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REGULATORY REFORM IN RETAIL DISTRIBUTION

Olivier Boylaud and Giuseppe Nicoletti

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INTRODUCTION

Distribution is a key sector of OECD economies, accounting for more than 10 per cent of GDP in most OECD countries. Its market structure has been traditionally characterised by monopolistic competition, with low entry barriers, high entry and exit rates and a large number of competitors whose size is relatively small (Scherer, 1979). Although this picture remains partly true, recent changes in some segments of the industry, such as food retailing, suggest a move towards rising concentration and retailer power (Dobson and Waterson, 1999; Hewitt, 2000). These developments have been linked to the presence of exogenous barriers to entry related mainly to capital requirements and access to distribution channels in an increasingly vertically-integrated industry (Gable *et al.* 1995; Carree and Thurik, 1996). At the same time, new forms of competition have emerged, such as the growing internationalisation of groups and the development of on-line electronic commerce (OECD, 1999, 2000*b*).

Changes in the distribution sector have occurred against the background of a variety of national regulatory environments. Although in the past two decades the tendency in many OECD Member countries has been to implement major structural reforms in service industries, regulations in retailing remain widely different across countries and often constitute (or add to) exogenous barriers to entry in the industry. With few exceptions (*e.g.* Høj *et al.*, 1995; Pilat, 1997) regulations affecting retailing and their economic impact have received little attention. The main purpose of this paper is to analyse cross-country differences in the regulation of the retail distribution industry in the OECD area, focusing on the situation in 1998. Regulatory differences are cast against changes in the industry environment to highlight the potential interactions between regulation and market forces. However, a full analysis of these underlying changes and interactions is outside the scope of the paper, which is mainly descriptive. It is important to note at the outset that, due to data limitations, the analysis is often unable to distinguish between the different segments that constitute the industry (*e.g.* food *versus* non-food), even though differences may be relevant for the study of competition and regulation issues.

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 available evidence on the outcomes of regulatory reform. The data on regulation and market structure are taken primarily from the OECD *International Regulation Database*.¹

STRUCTURE OF THE INDUSTRY

Distribution is the principal link between the producer and the end-consumer and plays a major role in price formation. Table 1 provides a few indicators of economic structure and performance for the distribution industry and its retail branch. Comparable data on value added and employment in distribution is hardly available at the international level. Therefore, the table draws on both national accounts and other sources, such as OECD service statistics and survey data on small and medium-sized enterprises. According to these data, the structure and performance of the retail distribution industry varies widely from one country to another. In 1996-1997 wholesale and retail trade accounted for between 9 and 18 per cent of GDP and 13 to 26 per cent of total employment; the retail branch, for which less data are available, accounted for between 3 and 7 per cent of GDP and 4 and 16 per cent of total employment. Differences in outlet density and average size (measured in terms of employees) of retail distribution enterprises were significant. Similarly, the gap in turnover or value added per employee between different OECD countries often appeared to be large.²

Retail distribution is an industry with a mostly competitive structure that typically has a large number of firms and relatively high entry and exit rates.³ 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). However, the industry is highly dynamic and has been changing rapidly in the past two decades. Furthermore, market structures may differ a lot between its different segments. Recently, there was 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.⁴

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 firms⁵ (OECD, 1997; Reardon *et al.*, 1996).

Table 1. Selected statistics on economic structure, 1996 or 1997

	Employment (percentage of total employment)		Value added (percentage of total GDP)		Value added per employed (1 000 US\$ PPP)		Turnover per employed in retail (1 000 US\$ PPP)	Employed per enterprise in retail	Outlets per 1 000 inhabitants
	Retail	Wholesale and retail	Retail	Wholesale and retail	Retail	Wholesale and retail			
Australia	9.9 ¹	17.4	..	10.8	..	31	104 ¹	10.8 ^{1, 6}	4.0 ¹
Austria	6.6	13.4	4.3	11.9	31	42	142	7.4	3.7
Belgium	12.7	13.3	..	10.9	..	50	104	4.7	14.0 ⁸
Canada	12.7 ²	18.7	..	9.3	..	25	63 ²	8.4 ^{2, 6}	6.9 ²
Czech Republic	8.5	15.0	3.7	10.8	12	20	59	3.4	6.8
Denmark	6.9	15.9	3.8	11.5	27	36	180	6.9	6.3
Finland	6.0	11.9	3.1	9.4	26	39	177	5.2	7.6 ⁹
France	7.2	13.8	4.0	9.2	31	36	199	4.7	6.7 ⁹
Germany	8.2	15.5	4.1	10.0	25	31	138	6.6	4.9 ³
Greece	15.6 ³	14.4	6.5	13.1	16	34	..	2.9 ³	18.3 ⁸
Hungary	10.7	13.9	4.7	10.2	12	20	41	3.1 ⁶	12.1
Iceland	7.0	13.6	..	..	..	..	183	5.2	6.7 ⁸
Ireland	9.6	..	..	..	..	..	114	5.1	14.4
Italy	7.6	17.3	2.9	12.6	24	44	138	2.1	9.8
Japan	11.2	17.1	..	11.8	..	33	166	5.7 ³	11.3
Korea	9.2 ⁴	..	..	..	..	..	86 ⁴	2.3 ^{4, 6}	18.6 ⁹
Luxembourg	10.0	21.1	3.4	10.2	30	43	..	..	..
Mexico	15.2 ³	..	..	15.1	..	..	42 ³	2.1 ^{3, 6}	13.1 ³
Netherlands	6.9	15.1	3.7	12.0	30	45	157	5.2	7.4 ⁹
New Zealand	6.8	15.3	..	..	..	..	..	5.4	9.5 ⁸
Norway	8.8	15.2	..	9.8	..	34	212	5.8	9.3
Poland	7.4	13.2	..	18.4	..	26	62	1.8	24.8
Portugal	8.4	17.2	4.4	13.3	17	26	90	3.3	15.2
Spain	12.8	22.3	..	13.3	..	28	113	2.9	14.2
Sweden	4.6	12.9	..	9.5	..	34	253	6.0	5.0
Switzerland	9.4	..	..	..	..	..	182	8.8 ⁷	7.8
Turkey	4.3 ⁵	..	5.4	14.4	22	..	13	2.9 ⁶	5.1
United Kingdom	10.0	16.4	..	10.7	..	30	132	8.7	3.4 ¹⁰
United States	8.9	25.8	..	16.8	..	43	132	15.3	5.8

1. 1992.

2. 1985.

3. 1993.

4. 1985.

5. Dependent employees only.

6. Retail outlet.

7. 1995/1996.

8. 1990.

9. 1995.

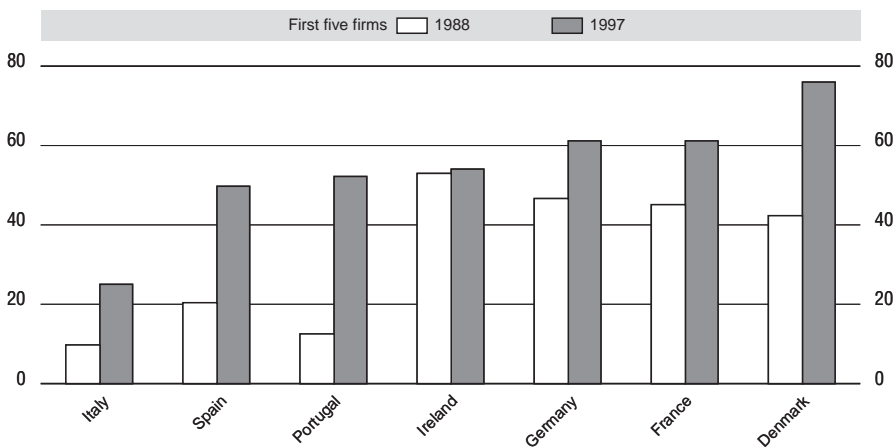
10. 1994.

 Sources: Dobson, 1999; OECD *International Regulation Database*; Eurostat.

The trend towards concentration is particularly marked in food distribution (Figure 1 and Table 2). 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, the ten largest retail distributors (excluding purchasing groups) 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.

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*b*). Food retailers also tend to strengthen their contractual position by signing co-operative agreements with

Figure 1. **Evolution of market concentration in food retail distribution**
Percentage shares of turnover



Source: OECD, EC, 2000.

Table 2. **Concentration**
Market shares based on sales

	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; OECD *International Regulation Database*; Pilat, 1997; Pellegrini, 2000; DREE, 1999.

other retailers in order to counter the market power of major food producers and compete more effectively with other large-sized 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 (Dobson, 1999).⁶ As a result, if purchasing groups are taken into account, the concentration index for food distribution is significantly higher for several countries (Boylaud, 2000).

The upshot of the trend towards concentration and vertical integration has been to strengthen the power of large distributors over their suppliers and to encourage the growth of own-brand product distribution (Boylaud, 2000). When there is a large number of producers and no dominant brand, there is a risk that domestic and/or international alliances between retail firms could reduce competition between retailers and give them monopsony powers over producers.⁷

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).⁸ 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).⁹ Countries which traditionally had very restrictive regulations (Italy, for example) have hindered the development of large national distribution groups as well as the internationalisation of their industry.

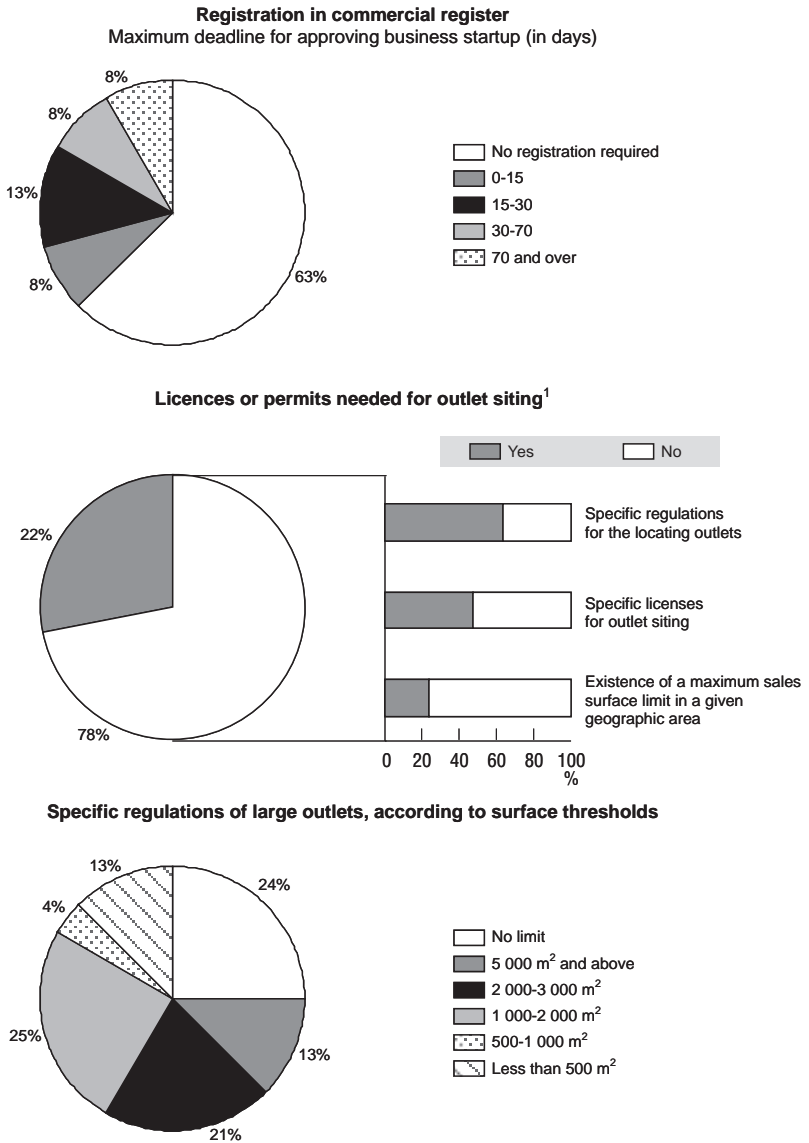
THE REGULATORY FRAMEWORK IN OECD COUNTRIES (1998)

Despite its generally competitive nature, retail distribution is often subject to numerous regulations. In 1998, the most recent year for which comparable data are available, the strictness and scope of these 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.¹⁰

Market access

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 2).

Figure 2. **Market access**
 Percentage of countries in each category, 1998



1. In addition to zoning restrictions.
 Source: OECD International Regulation Database.

In most of the countries considered, registration in the trade register is not a requirement for operating a business. 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).¹¹

The regulations concerning commercial real estate and zoning are among the greatest barriers to the development of retail services (OECD, 2000). Even in relatively liberal countries, such as the United States, availability of store locations is one of the main exogenous barriers for new entrants in the retail business (Gable *et al.*, 1995). In most OECD countries, special regulations over and above urban planning regulations apply to retail premises. 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). Unduly restrictive regulations generally lead to rigidities and hamper modernisation of the sector. Nation-wide legislation, superimposed on local and urban planning rules, is often used to reduce competition in the distribution sector. At the same time, local regulations can have effects similar to national laws.¹² For instance, there is a danger that quantitative limits on retail floor space in a given geographical area can be used to restrict competition by barring access to potential new entrants. This is especially likely when limits are endorsed by established retailers through their involvement in the decision process (for instance when professional associations participate in bodies designing and implementing industry regulations). The influence of local lobbies on local authorities may make entry particularly difficult for outsider (or foreign) companies wishing to enter local markets.

Besides registration and permission for outlet siting, in most countries a specific licence or permit is needed to operate a retail business. For instance, licences often limit the range of goods that can be sold in an outlet. Further authorisations or permits may be required for retailing additional or special products. The more permits are required, the greater the risk of restricting competition by increasing the costs of formalities for new entrants on the market.

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. 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.

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).

The restrictions on large-scale outlets have several consequences. Firstly, they slow down consolidation and modernisation of the sector (Høj *et al.*, 1995), hindering efficiency gains from the exploitation of scale and scope economies. This limits and rations the specialised services that new retail formats can offer consumers and may impede positive spillovers of large commercial centres on “fringe” stores (Bertrand and Kramarz, 2000). Secondly, they are likely to benefit incumbent firms, making it difficult for a new competitor to enter the market, and in some cases helping to maintain dominant positions. They may also 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). Finally, restrictions on large-scale outlets may reduce firms’ market power over their suppliers (Pellegrini, 2000).

The frequency of restrictions on large-scale outlets (according to the relevant legal threshold on retail floor space) is shown in Figure 2.¹³ The threshold floor areas above which regulatory requirements apply differ widely from one country to another (from 300 m² in France to 5 000 m² in Switzerland and Mexico). In many countries, the threshold is relatively low (less than 1 000 m²). 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.¹⁴ There is a generalised trend towards more stringent legislation in OECD countries (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.

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 outlets became widespread. Furthermore, 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). As a result, the density of large outlets bears little relationship with the existence of strict national legislation: for instance in 1995 low densities were observed in both Italy (which has national restrictions) and the Netherlands (which has no such restrictions), while France (which has national restrictions) had a relatively high density of hypermarkets (Pilat, 1997).

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 m² in 1998. In both countries, the main difficulties have been the scarcity of sites, and zoning policies (OECD, 2000). Lastly, Italy substantially overhauled its legislation on retailing in 1998.¹⁵

Regulations affecting the operation of the sector

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 (for details, see Pilat, 1997, and Boylaud, 2000). In 1998, a number of countries had few regulations on opening hours (the Czech Republic, Hungary, Ireland, Korea, Mexico, Poland, Sweden), with the main restrictions relating 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.

There is now a marked trend towards liberalising opening hours, largely in response to consumer demands (EC, 2000). Pilat (1997) discusses in considerable detail the potential economic impacts of making shop opening hours more flexible as well as the available evidence in EU countries that implemented this reform relatively early on (such as Sweden and the Netherlands). On the whole, increased flexibility enhances consumer welfare, stimulates employment in distribution and strengthens the position of large distribution firms relative to small outlets, while the impact on sales has generally been less significant than expected. Research taking stock of the experience with hours flexibility in

reforming countries has reached these conclusions looking at the sources and magnitude of welfare gains and employment effects (Gradus, 1996; Burda, 2000; Gersbach, 1999; McKinsey, 1997). Gains come mainly from cost efficiency improvements in large outlets due to a better exploitation of economies of scale (partly offset by an increase in costs for small outlets), an enlargement of the product mix and a lowering of product and labour market rents (related to entry of new outlets and a decrease in bargaining power of distribution workers, due to the rise in part-time employment).¹⁶ The employment effects have been shown to be large comparing both the evolution of distribution employment in a country before and after reforms (*e.g.* the Netherlands) and differences in distribution employment across liberal and restrictive countries.

Price controls exist in most OECD countries but generally concern only a few products. Price restrictions apply mainly to pharmaceuticals, tobacco and petrol. Only four countries maintain price controls on certain food products (Belgium, Iceland, Mexico and Turkey).¹⁷ Temporary controls, it should be added, are sometimes implemented in response to specific situations.

Regulation of promotional activities, on the other hand, is frequent. 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, 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).

INDICATORS OF REGULATION IN THE RETAIL DISTRIBUTION INDUSTRY (1998)

Based on the regulatory information presented above, factor analysis makes it possible to classify regulations governing access to the retail distribution sector, and its operation, into three categories:¹⁸ *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 business 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 3).

Table 3. Regulation: the discriminating factors

Results of factor analysis¹
Rotated factor loadings²

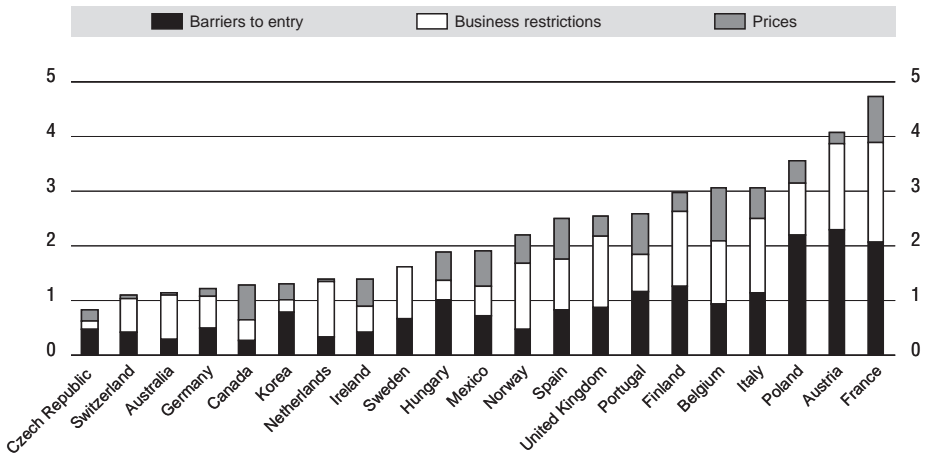
	Factor 1		Factor 2		Factor 3	
Interpretation	Barriers to entry		Operations restrictions		Prices	
Detailed indicators ³	Factor loadings	Weights of variables in factor	Factor loadings	Weights of variables in factor	Factor loadings	Weights of variables in factor
Registration in commercial register	0.78	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 outlets	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	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. Extraction method: Principal Component Analysis. Rotation method: Varimax with Kaiser normalisation.
2. Factor loadings measure the correlation between the individual indicators and the latent factors. Indicators are assigned to the factor to which they are most correlated. The rotation of factor loadings is a transformation aimed at minimising the number of indicators that are highly correlated with more than one factor.
3. See Boylaud (2000) for the precise definition of the indicators.

Quantitative summary indicators of the anti-competitive impact of regulation can be constructed for each of these categories by weighting each component of the regulatory framework by the extent to which it explains the total variance in the data. Figure 3 shows the score for each country.

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 business operation 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.¹⁹

Figure 3. Summary indicators of regulation¹



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

THE IMPACT OF REGULATION IN THE RETAIL DISTRIBUTION INDUSTRY

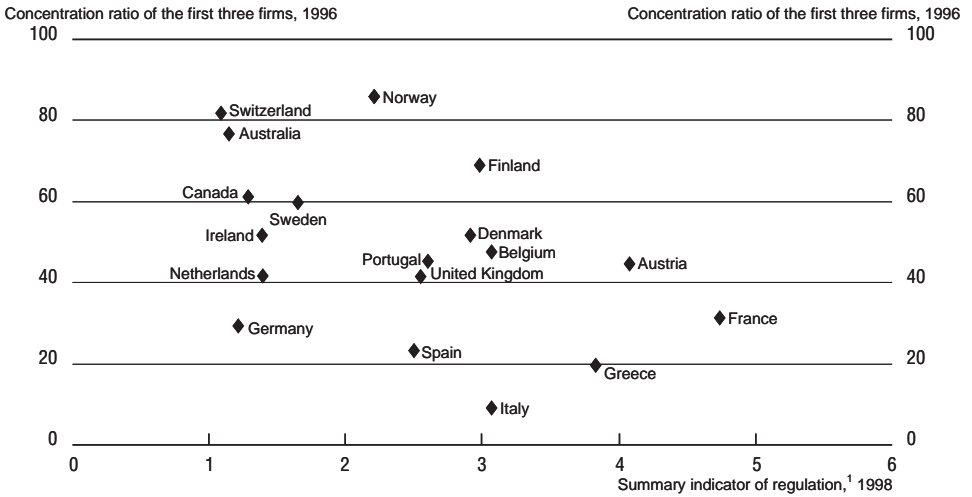
In the retail trade sector, restrictions on opening hours, excessive restrictions on the siting of outlets and the powers of veto attributed to existing retailers are often taken to have impeded the creation of those types of stores with higher valued added and which create jobs, as well limiting the range of consumer choice (McKinsey, 1994; Burda, 2000). For instance, based on a large sample of French retailers, Bertrand and Kramarz (2000) provide evidence suggesting that employment in the industry could have been 20 per cent higher over the 1975-1998 period had large outlet restrictions not been introduced. Although these restrictions are often invoked as a means to protect employment levels in “mom-and-pop” stores, the evidence suggests that the net effect of the establishment of large outlets is to increase retailing specialisation (*e.g.* with higher and lower quality food chains developing in parallel), encourage the creation of new high value/labour intensive stores and produce positive spillovers by strengthening the chances of success for other stores in the same commercial area.

Table 4 summarises the cost of retail trade regulation from the findings of several other 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

Table 4. Product market liberalisation and performance

Author	Country/period	Explanatory variable	Performance variable	Effects found	Method
Bertrand and Kramarz, 2000	France, 1975-1998	Large outlets' restrictions	Employment	Negative Employment in retailing up 20 per cent if regulation had not been introduced	Econometric
Centraal Planbureau, 1995	Netherlands	Liberalisation of shop opening hours	Employment Volume of sales Turnover and price	Increase 15 000 jobs (11 000 full time equivalent) Expand by 0.2 per cent Effect moderate	Simulation
Civildepartement, 1991 (Pilat, 1997)	Sweden	Liberalisation 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 per cent	Simulation
Høj <i>et al.</i> , 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)	Germany	Liberalisation 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: turnover decline 1-2 per cent 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 amount to L. 17.022B (including super and hypermarkets) and L.26.858B (excluding super and hypermarkets) respectively	Simulation
Pilat, 1997	10 countries (United States, Japan, Germany, France, United Kingdom, Canada, Australia, 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 4. Index of concentration and regulation



1. The scale of the indicator is 0-6 from least to most restrictive.
 Source: OECD.

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 4, which shows that the degree of concentration (percentage of the sector represented by the three largest groups) is inversely related to the overall degree of regulation. However, as argued above, excessive concentration is not positive either if it reduces competition.

CONCLUSIONS

Retail distribution is a structurally competitive industry that has undergone dramatic changes in the past two decades, especially in the food segment. Economies of scale and scope have risen, as well as the associated entry barriers, resulting in a trend towards the concentration, verticalisation and internationalisation of distribution groups. A variety of regulatory frameworks accompanied these developments in OECD countries, with different repercussions on competition in the industry. A number of countries have extensively liberalised market access

and price and service regulations. In some (mostly European) countries with relatively liberal environments, there is currently a tendency to reintroduce access restrictions for large outlets. Finally, in other countries market access has been traditionally hindered by unnecessarily restrictive regulations and excessive administrative burdens.

The available empirical evidence suggests that restricting access by imposing special requirements for outlet registration, siting and/or size thresholds curbs the dynamism of the industry (*e.g.* lowering entry and exit rates, and preventing restructuring and modernisation) and competitive pressures, leading to lower employment growth and higher consumer prices. Specifically, far from achieving the aim of supporting employment, large outlet restrictions restrain specialisation in the retailing industry, slow down the creation of high value, labour intensive stores and prevent positive spillover effects on stores operating at the fringe of large surfaces.

Given the importance of the distribution sector for overall economic performance, further cross-country evidence on the implications of regulatory reform is needed. This paper has contributed to this task by providing a summary description of regulatory differences across countries. However, two major data problems still need to be overcome. First, the data on regulation should be extended to cover several time periods (*e.g.* pre and post regulatory reform); second, better regulatory and performance statistics on the several segments that compose the distribution sector are needed.

Structural changes occurring in retailing also raise new policy issues connected to the enforcement of competition laws, such as the assessment of vertical distribution arrangements and horizontal co-operation agreements (*e.g.* buying groups). These issues were only briefly mentioned in this paper, but appropriate policy responses are crucial for ensuring that efficiency improvements and consumer benefits continue to characterise the evolution of the industry. Other important emerging issues not addressed in the paper concern consumer protection and the environmental impacts of outlet siting and product design.

NOTES

1. See www.oecd.org/subject/regdatabase and Nicoletti *et al.* (1999).
2. The figures on turnover and value added per employee can only be suggestive of differences in productivity across countries, since international comparisons of productivity levels suffer from a number of measurement problems, especially in service industries (see Pilat, 1997).
3. For example, according to firm-level data collected in the context of the OECD growth project, entry rates (*i.e.* the share of new firms in the total number) and exit rates (percentage of firms that went out of business) in the distribution sector (including both retail and wholesale trades) ranged from 7 to over 13 per cent in European countries and were around 10 per cent in the United States over the 1988-1995 period.
4. 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*b*).
5. There is also a trend towards specialisation and fragmentation of the market in response to customer needs (EC, 1997*a*). 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.
6. Franchising, which emerged later than other types of networks, has grown rapidly, especially in the non-food sector (EC, 1997*b*).
7. For a discussion of the impact of buying power and market power, in particular at the level of competition policy, see Dobson and Waterson (1999) and OECD (2000*a*).
8. 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).
9. For example, according to the ILO (1999), the internationalisation of groups in the United Kingdom and Germany increased competition in those countries. In both countries, foreign companies entered the market by buying a national distribution network and practising aggressive pricing.
10. The countries examined in each area of regulation are listed in Boylaud (2000). As sufficient comparable data are not available, the United States has been omitted from the tables and figures and is mentioned only in the text.
11. Based on a sample of Dutch shop types for the 1981-1988 period, Carree and Thurik (1996) find that entry rates in the retail business are significantly reduced by relatively high requirements of professional skills.

12. Since the data surveyed in this paper focuses mainly on national legislation, the anti-competitive impact of access regulations may be underestimated in countries that rely only on local rules.
13. For more details, see Boylaud (2000).
14. 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.
15. The data used in this paper take account of the reform.
16. According to Burda (2000) a possible rationale for regulating shopping hours is the public good nature of leisure time synchronisation. However, the possible welfare benefits of such synchronisation are more than offset by the negative effects of regulation.
17. In some countries, further controls exist in the form of resale price maintenance (minimum prices), but these are not covered by this study.
18. See annex to Boylaud and Nicoletti, in this issue, and Nicoletti *et al.* (1999), for an illustration of the methodology used. The basic indicators (and their composition) are described in Boylaud (2000).
19. The regulations regarding promotional activities are particularly stringent in Germany (see Boylaud, 2000).

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Rauf Gönenç, Maria Maher and Giuseppe Nicoletti

This article reviews trends, outcomes and issues in regulatory reform in OECD countries. First, it summarises the evidence on the evolution of regulatory environments and the economy-wide and sectoral effects of reforms (including privatisation) in both competitive and non-competitive industries in the past two decades. Turning to network industries, it then discusses the main policy issues raised by the need to adapt the regulation of the non-competitive segments of these industries to increasing competition in liberalised markets. It focuses on four topics that dominate the debate over regulatory reform: i) the move from command-and-control to incentive-based regulatory approaches relying on the removal of entry barriers in competitive markets, the adoption of price-cap mechanisms and the design of efficient and competitively-neutral charges for accessing the fixed networks of incumbents; ii) the pros and cons of structural measures such as privatisation, and vertical and horizontal separation of formerly integrated monopolies; iii) the ways to ensure that important non-economic objectives, such as universality of service, continue to be achieved in a more competitive environment at a minimum cost for society; and iv) the design of regulatory mechanisms and institutions that encourage best practice regulation.

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Olivier Boylaud and Giuseppe Nicoletti

The paper uses an international database on regulation, market structure and performance in the telecommunications industry to investigate the effects of entry liberalisation and privatisation on productivity, prices and quality of service in long-distance (domestic and international) and mobile cellular telephony services in 23 OECD countries over the 1991-1997 period. The data on regulation and market structure is analysed by means of factor analysis techniques in order to group countries according to their policy and market environments. Controlling for technology developments and differences in economic structure, panel data estimates show that prospective competition (as proxied by the number of years remaining to liberalisation) and effective competition (as proxied by the share of new entrants or by the number of competitors) both bring about productivity and quality improvements and reduce the prices of all the telecommunications services considered in the analysis. No clear evidence could be found concerning the effects on performance of the ownership structure of the industry (as proxied by both the public share in the public telecommunications operators and years remaining to privatisation).

**REGULATION, INDUSTRY STRUCTURE AND PERFORMANCE
IN THE ELECTRICITY SUPPLY INDUSTRY** 143

Faye Steiner

This article seeks to assess the impact of liberalisation and privatisation on performance in the generation segment of the electricity supply industry. Regulatory indicators for a panel of 19 OECD countries over a 10 year time period were constructed to examine the influence of regulatory reform on efficiency and price, and to assess the relative efficacy of different reform strategies. The presence of data with both cross-country and time-series dimensions allows separate identification of country specific and regulatory effects. The primary findings are that while changes in legal rules may be slow to translate into changes in conduct, unbundling of generation, private ownership, expanded access to transmission networks, and the introduction of electricity markets impact various aspects of performance in a statistically significant way.

**REGULATION, MARKET STRUCTURE AND PERFORMANCE IN AIR PASSENGER
TRANSPORTATION** 183

Rauf Gönenç and Giuseppe Nicoletti

The paper uses a data base on regulation, market structure and performance in the air passenger transportation industry, to analyse the links among liberalisation, private ownership, competition, efficiency and airfares at national and route levels. Covering the 1996-97 travel season, 21 aggregate indicators have been developed for 27 OECD countries, and 23 micro indicators for 102 air routes connecting 14 major international airports. These data are summarised by means of factor analysis. Controlling for market size, network length and other technological and economic differences, and combining national and route-level characteristics, cross-country and cross-route regressions show that i) productive efficiency increases and fares decline when regulations and market structures become more friendly to competition; ii) productive efficiency is sensitive to actual competitive pressures, as proxied by market concentration; iii) fares react to liberalisation independently from market structure, but in liberal environments their decline is amplified by actual competition between carriers; iv) business and economy fares tend to decline when they are liberalised and market concentration is reduced, but tend to increase when markets are dominated by airline alliances on the route; v) discount fares are affected by the overall market environment at route ends, charter regulations and the actual presence of challenger airlines on the route; and vi) airport congestion and dominance tend to increase fares in time-sensitive market segments.

REGULATORY REFORM IN ROAD FREIGHT 229

Olivier Boylaud and Giuseppe Nicoletti

This study analyses regulatory developments across OECD Member countries in the road freight industry, with a focus on how these developments have affected competition and performance. Over the past two decades, a growing number of OECD countries have recognised that regulations unduly restricting competitive developments in this industry needed to be relaxed. Still, the pace and scale of liberalisation has varied widely from one country to another. The main remaining impediment to competition is the restrictive web of bilateral international and/or multilateral agreements that continue to impose discrimination on foreign hauliers. The empirical evidence available suggests that liberalisation has promoted efficiency and consumer welfare in the countries that have implemented reforms.

REGULATORY REFORM IN RETAIL DISTRIBUTION	253
Olivier Boylaud and Giuseppe Nicoletti	

The main purpose of this paper is to analyse cross-country differences in the regulation of the retail distribution industry in the OECD area, focusing on the situation in 1998. Regulatory differences are cast against changes in the industry environment to highlight the potential interactions between regulation and market forces. A number of countries have extensively liberalised market access and price and service regulations. In some countries there is currently a tendency to introduce access restrictions for large outlets. In other countries market access has been traditionally hindered by restrictive regulations and administrative burdens. The available empirical evidence suggests that regulations that restrict shop opening hours and hinder access by imposing special requirements for outlet registration, siting and/or size thresholds curb the dynamism of the industry (e.g. lowering entry and exit rates, and preventing restructuring and modernisation) and competitive pressures, leading to lower employment growth and higher consumer prices.

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