	No
Belgium	Yes	Yes	1000m2	Nationally and locally	Yes	165	Yes	Yes
Canada	No	-	-	-	-	-	-	No
Czech republic	No	-	-	-	-	-	-	No
Denmark	Yes	Yes	..	Nationally and locally	Yes	.	Yes	Yes
Finland	Yes	Yes	2000 m2	Nationally	.	.	..	..
France	Yes	Yes	300m2	Locally	Yes	120	.	Yes
Germany	Yes	No	1200m2	Locally	No	.	Yes	No
Greece	Yes	Yes	200-2000 m2	Locally	No	.	Yes	No
Hungary	Yes	Yes	20000 m2	Nationally	No	.	Yes	No
Ireland	Yes (only food)	Yes	3000 m2	Locally	.	.	Yes	Yes
Italy	Yes	No	1500-2500m2	Nationally and locally	Yes	180	Yes	No
Japan	Yes	No	500m2	Nationally	Yes	365	Yes	..
Korea	Yes	No	3000m2	Nationally	Yes	20	No	No
Mexico	Yes	Yes	5000m2	Locally	Yes	21	Yes	Yes
Netherlands	No	-	-	-	-	-	-	No
Norway	Yes	Yes	3000m2	Nationally	No	..	Yes	..
Poland	..	-	..	-	..	..	.	No
Portugal	Yes	Yes	..	Nationally and locally	Yes	60	Yes	Yes
Spain	Yes	Yes	2500m2	Nationally and locally	Yes	..	Yes	No
Sweden	No	-	-	-	-	-	-	No
Switzerland	Yes	Yes	5000m2	Nationally and locally	No	..	Yes	No
Turkey	Yes	No	..	Locally	Yes	..	Yes	No
United Kingdom	Yes	Yes	..	Locally	Yes	..	Yes	Yes
European Union	Yes	No	..	Nationally and locally	Yes	.	Yes	Yes

Source: OECD International Regulation Database.

Table A2.4 **Retail distribution : Regulations concerning shop opening hours, 1998**

	Are shop opening hours regulated ?	At which level of government regulations are applied ?	Opening hours for : Weekdays	Saturday	Sunday	Maximum hours an outlet can be open per week	Mandatory minimum shut down days during the year
Australia	Yes	State	No limit	Not regulated	Some restrictions	Not regulated	Not regulated
Austria	Yes	National and State	6-19	6-17	..	66	60
Belgium	Yes	Local	5-20	5-20	5-20	91	37
Canada	Yes	National and Local	..	..	..	..	..
Czech Republic	No	-	No limit	No limit	No limit	No limit	No limit
Denmark	Yes	National	No limit	Closed from 17	Closing day with few exception	Closed from 17 on Saturday to 6 on Monday	Sundays and national holidays
Finland	Yes	National	7-21	7-21	Only during June,July, August and December	81	..
France	Yes	National	No limit	No limit	5 Sundays per year	75	52 plus national holidays
Germany	Yes	National	6-18	6-16	..	70	..
Greece	Yes	National and Local	6-20	..	Closed	..	..
Hungary	No	-	No limit	No limit	No limit	No limit	No limit
Iceland	Yes	National and Local	No limit	No limit	No limit	..	5
Ireland	No	-	No limit	No limit	No limit	No limit	No limit
Italy	Yes	National and Local	7-22	7-22	Closing day with few exception	78	Sundays and national holidays
Japan	Yes	National	Authorization to be open after 20 (large outlet)	Authorization to be open after 20 (large outlet)	Authorization for less than 24 days holidays a year (large outlet)	..	Authorization for less than 24 days holidays a year (large outlet)
Korea	No	-	No limit	No limit	No limit	No limit	No limit
Mexico	No	-	No limit	No limit	No limit	No limit	No limit
Netherlands	Yes	National	6-22	6-22	9 Sundays per year	No limit	No limit
New Zealand	Yes	National	..	..	..	..	..
Norway	Yes	National	6-21	6-18	Closed	..	..
Poland	No	-	No limit	No limit	No limit	No limit	No limit
Portugal	Yes	National and Local	6-4	6-4	6-4	Variable	Variable
Spain	Yes	State and Local	Minimum 72 hours per week	Minimum 72 hours per week	Minimum 8 days depends on regional regulation	Variable	Variable
Sweden	No	-	No limit	No limit	No limit	No limit	No limit
Switzerland	Yes	State and Local	6-20 (Zurich)	6-16 (Zurich)	Exceptions for some outlets and tourist regions	Variable	Variable
Turkey	Yes	State and Local	..	..	..	..	..
United Kingdom	Yes	National and Local	No limit	No limit	Closed	No limit	1

Source: OECD International Regulation Database.

Table A2.5 **Retail distribution : Detailed indicators[1], 1998**

	Registration in commercial register	Protection of existing firms	Licences or permits needed to engage in commercial activity	Licences or permits needed for outlet siting	Specific regulation of large outlet	Price controls	Regulation concerning shop opening hours	Limitations on promotion	Public ownership
Australia	0.0	1.5	2.0	0.0	0.0	0.0	5.5	1.2	Yes
Austria	6.0	3.0	6.0	4.0	5.0	0.0	5.5	0.0	Yes
Belgium	0.0	3.0	3.0	4.0	4.0	4.0	6.0	6.0	No
Canada	0.0	0.0	2.0	2.0	0.0	3.0	3.5	0.0	No
Czech Republic	1.5	0.0	2.0	2.0	0.0	1.0	0.0	0.0	No
Denmark	0.0	6.0	-	6.0	4.0	1.0	5.5	4.8	No
Finland	0.0	4.5	6.0	0.0	3.0	1.0	5.5	6.0	Yes
France	3.0	6.0	6.0	4.0	6.0	3.0	5.5	4.8	No
Germany	0.0	0.0	0.0	6.0	4.0	0.0	5.5	6.0	No
Greece	-	3.0	6.0	-	6.0	2.0	3.5	2.4	No
Hungary	4.5	0.0	2.0	2.0	1.0	2.4	0.0	0.0	Yes
Iceland	0.0	4.5	4.0	2.0	-	1.0	3.5	2.4	Yes
Ireland	0.0	3.0	0.0	0.0	3.0	2.0	0.0	4.8	No
Italy	0.0	6.0	4.0	4.0	4.0	2.0	3.5	4.8	No
Japan	6.0	3.0	-	-	6.0	1.5	5.5	-	No
Korea	3.0	0.0	0.0	-	3.0	1.0	0.0	4.8	No
Luxembourg	-	-	-	-	-	-	-	-	-
Mexico	0.0	3.0	4.0	4.0	1.0	3.0	0.0	3.6	No
Netherlands	0.0	3.0	2.0	-	0.0	0.0	5.5	-	No
Norway	0.0	4.5	0.0	0.0	3.0	2.0	5.5	1.2	No
New Zealand	-	-	-	-	-	0.0	0.0	-	No
Poland	4.5	3.0	6.0	0.0	6.0	1.0	0.0	-	Yes
Portugal	3.0	0.0	2.0	2.0	4.0	3.0	4.0	3.6	No
Spain	0.0	3.0	3.0	2.0	3.0	3.0	4.0	6.0	Yes
Sweden	0.0	6.0	4.0	4.0	0.0	0.0	0.0	1.2	Yes
Switzerland	0.0	1.5	2.0	0.0	1.0	0.0	3.5	0.0	No
Turkey	1.5	3.0	6.0	2.0	-	2.0	3.5	-	No
United Kingdom	0.0	6.0	2.0	-	4.0	1.0	3.5	0.0	No
United States	-	-	-	-	-	-	-	-	No

1. The scale of indicators is 0-6 from least to most restrictive. See Table A2.6 for the precise definition of the indicators.

Table A2.6 **Retail distribution: Construction of the detailed indicators[1], 1998**

Price controls

Categorical data on:	Coding of answers[2]		
	Question weights (c_k)	***Yes***	***No***
Retail prices of:			
certain products are subject to price controls	1/7	6	0
certain staples (e.g. milk and bread) are subject to price controls	1/7	6	0
gasoline are subject to price controls	1/7	6	0
tobacco are subject to price controls	1/7	6	0
alcohol are subject to price controls	1/7	6	0
pharmaceuticals are subject to price controls	1/7	6	0
Retail prices of other product are subject to price controls	1/7	6	0

Regulation concerning shop opening hours

Shop opening hours are regulated	2/3	6	0
Government regulations on shop opening hours apply at national level	1/3	6	0
The regulation of opening hours became more flexible in the last 5 years	*	0	6

* - 0.5 to the industry-specific score if answer is "yes"

Licenses or permits needed to engage in commercial activity

Licenses or permits needed to engage in commercial activity	1/3	6	0
Are Type 2 licenses product specific?	1/3	6	0
Are Type 2 licenses related to a certain type of activity?	1/3	6	0

Protection of existing firms

Are there products that can only be sold in outlets operating under a local or national legal monopoly (franchise)?	1/2	6	0
Are professional bodies or representatives of trade and commercial interests involved licensing decisions?	1/2	6	0

Limitations on promotion

Special promotions	1/5	6	0
Closing down sales	1/5	6	0
Discounts	1/5	6	0
Free gifts	1/5	6	0
Special sales or inventory cleanups	1/5	6	0

1. The scale of indicators is 0-6 from least to most restrictive.
2. Country scores: $\Sigma_k c_k$ answer$_{jk}$

Table A2.6 **Retail distribution: Construction of the detailed indicators**[1] (continued)

Licenses or permits needed for outlet siting

Categorical data on:	Coding of answers[2]			
	No	***Question weights (c_k)***	***Yes***	
Licenses or permits needed for outlet siting	0			
			Yes	***No***
In setting up a retail outlet is it necessary to apply for a site or is abiding by the zoning regulations sufficient?		1/3	6	0
Are there specific regulations for the location of retail distribution outlets in addition to general urban planning rules?		1/3	6	0
Can local regulatory authorities set a maximum total sales surface limit for certain products or product aggregates in one geographic area?		1/3	6	0

Registration in commercial register

	Scale 0-6				
	0	1.5	3	4.5	6
Registration in commercial register	No				
Does the registration office have statutory deadlines for approving and/or confirming registration?	No				
Maximum deadline? (in days)	0	>0	>15	>30	>70

Specific regulation of large outlet

	Scale 0-6						
	0	1	2	3	4	5	6
What is the threshold surface limit for these laws or regulations to apply? (in m2)	No limit	>4999	>2999	>1999	>999	>500	<501

1. The scale of indicators is 0-6 from least to most restrictive.
2. Country scores: 0 or $\Sigma_k c_k$ answer$_{jk}$

Table A2.7 **Retail distribution: Selected statistics on economic structure, basic indicators**[1]

	Turnover (billion US$)		Employment (thousands)		Number of enterprises (thousands)		Number of outlets (thousands)	
European Union countries								
Austria	42	*1996*	256	*1996*	39	*1996*	30	*1997*
Belgium	55	*1996*	276	*1996*	124	*1991*	140	*1990*
Denmark	32	*1995*	194	*1995*	32	*1995*	33	*1997*
Finalnd	21	*1997*	100	*1997*	24	*1997*	39	*1995*
France	319	*1996*	1445	*1996*	392	*1996*	389	*1995*
Germany	403	*1996*	2693	*1996*	294	*1996*	401	*1993*
Greece	26	*1993*	579	*1993*	199	*1993*	185	*1990*
Ireland	15	*1997*	132	*1997*	21	*1997*	53	*1997*
Italy	209	*1996*	1511	*1996*	709	*1996*	564	*1996*
Netherlands	69	*1996*	585	*1996*	86	*1996*	115	*1995*
Portugal	35	*1996*	371	*1996*	118	*1996*	152	*1997*
Spain	113	*1992*	1537	*1992*	570	*1992*	559	*1997*
Sweden	47	*1996*	288	*1993*	55	*1996*	44	*1996*
United Kingdom	301	*1996*	3030	*1993*	207	*1996*	197	*1994*
Other OECD countries								
Australia	79	*1992*	759	*1992*			70	*1992*
Canada	94	*1985*	1489	*1985*			178	*1985*
Czech Republic	24	*1996*	931	*1996*			70	*1997*
Hungary	16	*1997*	197	*1997*			123	*1997*
Iceland	2	*1996*	8	*1995*	3	*1992*	2	*1990*
Japan	1221	*1997*	7351	*1997*	1300	*1993*	1420	*1997*
Korea	162	*1995*	1890	*1995*			836	*1995*
Mew Zealand			144	*1990*			32	*1990*
Mexico	100	*1993*	2368	*1993*			1133	*1993*
Norway	40	*1996*	188	*1996*	38	*1993*	41	*1996*
Poland	70	*1997*	1959	*1997*			960	*1997*
Switzerland	65	*1996*	358	*1996*			55	*1996*
Turkey	12	*1996*	291	*1996*			317	*1996*
United States	2562	*1997*	18407	*1992*	1589	*1993*	1566	*1997*
European Union[2]	1759	*1996*	12352	*1996*	2804	*1996*	3939	*1990*
European Union[3]	2593	*1996*	15473	*1996*	4040	*1996*	5237	*1996*

1. Retail statistics are only provided on a national basis by statistical offices that use different definitions and methods.
2. Excluding sales of motor vehicles.
3. Including sales of motor vehicles.

Sources: EUROSTAT; OECD; The european retail handbook 1997; Economic census, 2000.

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