

Barriers to Competition in Croatia

The Role of Government Regulation

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Abstract

This paper examines product market policies in Croatia by benchmarking them to OECD countries and highlighting how policies that are more conducive to competition would stimulate a more efficient allocation of resources and, in consequence, facilitate convergence to higher income levels. OECD indicators of overall regulation in product markets indicate that Croatia's policies in 2007 were generally more restrictive of competition than were the policies in OECD countries. This is especially true for policies concerned with the degree of state control of the economy and with barriers to entrepreneurship. Regulatory obstacles to trade and

foreign direct investment, by contrast, are in line with those of pre-accession European Union countries (Czech Republic, Hungary, Slovak Republic, and Poland in 2003, as well as Bulgaria and Romania in 2006), albeit well above the OECD average. Regulation of post, electricity, gas, telecoms, air, rail, and road transport, as estimated by the OECD energy transport and communication sectors indicator, is also less liberal than in the OECD, highlighting the positive knock-on effects for the rest of the economy that could derive from further liberalization of network industries.

This paper—a product of the Private and Financial Sector Department, Europe and Central Asia Region—is part of the background research carried out in the context of “Croatia’s EU Convergence Report: Reaching and Sustaining Higher Rates of Economic Growth.” Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at dderosa@worldbank.org.

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Barriers to Competition in Croatia: The Role of Government Regulation

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The data collection effort that underlies the present report took place in the Autumn of 2007. Particular thanks are due to representatives of Croatian Government Institutions and professional associations who provided valuable inputs and information. Without their collaboration data collection would not be possible. Nevertheless the responsibility for any data and/or opinion expressed in this paper remains with authors only.

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1. Introduction

Despite the progress achieved since independence, in large part due to the pull of EU accession negotiations, the income gap with the wealthier EU members remains sizeable. Income per capita has been converging towards the OECD and the EU average, with the income gap narrowing from 28 percent to 39 percent of the OECD average between 1993 and 2006 or 46 to 63 percent (at GDP PPS) of the EU27 average between 1995 and 2008.

In order to sustain growth and improve competitiveness, a second generation of reforms has been launched to help the country's successful integration in EU and global markets. A cornerstone of this reform agenda is the implementation of product market policies that are less restrictive of competition, in order to enable firms to put resources -both capital and labor- to their most efficient use.

Adoption of pro-competitive product market policies would enhance Croatia's ability to converge to higher income levels. In the long run, an economy where competition is restricted will be less productive because its firms will face reduced incentives to be efficient. In this context, Acemoglu et al. (2006) and Aghion and Griffith (2005) note how incentives to enhance productivity are crucially affected by institutions and policies that promote or hinder firm rivalry and entry of new firms. In particular, regulations that promote competition may increase the incentive and lower the cost of incorporating new technologies into the production process, as suggested by neo-Schumpeterian growth theories (Aghion and Howitt, 2005). Along similar lines, Conway et al. (2006) provide empirical evidence of the negative effects of anticompetitive regulations on productivity growth and, in particular, on the convergence to higher productivity levels using sectoral data for OECD countries; Alesina et al. (2005) emphasize the link between pro-competitive regulation and investment, while Bassanini and Ernst (2002) find a connection between anticompetitive regulations and innovation. Ultimately, the consequences of dampened incentives may be particularly severe for economies that are far from the technological frontier, since the ability to absorb new technologies is essential to allow convergence to the levels of more developed economies.

This paper uses a number of benchmarking tools to assess the extent to which Croatia's product market policies are restrictive of firm rivalry, entry and exit. This is done by benchmarking various dimension of the Croatian regulatory framework to a best practices worldwide, and, more specifically across the OECD and the European Union. Various tools are employed for this benchmarking exercise. The first is the OECD indicator of product market regulation (PMR), which offers a structured approach to benchmark the Croatian regulatory environment and will therefore be used as a blueprint to guide the assessment.¹ Complementary sources of information are provided by the World Bank Doing Business indicator, as well as, to the extent possible, by the Croatia Investment Climate Survey (ICS). The paper also includes a benchmarking of Croatia's regulation in seven network industries (post, electricity, gas, telecoms, air, rail and road transport). This is done by using the OECD ETCR indicator. Regulation in these sectors is relevant, because it has cascade effects on the rest of the economy. Indeed, Conway and Nicoletti (2006) argue that regulation is most invasive in service rather than in manufacturing

¹ The approach used relies on a methodology developed by the OECD (Conway, Janod and Nicoletti 2005), and the associated data which is available for all OECD members (2003), Brazil in 2004 (See OECD 2005), Bulgaria in 2006 (See De Rosa, Fay and Ilieva, 2007), Romania in 2006 (See De Rosa, Fay and Pauna, 2007), Ukraine in 2007 (See OECD, 2007), and Albania in 2007 (See De Rosa, Sulko and Uregjan 2008). Data for Croatia were collected following the same methodology in late 2007. Comparators include countries at similar levels of income and development, as well as high income EU and OECD countries.

sectors, since the latter are largely de-regulated in consequence of compliance with WTO and, in the case of European countries, EU rules. In addition to retail trade and professional services – which are covered by the PMR - network industries are the object of the bulk of the state's regulatory intervention in OECD countries. Furthermore, these sectors provide as much as two-thirds of inputs for others sectors in the economy, implying that the regulatory burden in these sectors has broad effects across the entire economy.

Not unexpectedly, we find that overall product market policies in Croatia are generally more restrictive than among OECD countries, all of which are richer and with a longer tradition of reviewing their policy environment to make it more conducive to private sector development. Nevertheless, a number of interesting observations on the sources of Croatia's ranking emerge from the analysis. These can be summarized as follows:

1. **In terms of regulatory obstacles to trade and FDI, Croatia, in 2007, performs along the average of pre-accession European countries** (Czech Republic, Hungary, Slovak Republic and Poland in 2003, as well as Bulgaria and Romania in 2006). Its policies in this domain are more liberal than those of other middle income countries (Brazil, Mexico and Turkey) albeit more restrictive than the OECD average. Driving this achievement, substantial progress has been made in ensuring the equal treatment of foreign parties and in eliminating regulatory barriers to trade and investment. Average production-weighted tariffs on industrial progress have also been slashed to an average of around 4.9 percent, which is lower than all comparators. Regulatory barriers to foreign investment have also been substantially reduced.
2. **Croatia is most restrictive in inward-oriented policies – meaning policies concerned with the degree of state control of the economy and with barriers to entrepreneurship.** This is due to a combination of factors:
 - **State control over the economy is still significant.** The size of the public enterprise sector and the extent to which the state controls strategic decisions of public enterprises are among the highest in the sample of comparator countries. In addition, although price controls have been substantially reduced during the first-generation of reforms, incentive-based regulation is still not the norm.
 - **Barriers to entrepreneurship need to be further reduced**, although they are not too distant from benchmark groups. Actions could include: lifting barriers to entry in network and utilities sectors; further streamlining the licenses and permits system (notably by introducing the 'silence is consent' rule); simplifying rules and procedures; and alleviating administrative burdens on startups by simplifying the incorporation of new firms and further liberalizing entry in regulated service sectors.
 - **Further liberalization of network industries would alleviate costs for the rest of the economy, thus stimulating growth and convergence.** Despite progress in lifting barriers to entry and in reducing the extent of public ownership in energy, communication and transport sectors, regulatory inefficiencies in these sectors still represent a drag on the rest of the economy and impose additional costs on firm operation. This is reflected in regressions results indicating that restrictiveness of regulation in energy, transport and communication sectors has a significantly negative impact on income convergence.

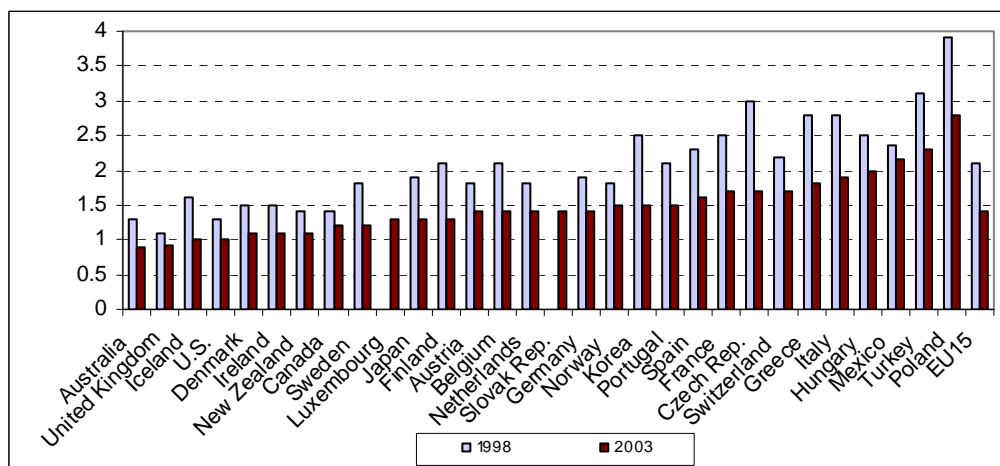
The paper is organized as follows. First, is a general mapping of Croatia's product market policies guided by the structure of the OECD PMR indicator. The objective is to benchmark Croatia to OECD countries and outline the areas where divergence from average OECD levels or from selected comparator groups is the largest. Second, is a more detailed exploration of product market policies following the structure of the PMR indicator. Third, is benchmarking of Croatia's product market policies to OECD countries using the OECD ETCR indicators of regulation in network industries from the early 1990s to the present, with results of growth regressions including the ETCR indicator.

2. Benchmarking Product Market Policies in Croatia: The OECD PMR

Enhancing competition in product markets has been found to help increase GDP per capita by providing incentives to firms to reallocate resources to more productive activities, increase innovation and technological diffusion. In addition, less restrictive regulations may positively affect employment by reducing the rents that some firms extract from overregulation and force firms to expand their activities.²

Benchmarking product market regulation has proved to be a useful tool for monitoring the performance of policies and institutions in OECD countries and for identifying specific policy gaps, thus offering the opportunity to benefit from the experience of other member states. Two surveys have been conducted so far collecting data for 1998 and 2003. Results from these surveys point to a convergence in product market policies across OECD countries, with substantial improvements achieved by countries that originally exhibited relatively restrictive product market regulations, such as Poland, Turkey, Czech Republic, Greece, Italy, France, Mexico, Korea, Hungary, and Spain (Figure 1). Substantial improvements in easing product market policies have also been achieved among EU15 countries where the average PMR score fell from 2.1 in 1998 to 1.4 in 2003. While this reflects the increasing harmonization of EU common market rules, the PMR benchmarking may have been instrumental in fostering this improvement.

Figure 1: Product Market Regulation among OECD countries, a comparison between 1998 and 2003

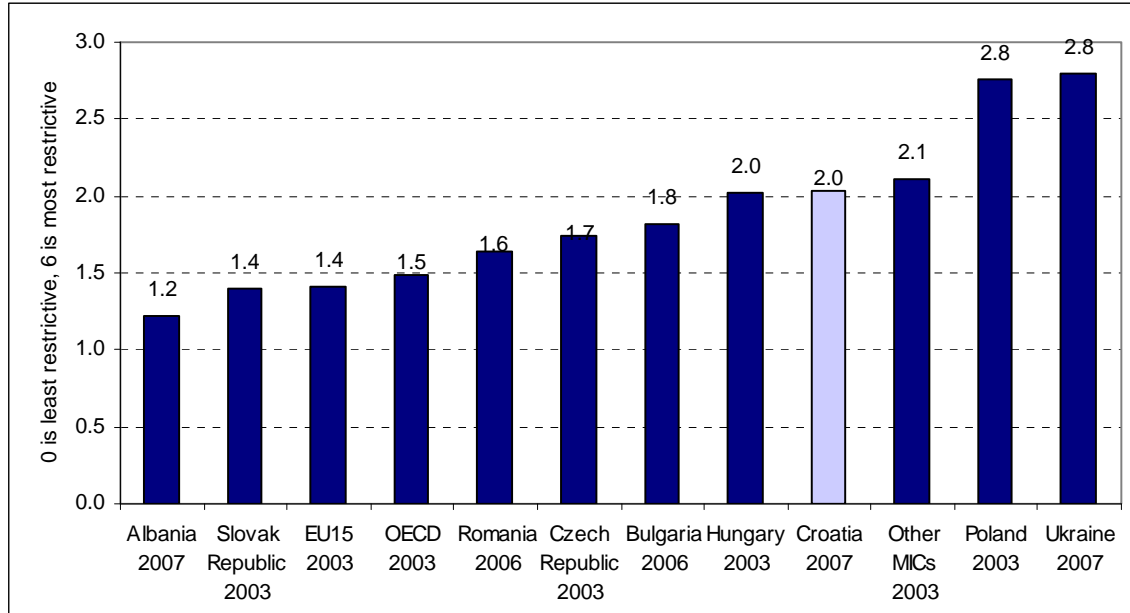


Source: Conway, Janod, Nicoletti 2005. Note: A lower figure indicates a better performance.

² See Conway, Janod and Nicoletti (2005) and Conway, De Rosa, Nicoletti and Steiner (2006).

Product market policies, as measured by the overall summary product market indicator, are still relatively restrictive in Croatia compared to those of OECD countries. Simple comparisons suggest Croatia still scores less well than the EU 15 average, although better than many of its peers did in 2003 (Figure 2). Figure 3, which reports the summary PMR scores accounting for the uncertainty in the choice of weights used in the PMR system, confirms that Croatia falls into the group of relatively restrictive countries (which includes France, Greece, Italy and the Czech Republic as estimated with 2003 data).³

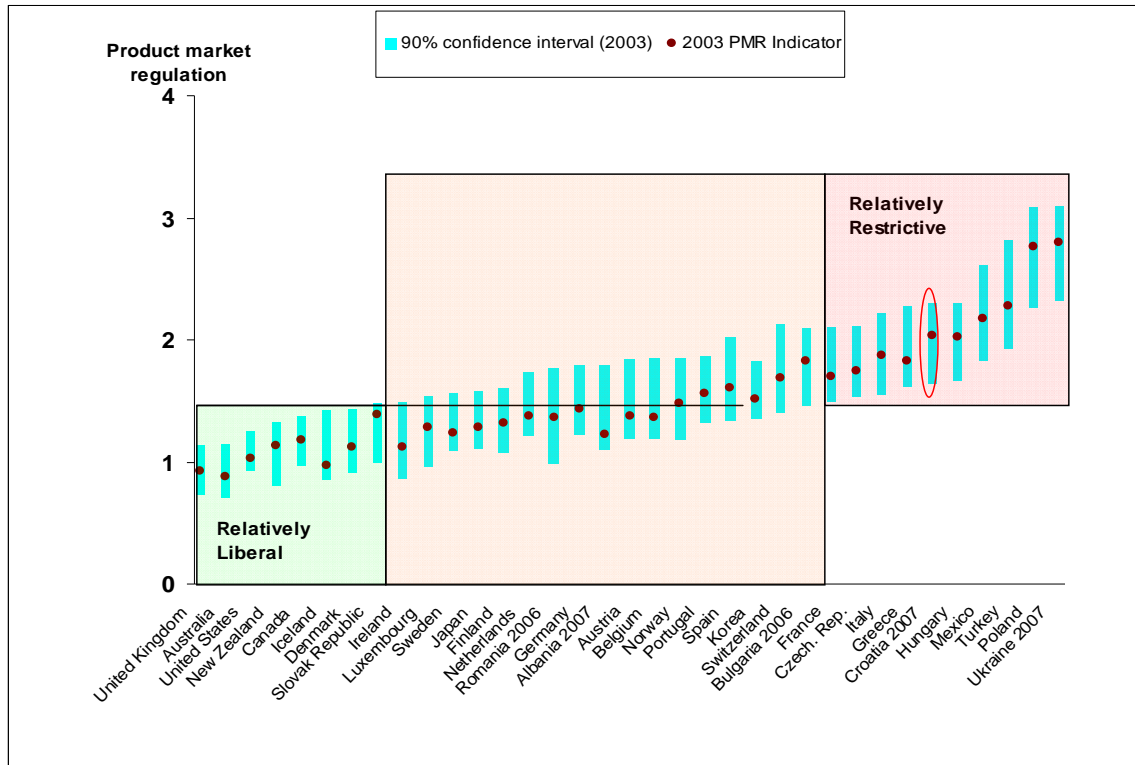
Figure 2: Product Market Regulation: Country Group Comparison



Source: see Figure 3. Note: Other MICs are Brazil, Mexico, Turkey. Values refer to 2007 for Croatia, Albania and Ukraine, 2006 for Bulgaria and Romania, 2004 for Brazil, and 2003 for all other countries. For full data set see Annex I.

³ See Conway, Janod, Nicoletti (2005) for details.

Figure 3: Product Market Regulation - Country Comparison



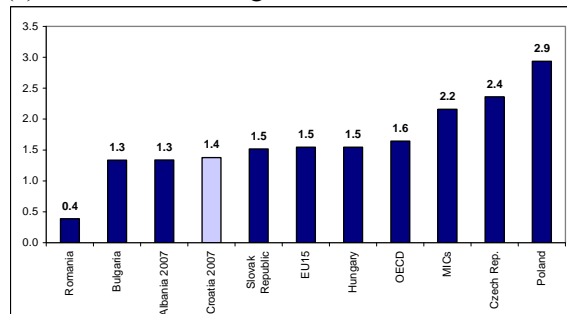
Note: Values refer to 2007 for Croatia, Albania and Ukraine, 2006 for Bulgaria and Romania, and 2003 for all other countries. The confidence intervals are calculated using stochastic weights on the low-level indicators to generate a distribution of overall PMR indicators for each country. The 90 per cent confidence intervals are calculated from that distribution. Indicator values for the 'relatively liberal' and 'relatively restrictive' countries are significantly different at the 90 percent level of confidence (Conway, Janod, Nicoletti, 2005).

In order to identify the sources of restrictiveness of product market regulation, the PMR indicator may be decomposed in a number of broad aggregates (Figure 2). One possible classification distinguishes between administrative and economic regulation. The former includes reporting, information and application procedures, and the burdens on business start-ups, implied by both economy-wide and sector-level requirements. The latter includes all other domestic regulatory provisions affecting private governance and product market competition (such as state control and legal barriers to entry in competitive markets).

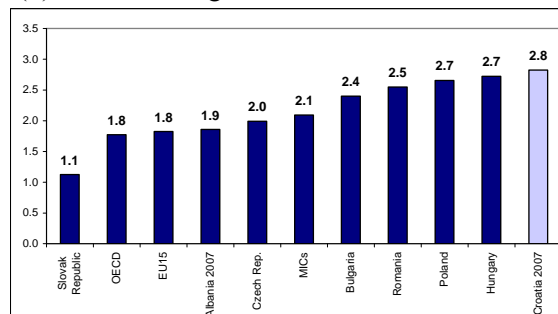
Croatia performs relatively well in administrative regulation, relative to comparator countries. On the other hand, in terms of economic regulation, Croatia’s performance is the worst in the sample (Figure 4). This suggests that very little progress has been made in the areas of the regulatory environment that directly affect the incentives of economic agents, namely corporate governance and, more generally, the degree of competition in product markets.

Figure 4: Economic and administrative regulation

(a) Administrative regulation



(b) Economic regulation



Source: see Figures 3, 4 and 5. Note: Other MICs are Brazil, Mexico, Turkey. Values refer to 2007 for Croatia and Albania, 2006 for Bulgaria and Romania, 2004 for Brazil, and 2003 for all other countries. For full data set see Annex I.

BOX 1: A REMINDER ON PMR METHODOLOGY

Administrative regulation

- Licenses and permits
- Communication and simplification of rules and procedures of administrative intervention
- Administrative burdens on start ups: Corporations
- Administrative burdens on start ups: Sole proprietors
- Administrative burdens on start ups: Sector specific burdens

Economic regulation

- Scope of the public enterprise sector
- Size of the public enterprise sector
- Direct control over business enterprises (SOEs)
- Price controls
- Use of command and control regulation
- Legal barriers to competition
- Antitrust exemptions
- Foreign ownership barriers
- Discriminatory procedures against foreign firms
- Tariffs

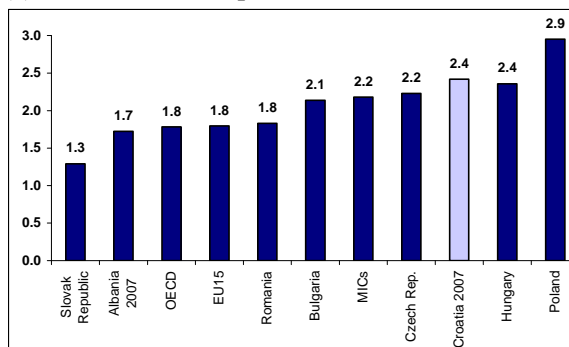
A second broad distinction can be made between inward oriented policies and outward oriented policies. The former include policies and regulations that determine the degree of state control and barriers to entrepreneurship, while the latter reflect policies and regulations that affect barriers to trade and investment. A detailed description of what the indicators measure follows in the next sections.

Compliance with the *acquis communautaire* in the perspective of EU accession and membership of the WTO have an important impact on both inward and outward oriented policies. EU legislation must eventually be fully implemented in a wide range of domains as a precondition to participating in the EU-wide single market for goods and services. Nonetheless, greater reform challenges, as well as greater cross-country variation, lie with the regulations that fall under the category of inward oriented policies. Indeed, while implementation of the *acquis communautaire* is certainly reflected in certain aspects of the inward regulatory framework in Croatia (e.g. competition policy), many areas are still subject to a large degree of domestic discretion.

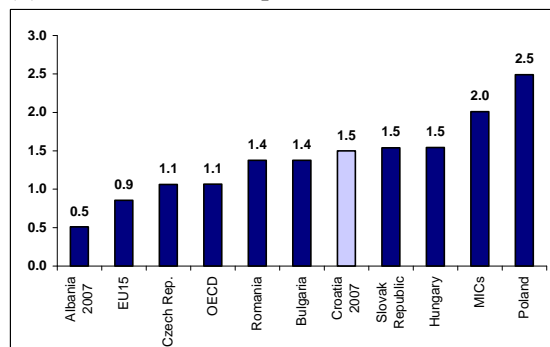
Thus, average scores are lower (less restrictive of competition) across the board for outward-oriented policies than for inward-oriented ones. This is certainly due to the requirements that are imposed by international agreements - such as the WTO charters, and, for EU countries, membership in the European Union - which are more binding in matters concerning trade and foreign direct investment. Within this general picture, it appears that Croatia performs less liberally than most comparators in both inward and outward policies. However, certainly as a reflection of its international commitments, more progress has been achieved in the areas of international trade and foreign direct investment (outward oriented), relative to those that are more likely to be determined by discretionary domestic policies (Figure 5).

Figure 5: Inward and outward oriented policies

(a) Inward-oriented policies



(b) Outward oriented policies



Source: see Figure 3. Note: Other MICs are Brazil, Mexico, Turkey. Values refer to 2007 for Croatia and Albania, 2006 for Bulgaria and Romania, 2004 for Brazil, and 2003 for all other countries. For full data set see Annex I.

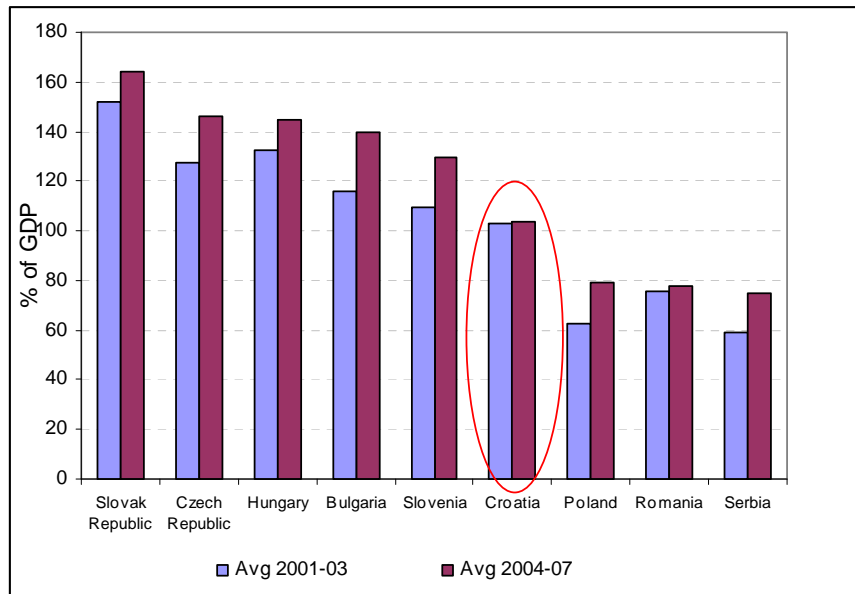
3. Outward-oriented Policies: Barriers to Trade and Foreign Investment

Compliance with international commitments may more easily impose discipline on policymakers. Indeed, this probably explains why all country groups do better on average in their outward oriented policies ratings than in the inward oriented one. In the case of Croatia, observance and implementation of the rules for membership of the World Trade Organization (WTO) and, even more strongly, the European Union (EU) has led it to significantly reduce barriers to trade and investment since the start of transition. Croatia's foreign trade policy has been driven most of all by the commitments of the EU Eastern Enlargement project, promoting bilateral trade liberalization initially with the EU and EFTA and, subsequently, with other preferential partners of the EU, including with the SEE countries. The Pan-European Agreement on the Cumulation of the Rules of Origin has not yet been extended to Croatia which prevents further expansion of trade with the EU. However, the removal of tariffs on all industrial products and the harmonization of technical standards has led to Croatia's participation in a de facto free trade area for industrial products.

Despite the efforts made to harmonize legislation and regulation with international norms, both foreign direct investment net inflows and trade openness have remained stagnant since the beginning of the decade (Figures 8 and 9). Trade in goods and services has remained relatively stagnant at slightly over 100% of GDP, while average annual foreign direct investment inflows have hovered around 5.5-6% of GDP. FDI has gone to a variety of sectors, notably financial services, telecommunications, pharmaceuticals, oil industry and trade and has made up

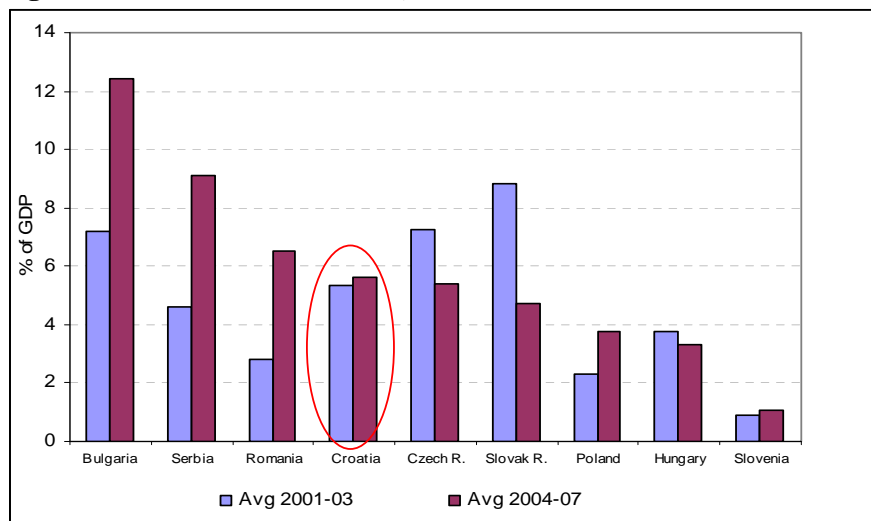
for financing a significant portion of the BoP current account deficit, which exceeded 9% of GDP in 2008. Looking forward, strong FDI inflows will be instrumental in ensuring continued macroeconomic stability and productivity growth. Therefore, continued improvement in the business environment remains critical.

Figure 6: Trade Integration in SEE and CEE, (2001-2007)



Note: Data is from World Bank Indicators database (DDP)

Figure 7: FDI in SEE and CEE, (2001-2007)



Note: Data is from World Bank Indicators database (DDP)

Examining the various component indicators of outward oriented policies sheds light on the sources of the gap between Croatia and OECD CEE countries. These include explicit barriers to trade and foreign investments such as tariffs, discriminatory procedures against foreign firms and foreign ownership barriers, as well as regulatory barriers such as the absence of international harmonization or mutual recognition agreements. While Croatia has achieved great

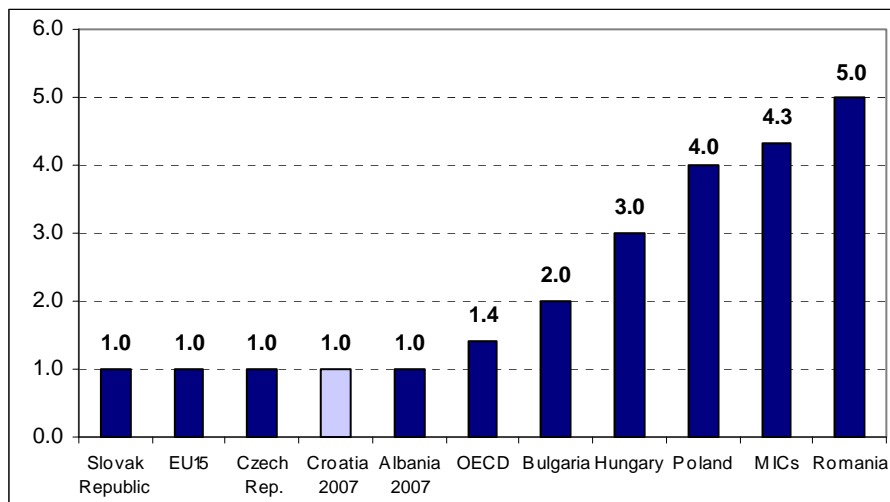
progress in reducing tariffs on imported goods, there are still great margins for improvement in incorporating in legislation the principle of non-discrimination against foreign parties and in eliminating residual regulatory barriers to trade and investment.

3.1 Tariffs

First generation reforms rapidly succeeded in eliminating all quantitative trade restrictions.

The EU Eastern Enlargement project led to extending preferential status for Croatia's participation in a European trade area. As a result Croatia's tariff levels (measured here as MFN tariffs on industrial goods) are much lower in 2007 than those of comparator middle income countries and in line with the best practice of the pre-accession OECD CEE (Figure 8). In particular, Hungary and Poland entered the EU with substantially higher tariff levels than Croatia's in 2006. In addition, Croatia's tariff levels have been lowered to those of the EU common market as of its entry into the EU as of January 1, 2007.

Figure 8: Tariffs



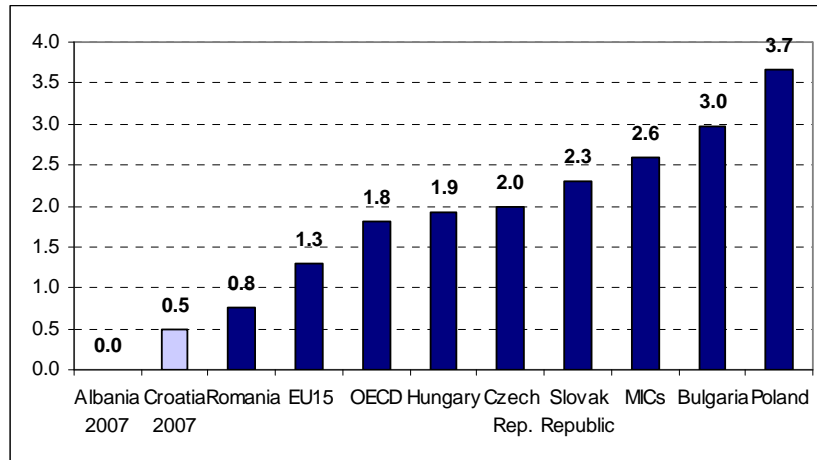
Note: Other MICs are Brazil, Mexico, Turkey. Values refer to 2007 for Croatia and Albania, 2006 for Bulgaria and Romania, 2004 for Brazil, and 2003 for all other countries. For full data set see Annex I.

3.2 Barriers to foreign direct investment

Barriers to foreign direct investment include foreign ownership barriers, discriminatory procedures against foreign firms, and other barriers to trade and investment, all of which are presented in detail below.

Croatia has relatively low foreign ownership barriers. These take the form of statutory or other legal limits to the proportion of shares that can be acquired by foreign investor or of special voting rights that can be exercised in case of acquisition of equity by foreign investors. Such restriction may apply in general or be limited to specific sectors that are considered 'strategic' such as air transport, telecommunications, and electricity generation. Croatia fares relatively well in this respect since regulatory barriers remain only in specific sectors, among which the PMR capture the 50% foreign ownership ceiling in the airlines sector, that fairly common across EU countries (Figure 9).

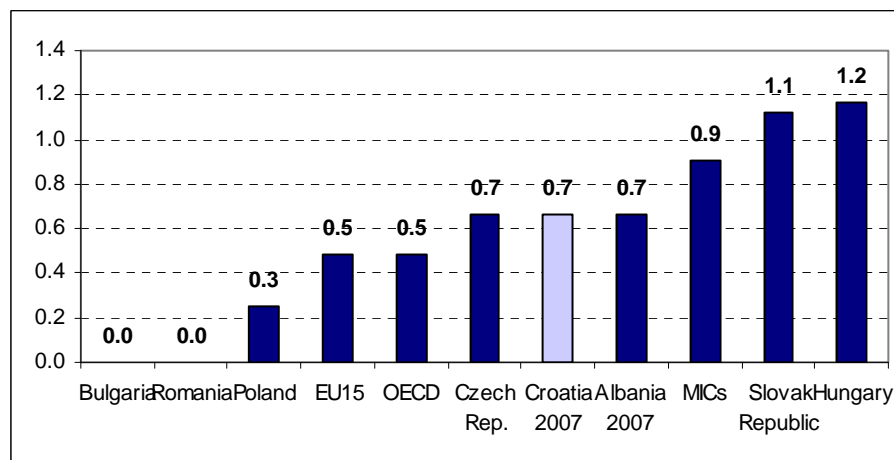
Figure 9: Foreign ownership barriers



Source: see Figure 3. Note: Other MICs are Brazil, Mexico, Turkey. Values refer to 2007 for Croatia and Albania, 2006 for Bulgaria and Romania, 2004 for Brazil, and 2003 for all other countries. For full data set see Annex I.

This is therefore consistent with the finding that Croatia does not, in general, discriminate against foreign firms (Figure 10). The rights of foreign firms in Croatia to appeal and redress through competition agencies, regulatory bodies, trade policy bodies, or private rights of action is equal to those of domestic firms, although there are no specific provisions requiring that regulations, prior to entry into force, be published or otherwise communicated to the public in a manner accessible at the international level, which may put foreign players at a disadvantage relative to domestic competition.

Figure 10: Discriminatory Procedures against foreign firms



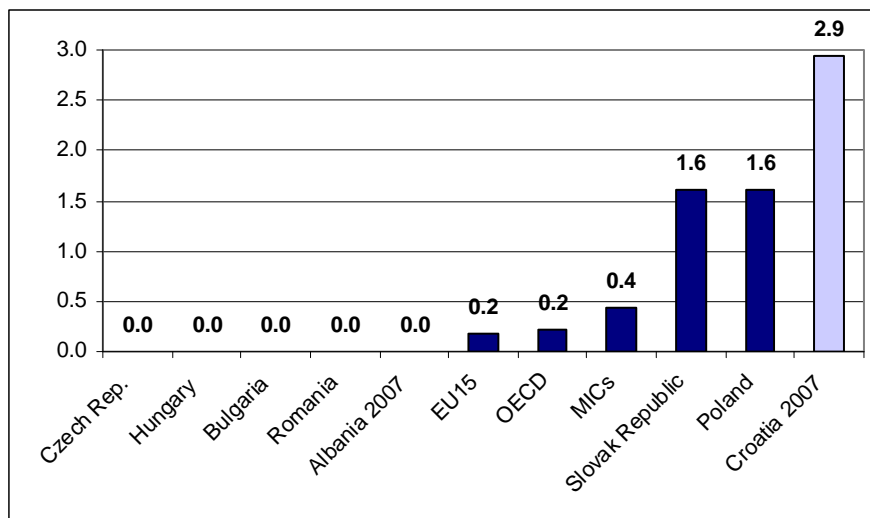
Source: see Figure 3. Note: Other MICs are Brazil, Mexico, Turkey. Values refer to 2007 for Croatia and Albania, 2006 for Bulgaria and Romania, 2004 for Brazil, and 2003 for all other countries. For full data set see Annex I.

3.3 Regulatory barriers to trade and investment

Croatia still has a plethora of regulatory barriers relating to international harmonization of standards and certification procedures Whereas mutual recognition agreements with other countries are in force, there are no specific provisions which require regulators to recognize

regulatory measures performed in other countries to use internationally harmonized standards and certification procedures (Figure 11). Lagging behind in terms of use of internationally harmonized certification procedures may be partly explained by the fact that Croatia still has to fulfill its obligations with respect to the overall EU accession process. It is reasonable to expect that transplantation of the *Acquis* shall implement provisions on multilateral recognitions of standards and certification procedures in many areas. Nevertheless, it should not be assumed that the problem will be eliminated in that way entirely. Figure 13 shows notable differences between EU countries with common history (e.g. Czech Republic vs. Slovak Republic). It also shows significantly lower barriers in non-EU countries vs. EU countries (e.g. Albania vs. Poland). Hence EU accession by itself is not a sufficient condition to believe that regulatory barriers to trade and investment shall be sufficiently reduced. This finding is of critical importance in the case of Croatia where other non-explicit barriers play far more important role than explicit barriers which are expected to be affected by implementation of EU standards.

Figure 11: Regulatory barriers to trade and investment



Note: Other MICs are Brazil, Mexico, Turkey. Values refer to 2007 for Croatia and Albania, 2006 for Bulgaria and Romania, 2004 for Brazil, and 2003 for all other countries. For full data set see Annex I.

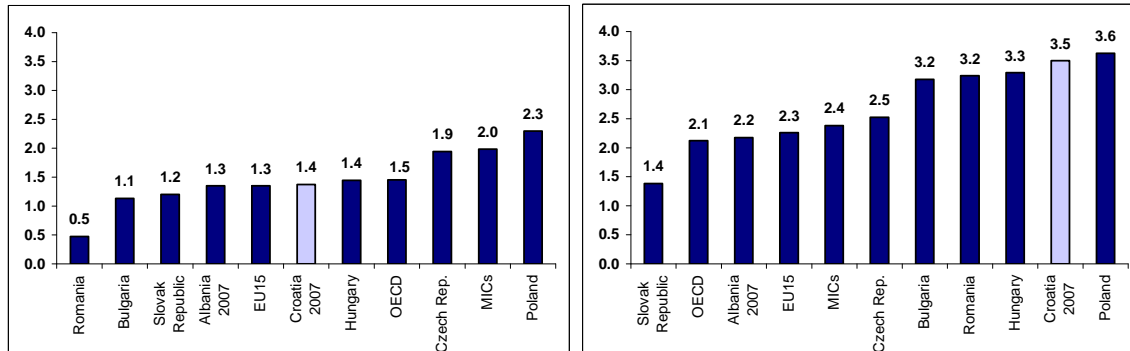
4. Inward Oriented Policies: State Control and Barriers to Entrepreneurship

Inward oriented policies in the PMR system can be decomposed into two broad categories: indicators of state control and barriers to entrepreneurship (Figure 12).

Figure 12: State control and barriers to entrepreneurship

a. Barriers to entrepreneurship

b. State control



Source: see Figure 3. Note: Other MICs are Brazil, Mexico, Turkey. Values refer to 2007 for Croatia and Albania, 2006 for Bulgaria and Romania, 2004 for Brazil, and 2003 for all other countries. For full data set see Annex I.

Croatia performs quite well with respect to barriers to entrepreneurship. Priorities concerning inward policies clearly lie with state control. The legacy of central planning is still visible in CEE countries, since they perform comparatively worse than all other groups, although Euro zone countries, with a tradition of heavy state involvement in the economy, present not much lower values.⁴ As a general trend, most of the OECD countries that had relatively restrictive policies in 1998 have succeeded in reducing the extent of state control in 2003 by removing price controls and reducing reliance on coercive - as opposed to incentive-based - regulations.

4.1 Barriers to entrepreneurship

Barriers to entrepreneurship affect firm rivalry entry and exit. They include barriers to competition, regulatory and administrative opacity and administrative burdens on start-ups as well as barriers to closing a business. These are discussed in turn below.

4.1.1 Barriers to competition

License and permit requirements or antitrust exemptions are more pervasive in Croatia than on average across the EU15. Croatia scores worse than the EU15 average in 2003 in terms of barriers to competition (as measured by license and permit requirements or antitrust exemptions), whereas it outperforms other MICs (Figure 13). This is largely due to Croatia's progress in incorporating EU and WTO rules and best practices in national legislation. This resulted in the elimination of most antitrust exemptions for state-owned enterprises, with the exception of rules providing for exclusion or exemption from liability under the general competition law for provision of public services that is required or authorized on the basis of special legislation.

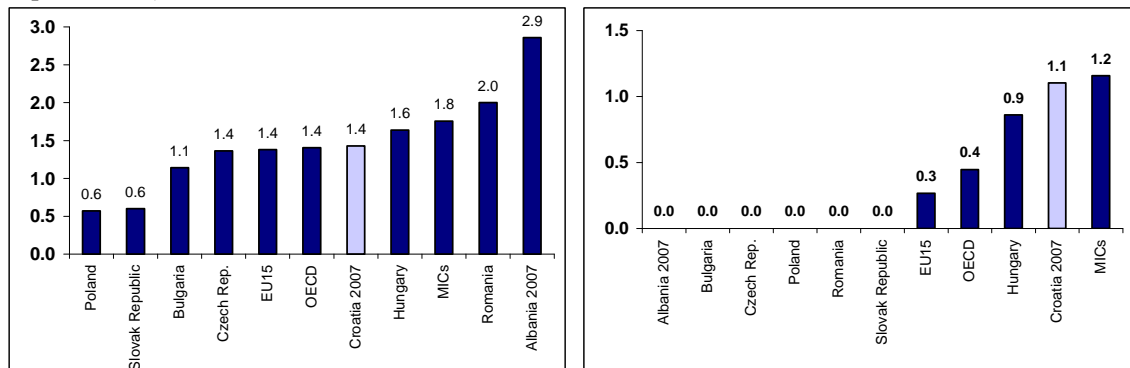
Croatia's score is around the EU15 and OECD averages in terms of other legal barriers to competition, such as explicit legal limitations on the number of competitors allowed in certain business sectors. Croatia still maintains some legal restrictions to entry in network and utilities

⁴ See Tables in the Annex.

sectors (transport infrastructure; collection, purification and distribution of water; electricity generation, transmission, distribution and supply; and gas production, transmission, distribution and supply), which are fairly standard among other OECD and EU countries. Less typical of other countries are barriers to competition in the insurance and financial sector, beyond those imposed by prudential regulatory requirements.

Figure 13: Barriers to competition

a. Legal barriers (licenses and permit requirements) b. Antitrust exemptions



Source: see Figure 3. Note: Other MICs are Brazil, Mexico, Turkey. Values refer to 2007 for Croatia and Albania, 2006 for Bulgaria and Romania, 2004 for Brazil, and 2003 for all other countries. For full data set see Annex I.

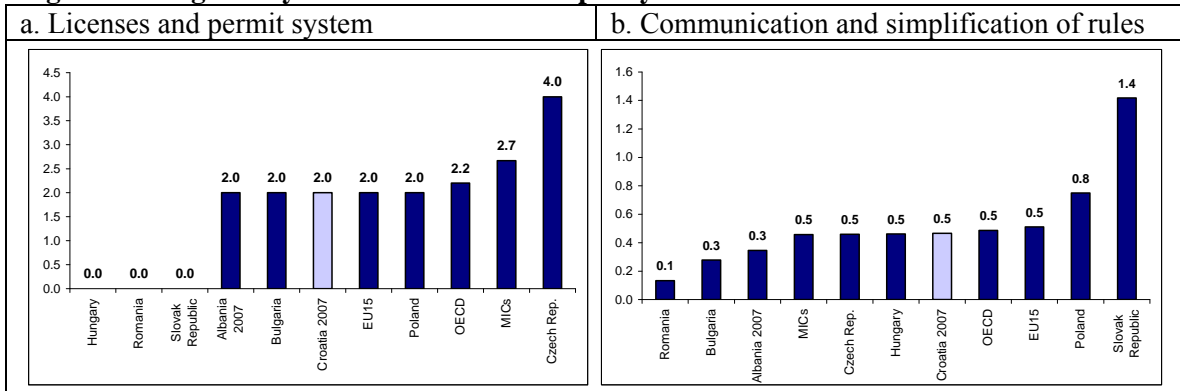
4.1.2 Regulatory and Administrative Opacity

Some progress has been made in streamlining licensing regimes at the national level (Figure 14a).⁵ For instance single contact points (“one-stop shops”) for getting information and for issuing and accepting on notifications and licenses. On the minus side, the ‘silence is consent’ rule (i.e. that licenses are issued automatically if the competent licensing office has not acted by the end of the statutory response period) is not used widely.

Croatia also fares well in terms of communication and simplification of rules and procedures (Figure 14b) compared to OECD countries. The indicator captures aspects of the government’s communication strategy and its efforts to reduce and simplify the administrative burden of interacting with government. Regarding communication to the public, systematic procedures for making regulations known and accessible to affected parties have been enacted. Also there is a general policy requiring “plain language” drafting of regulation; affected parties have the right to appeal against adverse enforcement decisions in individual cases; Government policy imposes specific requirements in relation to transparency/freedom of information government wide. Regarding simplification of procedures, there is an explicit program to reduce the administrative burdens imposed by government on enterprises and/or citizens, as well as a program underway to review and reduce the number of licenses and permits required by the national government.

⁵ Note that, since accession, the Czech Republic, Hungary, Poland and the Slovak Republic have continued progressing with their reform agenda implying that the gap between these countries today and Croatia is larger than what the 2003 data suggest. For instance, in January 2004, Poland enacted a Law on Economic Freedom, reducing the number of licensing regimes from 9 to 5 and introducing the ‘silence is consent’ rule’ in business registration and in various areas administrative regulation.

Figure 14: Regulatory and Administrative Opacity



Source: see Figure 3. Note: Other MICs are Brazil, Mexico, Turkey. Values refer to 2007 for Croatia and Albania, 2006 for Bulgaria and Romania, 2004 for Brazil, and 2003 for all other countries. For full data set see Annex I.

4.1.3 Regulatory burdens on business entry

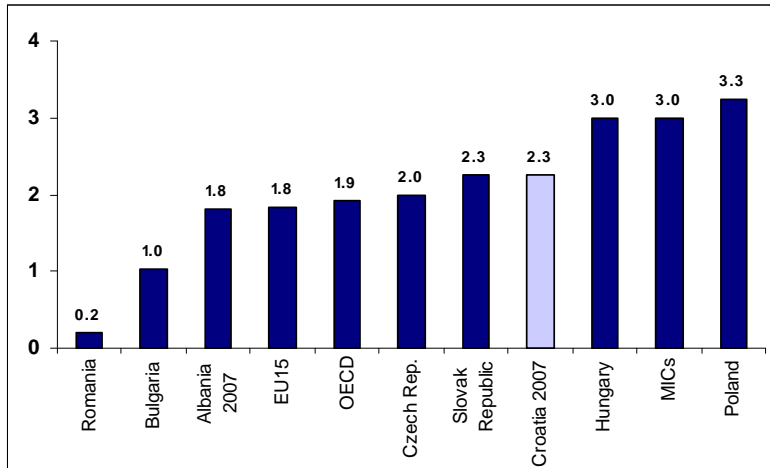
Firm entry and exit are two critical parts of the Schumpeterian creative destruction process which is a major prerequisite for a dynamic economy. High levels of firm turnover (the sum of firms' entry and exit rates) are associated with higher productivity reflecting the fact that new firms with at least average productivity put competitive pressure on incumbents, leading to more exits but also to increased productivity amongst those that remain⁶. Thus, the replacement of less productive firms by new entrants and the mobility of market share from less productive to more productive firms exert a significant upward push on overall industrial performance. Thus easy entry and quick exit of companies allows for competition to flourish and for an efficient allocation of resources.

The PMR indicators show that administrative burdens on start-ups are still an issue for sole proprietor firms, especially for the number of mandatory procedures entrepreneurs have to comply with (16 in Croatia versus 7 on average in the EU15 in 2003). Number of procedures is also an issue to start a corporation (21 in Croatia versus less than 15 on average in the EU15 in 2003). Requirement for specific service sectors -such as road transport and retail distribution, are, on the other hand, less cumbersome than both the EU15 and OECD averages. These sector specific administrative burdens assess the restrictiveness of licensing, registration and notification requirements, as well as technical, health and safety standards.

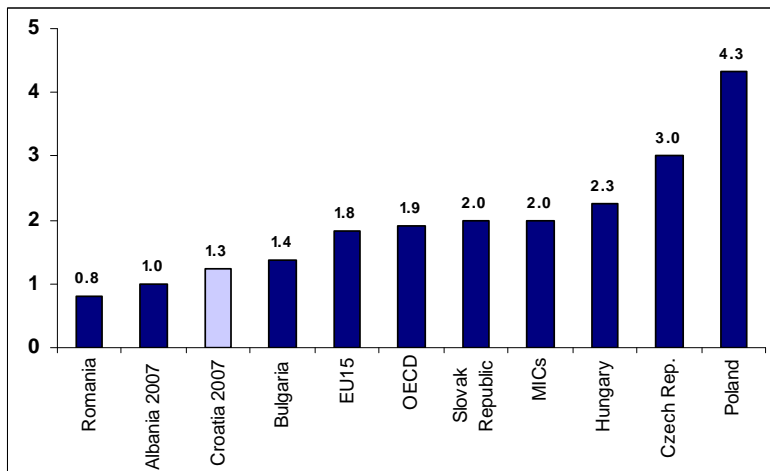
⁶ Scarpetta, S. *et al.* (2002), "The Role of Policy and Institutions for Productivity and Firm Dynamics: Evidence from Micro and Industry Data", *OECD Economics Department Working Papers*, No. 329, OECD Publishing. doi:10.1787/547061627526

Figure 15: Administrative burdens

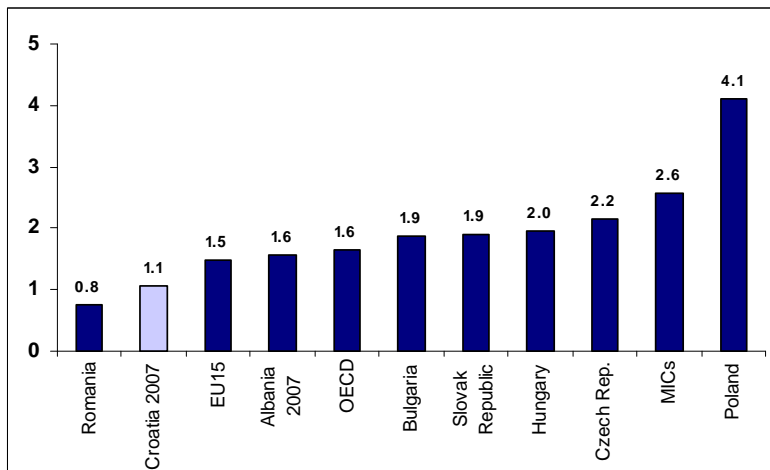
a. Sole proprietors



b. Corporations



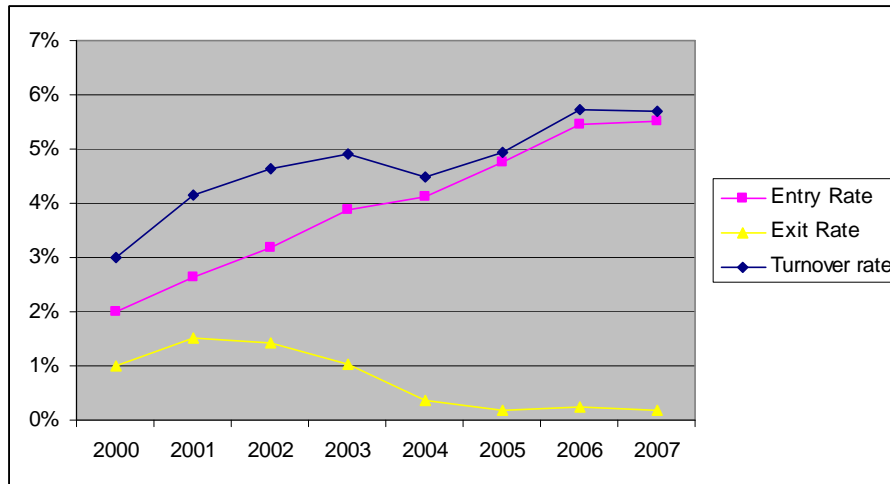
c. Sector-specific



Note: Other MICs are Brazil, Mexico, Turkey. Values refer to 2007 for Croatia and Albania, 2006 for Bulgaria and Romania, 2004 for Brazil, and 2003 for all other countries. For full data set see Annex I.

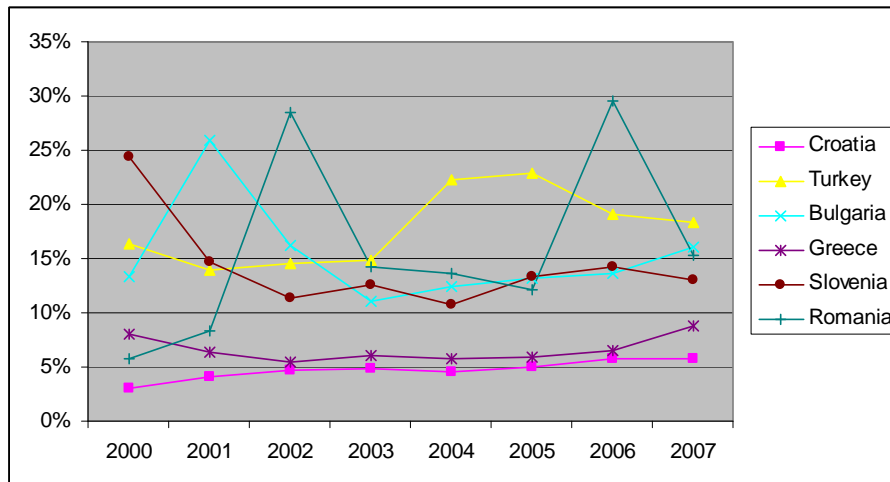
Croatia's turnover rate has been increasing due to the rising entry rate but is still below the regional average. Firm turnover has increased from 3 percent in 2000 to 5.7 percent in 2007. The increase is accounted solely by a steady rise in entry rates from 2 percent to 5.5 percent over the same period, as the exit rate decreased from the high point of 1.5 percent in 2001 to 0.2 percent in 2007 (fig. 1). The dynamic of Croatia's turnover rate resembles closely that of Greece, but differs greatly from the regional one. Romania, Slovenia, Bulgaria and Turkey are all characterized by an above 10 percent turnover rate between 2000 and 2007 (fig.2). In 2007, Croatia's turnover rate was 5.7 percent, whereas those of Slovenia, Bulgaria, Romania and Turkey were 13, 15.3, 16 and 18.3 percent respectively (fig.3).

Figure 16: Firm Turnover in Croatia⁷



Source: World Bank, Entrepreneurship Survey 2008

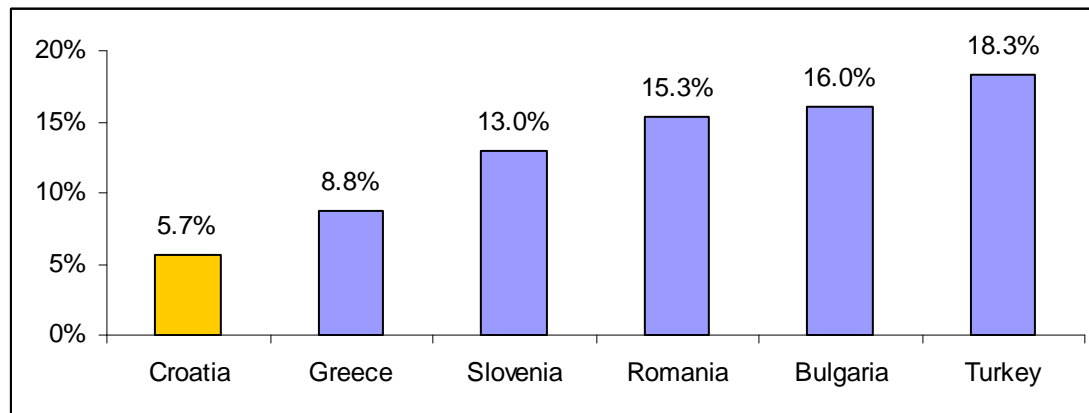
Figure 17: Firm Turnover



Source: World Bank, Entrepreneurship Survey 2008

⁷ Firm turnover is calculated as the sum of entry and exit rates, where the entry rate is the ratio of entering firms to the total population and the exit rate is the ratio of exiting firms to the population of origin.

Figure 18: Firm Turnover, 2007



Source: World Bank, Entrepreneurship Survey 2008

Below follows a review of the entry and exit procedures, the reforms that the Croatian government has undertaken to date to accelerate both entry and exit and the suggestions on the way forward,

4.2 State control of economic activity

The privatization process in Croatia has been long, controversial in terms of its impacts, and still incomplete. The first phase of enterprise privatization, which was launched in 1991, was characterized by sales to insiders (managers and employees) and distribution to political supporters. It did not provide the hoped-for boost to investment and growth, largely owing to the method of privatization used (companies were not transferred to those who could operate them most efficiently), but also because of Government's unwillingness to impose financial discipline on privatized enterprises. Instead of establishing hard budget constraints and pushing the chronic loss-makers into liquidation, the Government has kept bailing them out. As a result, the list of state-owned enterprises slated for privatization—or re-privatization—remains long today, over 750 companies.

After taking off again in 2005-2007 period, enterprises with high state ownership remained mainly in shipbuilding and tourism sectors. Many of them are loss-making, heavily indebted, and cannot survive without direct subsidies (including for working capital). Completion of enterprise privatization or liquidation has become urgent to create space for the private sector and to release the significant assets locked in these enterprises to more productive use.

Croatia performs remains quite far from OECD and EU levels with respect to both the extent of public ownership and state involvement in business operations. The two measures of state control in the PMR system are public ownership and state involvement in business operations (through price controls and coercive, as opposed to incentive-based, regulation). On both accounts, the extent of control performed by the state in Croatia is heavier than in comparators.

Box 2: What the PMR survey means by “command and control” or coercive regulation

The contrasting use of “command-and-control” and “incentive-based” regulation appear to have been brought into common usage by Schultze who wrote in a 1977 lecture about economic efficiency: “We tend to see only one way of intervening – namely removing a set of decision from the decentralized and incentive-oriented private market and transferring them to the command-and-control techniques of government bureaucracy” (page 6)

In this context, the PMR attempts to measure the extent to which the cost of new regulation is assessed, and whether alternatives are considered before implementing new regulations. About half of the indicator weights are allocated to the following two questions (the full make-up of the indicator is provided in Annex table A2.5):

Regulators are required to assess alternative policy instruments (regulatory and non-regulatory) before adopting new regulation. (Current answer: no).

Explanation. The use of a wide range of mechanisms for meeting policy goals, not just traditional regulatory controls, helps to ensure that the most efficient and effective approaches are used. Approaches may include green taxes and subsidies, voluntary agreements, information programs such as eco labeling, self-regulation, permit-trading schemes, and performance-based regulation (where a sector or industry must comply with a standard but can broadly choose how to meet it). Note that the question only refers to whether the obligation exists as a specific provision in a specific legislative act, not whether the spirit of it is in fact respected. A positive answer to the question would require the existence of a normative act explicitly ruling out regulation as the default option

Guidance has been issued on using alternatives to traditional regulation. (Current answer: no).

Explanation. We understand that the first steps have been made to implement regulatory impact assessment (RIA) which is a step in the right direction. However, RIA has not been legislated to make it mandatory for a wide range of regulatory interventions and, most importantly, the RIA guidelines contain no provisions on **how** to use alternatives to traditional regulation. Lack of know-how and guidance how to use alternatives may prove to be a surmounting obstacle in an environment which is heavily used to more traditional coercive kinds of intervention. Box 3 offers a discussion of alternatives to traditional regulation.

Box 3: Alternative Regulatory approaches

Performance-Based Regulations—specify required outcomes or objectives rather than the means by which they must be achieved. Thus firms and individuals can choose processes that are more efficient and less costly, which promotes the use of new technology on a broader scale. Such type of regulation is increasingly used in health, safety, consumer protection, and environmental regulation. Drawbacks include measurement problems related to desired outcomes, higher administrative and monitoring costs, greater responsibilities for small companies to develop appropriate compliance strategies. Most countries have resorted to the use of guidelines or “safe harbors” in conjunction with performance-based regulation. Guidelines provide information on appropriate compliance strategies, while safe harbors allow the benefits of certainty of compliance associated with prescriptive regulation to be attained, while also allowing more innovative firms to take advantage of the benefits of such regulation.

Process Based Regulations—require businesses to develop processes that systematically control and minimize production risks. These processes are used in businesses with multiple and complex sources of risk, where ex post testing of the product is either ineffective or expensive. Process based regulation is predominantly used in health, food safety, and environmental regulation.

Co-regulation—businesses take the lead in regulation through endorsement and adherence to codes of practice. This type of regulation is highly cost effective for the government. Drawbacks include the possibility for encouraging anti-competitive activities by business or professional organizations.

Economic Instruments—taxes, subsidies, tradable permits, vouchers and the like. Economic instruments allow businesses to achieve regulatory goals in the least costly manner and provide market incentives which reward the use of innovation and technical change.

Information and Education—most widely used approach to regulation in OECD member states; empower consumers to adopt actions or make informed choices to change their behavior. Examples include campaigns aimed at reducing speeding when driving, anti-litter behaviors; reducing the use of drinking water; eco-labeling of products.

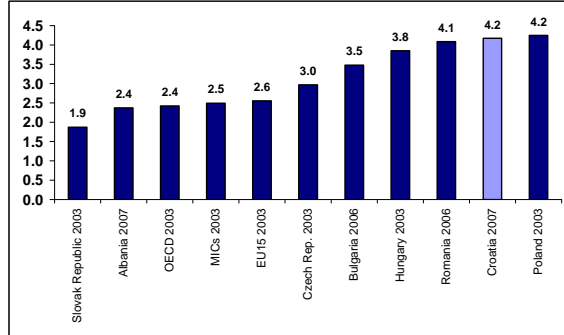
Guidelines—issued by regulatory authorities, setting out processing or providing interpretations to aid understanding of government objectives by businesses and citizens. Guidelines may accompany existing regulations, but also are increasingly used as stand-alone documents. Guidelines, for example, are widely used in the area of consumer protection in Denmark.

Voluntary Approaches—initiated by industries, sometimes formally sanctioned or endorsed by government. They include voluntary initiatives, voluntary codes, voluntary agreements, and self-regulation. An example of a voluntary arrangement is the chemical industry’s Responsible Care Program, used in 40 countries, which promotes the adoption of rules for sound environmental management practice.

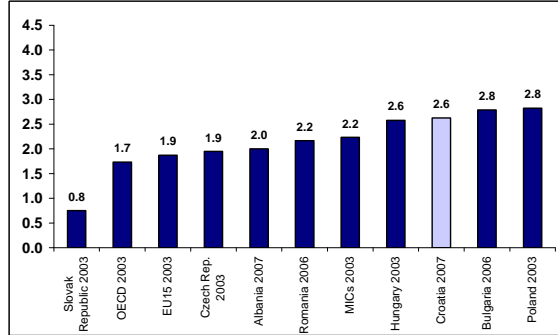
Source: OECD 2002.

Figure 19: Public ownership and state involvement in business operation

a. Public ownership



b. State involvement in business operations



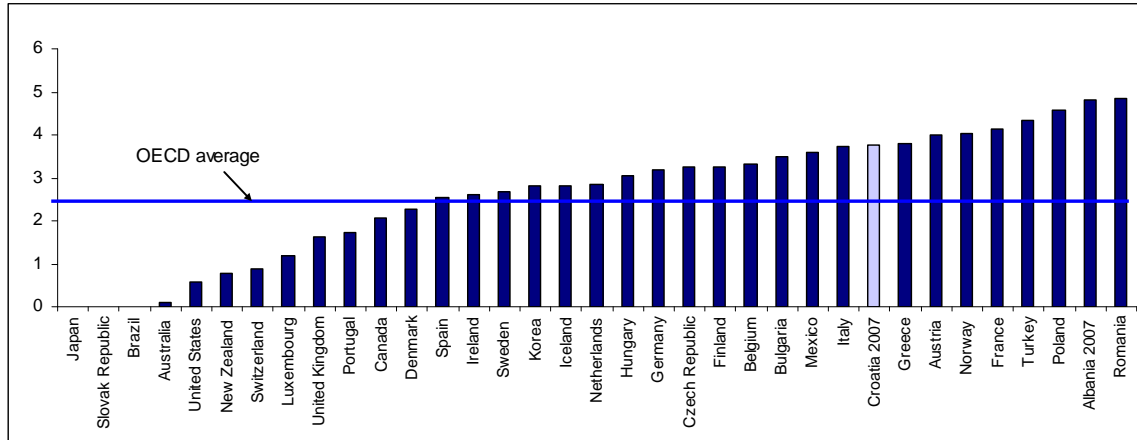
Note: Other MICs are Brazil, Mexico, Turkey. Values refer to 2007 for Croatia and Albania, 2006 for Bulgaria and Romania, 2004 for Brazil, and 2003 for all other countries. For full data set see Annex I.

4.2.1 Public ownership

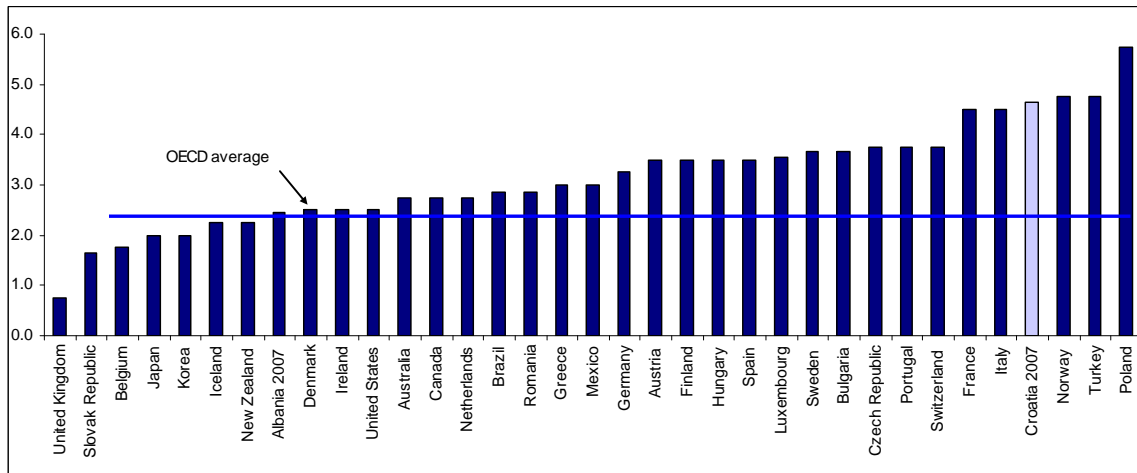
The presence of the Croatian state in the economy is pervasive, in terms of its size, of the number of sectors it is involved in, and on the nature of control it exerts over state-owned enterprises. The aggregate indicator for public ownership covers size and scope of public enterprise sector, as well as direct control over business enterprises. Given that there is much variation among EU15 or OECD countries for these indicators, we show the full set of comparators (Figure 20). The figure suggests that whereas the size of the public enterprise sector in Croatia is not exceptional (although within the upper tier), the scope of state involvement (number of sectors) and the form it takes is among the heaviest in the sample.

Figure 20: Public ownership: size, scope and extent of control over public enterprises

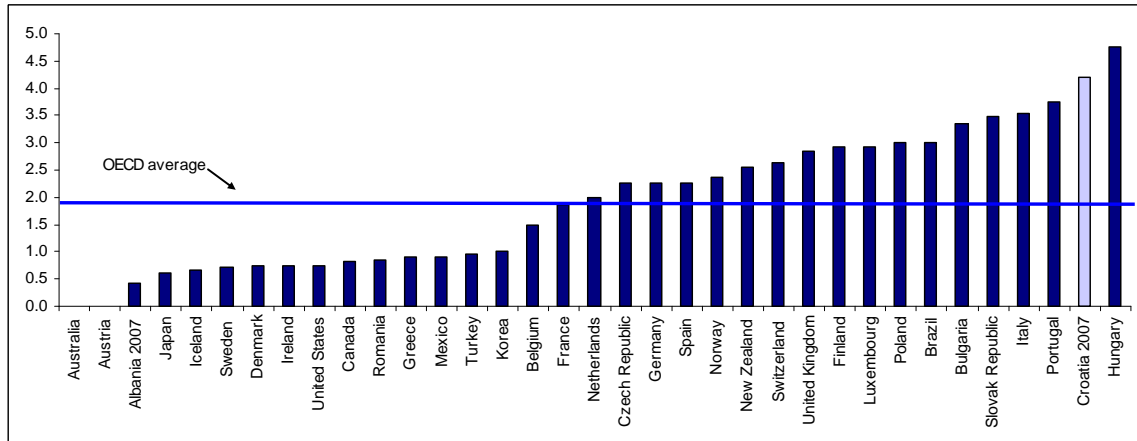
a. Size of the public enterprise sector



b. Scope of the public sector



c. Control of public enterprise by legislative bodies



Note: Other MICs are Brazil, Mexico, Turkey. Values refer to 2007 for Croatia and Albania, 2006 for Bulgaria and Romania, 2004 for Brazil, and 2003 for all other countries. For full data set see Annex I.

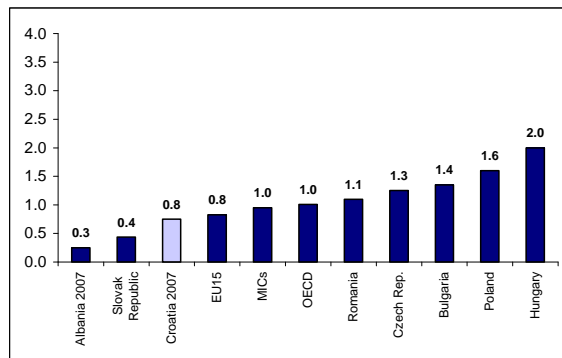
To make this point, that the state holds equity shares in the largest firm in 17 out of 24 sectors of the economy considered in the PMR survey (Figure 20b).⁸ As to the instruments of control used by the Croatian state in the sectors where it remains involved, they seem more extensive than in most benchmark countries (Figure 20c). The similarity with Hungary, Poland, and the Slovak Republic suggests that transition countries have followed a similar approach in this domain. Direct control over business enterprises in Croatia has taken the form of constraints to the sales of state-owned equity stakes, special voting rights, and control of the strategic choices of public enterprises by legislative bodies (see Annex Table A2.3 for details).

4.2.2 State Involvement in Business Operation

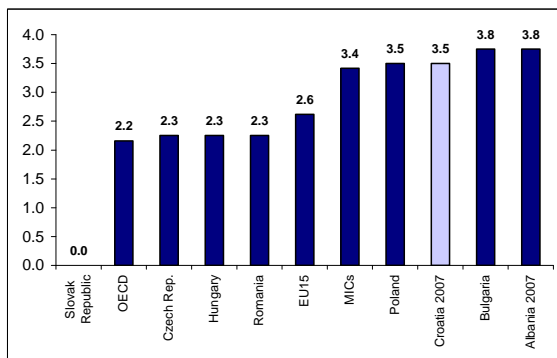
State intervention in the overall economy is captured through price controls and “use of command and control regulations.” The price control indicator measures the existence of price regulation or administrative control of prices in air travel, road freight, telecommunications, and retail distribution sectors. The “use of command-and-control” indicator reflects the extent to which government uses prescriptive (as opposed to incentive-based) regulation both in general and in specific service sectors.

Figure 21: State involvement in business operations

a. Price controls



b. Use of command-and-control regulation



Source: see Figure 3. Note: Other MICs are Brazil, Mexico, and Turkey. Values refer to 2007 for Croatia and Albania, 2006 for Bulgaria and Romania, 2004 for Brazil, and 2003 for all other countries. For full data set see Annex I.

Regulatory processes do not sufficiently rely on incentive-based regulation. Price controls have been largely removed since the first phase of transition, placing Croatia below the OECD and EU15 averages in 2003 (Figure 21). On the other hand, reliance on prescriptive regulation is much more pronounced than in most comparator groups or countries, on level with Poland’s and the MICs 2003 average. This suggests that this should represent a high priority for the reform efforts of policymakers. A detailed look at the make-up of this indicator shows that Croatia’s very high (poor) score is almost entirely driven by the fact that regulators have not issued guidelines on the use of alternative instruments before issuing new regulations. The use of prescriptive regulation is also the norm in a number of aspects of activity in the specific sectors included in the PMR approach (air travel, road freight, railways and retail distribution). For instance, the

⁸ The indicator does not take into account the number of shares or the proportion of state ownership. In Croatia, for example, state ownership in some of the sectors in terms of actual control over equity is minimal.

universal service requirement for railways and domestic airlines drives a large portion of Croatia's score in this indicator.

5. Regulation in Non-manufacturing Sectors

Regulation of non-manufacturing sectors in Croatia is pervasive and has important knock-on effects for the rest of the economy. Non-manufacturing sectors represent around two-thirds of economic activity across OECD countries. Furthermore over the past two decades they have proven to be the sectors contributing the largest share of growth both in terms of productivity and employment in several OECD countries. Non-manufacturing sectors are also the area in which government regulation is concentrated given that manufacturing sectors have usually been the object of generalized de-regulation and liberalization associated with free trade agreements, such those associated with membership of the World Trade Organization (WTO) and, even more so, as a consequence of the adoption of norms from the *acquis communautaire* in countries that are members of the EU or in the path to accession. This implies that final and intermediate consumers of non-manufacturing products across the economy have to bear the costs of heavy regulation in non-manufacturing sectors, with consequences for consumer welfare and efficiency of economic organization.

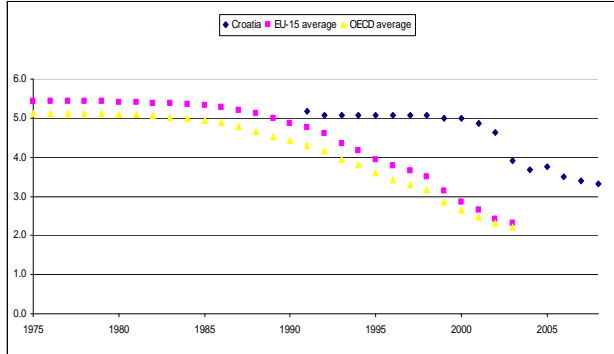
The OECD indicators of regulation in the energy transport and communication sectors (ETCR) provide a framework to benchmark Croatian non-manufacturing sectors to EU and other OECD countries.⁹ The OECD ETCR indicator system for regulation in non-manufacturing sectors is structured around precise criteria. As for the OECD economy-wide PMR indicators, the overarching criterion to assess regulations is their effect on competition where competition is viable. The ETCR indicators assess regulation in electricity, gas, telecoms, post, air transport, rail transport and road freight. Sectoral indicators summarize information on the restrictiveness of regulation in four main areas: state control, barriers to entry, involvement in business operations and, in some cases, market structure. The resulting ETCR indicators cover the 1975-2003 period in 21 OECD countries and –together with the retail distribution and professional services indicators covered in the PMR for 1998 and 2003 in 30 OECD countries – map the restrictiveness of regulation in non Manufacturing sectors.

Regulation in energy, transportation and telecommunications is more restrictive in Croatia than in EU countries. The aggregate ETCR indicator reveals that regulation of non-manufacturing sectors in Croatia is more restrictive of competition than both the OECD and EU15 averages (Figure 22a). However, Croatia appears to have made considerable progress since independence to make competition viable in these sectors. Most of these efforts are associated with Croatia's progressive compliance with the provisions of the *acquis communautaire* relating to these sectors, which has led to convergence in regulatory frameworks. Convergence in regulation with the EU has occurred more rapidly in the electricity and telecoms sectors (Figure 22b).

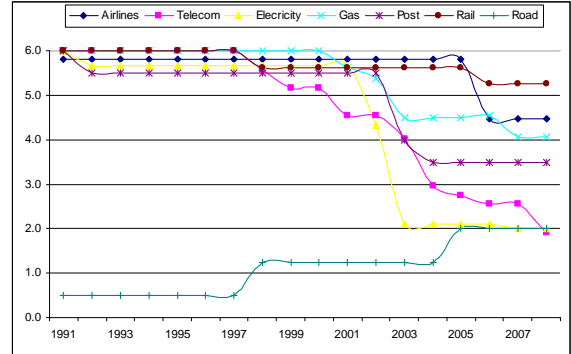
⁹ See Annex for a detailed description of the methodology of ETCR indicators based on Conway and Nicoletti (2006).

Figure 22: The ETCR Indicator for Croatia

a) Aggregate ETCR

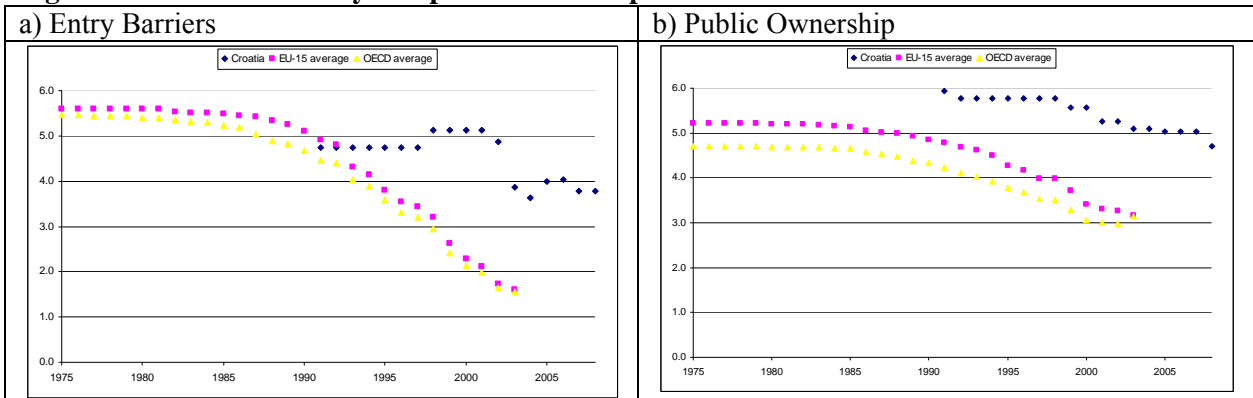


b) Disaggregated ETCR



The gap in regulatory restrictiveness with the EU is equally large for barriers to entry and public ownership. The ETCR can be decomposed in its various components, thus allowing us to trace the restrictiveness of regulation to its sources. The dimensions considered are tailored to each sector and include public ownership and barriers to entry (see Annex). Under both dimensions, the regulatory framework in Croatia is more restrictive than the EU and OECD averages (Figure 23).

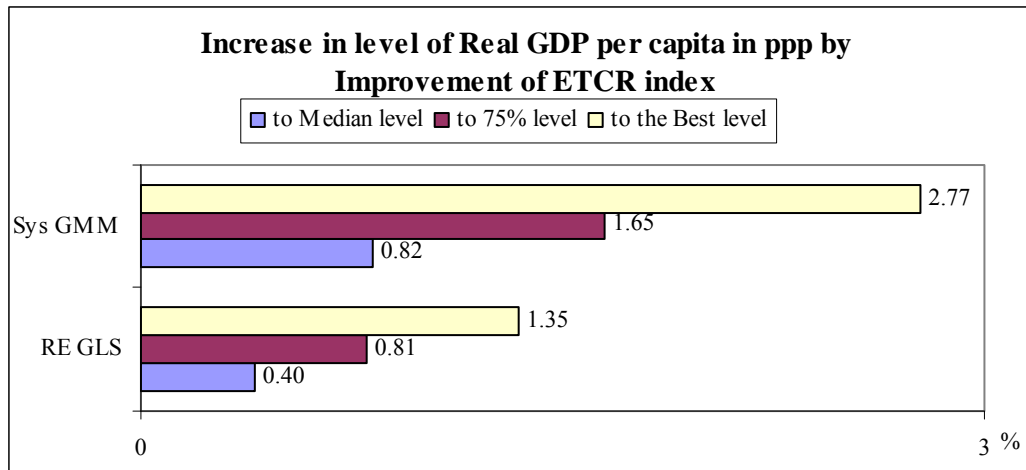
Figure 23: Barriers to entry and public ownership



Product market policies that are more conducive to competition would have a significant impact on Croatia's convergence to higher income levels. Conway et al. (2006) show that the ETCR is highly correlated with the overall restrictiveness of a country's regulatory environment across OECD countries. This allows using the ETCR in regression analysis as a proxy for the degree to which overall product market policies restrict competition. Simulations based on regression analysis conducted for Croatia indicate that a reduction of the regulatory burden as represented by the ETCR indicator to the less restrictive level of the EU15 would be associated with an increase in the level of GDP per capita of between 1.35% and 2.77% (Figure 24). As argued by Conway et al. (2006), restrictive product market regulation negatively affects income convergence by slowing the process of adjustment through which positive productivity shocks diffuse across borders and new technologies are incorporated into the production process. Furthermore, Conway et al (2006) show that the gains from further product market reform are more significant the more distant a country is from the productivity frontier. For a country like Croatia, which is far from the world productivity frontier, progressive integration with the EU is

going to multiply and amplify exogenous shocks, thus highlighting the importance of a more competitive regulatory environment for continued convergence.

Figure 24: Simulation of the effect of ETCR on GDP



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Annex I: The PMR Methodology

A regulatory environment propitious to competition in product markets is widely believed to have positive repercussions on long run economic performance (Nicoletti and Scarpetta 2003) and productivity convergence (Conway et al. 2006 and 2007). This may occur by promoting a more efficient allocation of resources both across and within sectors. A more competitive environment may also stimulate innovation and technological diffusion, thus enhancing dynamic efficiency (Aghion et al. 2001).

Product market regulation (PMR) is measurable through a methodology developed at the OECD relying on the OECD regulatory indicators questionnaire. The methodology and key findings of the PMR for OECD countries are presented in Nicoletti et al. (1999) and Conway et al. (2005). The PMR indicators summarize information on economy-wide and industry-specific regulatory provisions.

The PMR indicators are designed to reflect regulations that have the potential to restrict competition in areas where competition is viable. By construction, they have a number of features which make them useful not only for analysis, but, more importantly, for policy advice, since they allow to pinpoint specific policies that hamper competition in product markets. First, PMR indicators are focused on enacted policies and not on outcomes, implying that they are ‘objective’, in that they are not based on opinion surveys. Second, since the summary PMR indicator is constructed as the average of well defined components, PMR scores can be related to specific underlying policies, thus providing precise inputs in the phase of policy recommendation. Finally, PMR indicators focus on regulatory measures that affect the economy at large and can therefore be considered as comprehensive measures of regulatory restrictiveness. Their advantages notwithstanding, PMR indicators are not designed to capture informal regulatory practices nor the effective enforcement of regulations, since they are only concerned with formal compliance with a number of criteria.

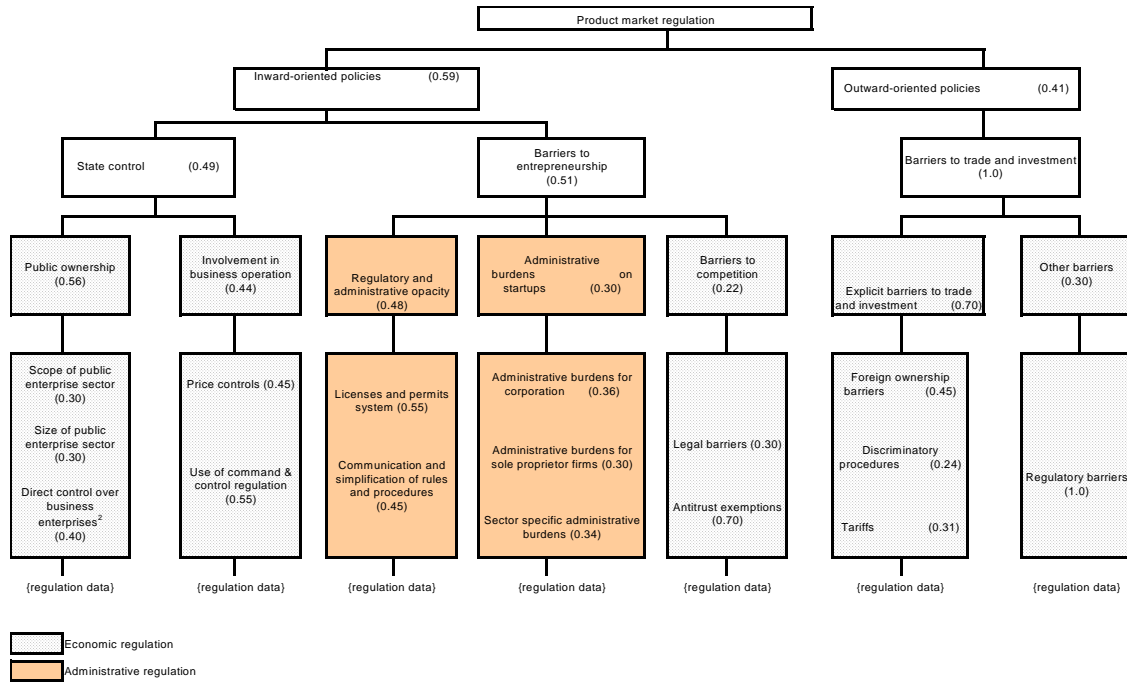
Data was collected for Croatia for the purpose of the present exercise on the basis of the OECD product market regulation questionnaire.¹⁰ The first section deals with general regulatory policy issues, concerning public ownership; market access and competition issues; market structure and vertical relationships in utilities and other network industries. The second section covers regulatory and administrative policies, such as processes and capacities in the public administration. The third section covers administrative requirements for start-ups, both sole proprietors and corporations. The fourth section deals with the regulation of professional services (accountancy, legal, engineering, architectural). The fifth section covers regulation in transportation industries, focusing on market access, business conduct, and market structure in road freight, railways and passenger air travel. The final section covers regulation in retail distribution, focusing on the regulatory environment, industry behavior and prices. Information from Doing Business 2006 was used for a fifth section of the PMR - administrative burdens on startups.

The structure of the PMR system is shown in Figure 2. The system is composed of 16 basic or ‘low-level’ indicators, each capturing a specific aspect of the regulatory regime as described in Box 1. The basic indicators are progressively aggregated in more comprehensive policy areas.

¹⁰ Annex 2 presents responses to the OECD questionnaire provides the responses for Croatia and comparators .

The highest level of aggregation corresponds to the summary measure of product market regulation in the country.

Figure 1: The PMR indicator system



1. The numbers in brackets indicate the weight given to each lower level indicator in the calculation of the higher level indicator immediately above it.

The weights were derived by applying principal components analysis to the set of indicators in each of the main regulatory domains (state control, barriers to entrepreneurship, barriers to trade and investment, economic regulation and administrative regulation). The same approach was used to derive the weights used to calculate the indicators of inward and outward-oriented policies and the overall PMR indicator. The principal components analysis was based on the original 1998 data.

2. Two indicators from the 1998 version of the PMR indicators ('Special voting rights' and 'Control of public enterprise by legislative bodies') have been combined into this indicator.

Source: Conway et al. (2005)

Box A1. The low-level PMR indicators

There are 16 low-level indicators in the PMR system. These indicators cover a wide range of product market policies and include:

INWARD ORIENTED POLICIES

State control: Public ownership

Scope of public enterprises: this indicator measures the pervasiveness of state ownership across business sectors as the proportion of sectors in which the state has an equity stake in at least one firm.

Size of public enterprise: reflects the overall size of state-owned enterprises relative to the size of the economy.

Direct control over business enterprises: measures the existence of government special voting rights in privately-owned firms, constraints on the sale of state-owned equity stakes, and the extent to which legislative bodies control the strategic choices of public enterprises.

State control: Involvement in business operations

Price controls: reflects the extent of price controls in specific sectors.

Use of command and control regulation: indicates the extent to which government uses coercive (as opposed to incentive-based) regulation in general and in specific service sectors.

Barriers to entrepreneurship: Regulatory and administrative opacity

Licenses and permits systems: reflects the use of 'one-stop shops' and 'silence is consent' rules for getting information on and issuing licenses and permits.

Communication and simplification of rules and procedures: reflects aspects of government's communication strategy and efforts to reduce and simplify the administrative burden of interacting with government.

Barriers to entrepreneurship: Administrative burden on corporations

Administrative burdens for corporations: measures the administrative burdens on the creation of corporations.

Administrative burdens for sole proprietors: measures the administrative burdens on the creation of sole proprietor firms.

Sector-specific administrative burdens: reflects administrative burdens in the road transport and retail distribution sectors.

OUTWARD ORIENTED POLICIES

Barriers to entrepreneurship: Barriers to competition

Legal barriers: measures the scope of explicit legal limitations on the number of competitors allowed in a wide range of business sectors.

Antitrust exemptions: measures the scope of exemptions to competition law for public enterprises.

Barriers to trade and investment: Explicit barriers

Tariffs: calculated as the (simple) average of most-favoured-nation tariffs.

Foreign Ownership barriers: reflects legal restrictions on foreign acquisition of equity in public and private firms and in the telecommunications and airlines sectors.

Discriminatory procedures: reflects the extent of discrimination against foreign firms at the procedural level.

Barriers to trade and investment: Regulatory barriers

Regulatory barriers: reflects other barriers to international trade (e.g. international harmonisation, mutual recognition agreements).

Source: reproduced from Conway, Janod and Nicoletti, 2005

The indicators are calculated on the basis of the qualitative and quantitative information obtained from questionnaire answers. Qualitative data are assigned a numerical value that allows ordering each of the possible responses to a given question. Quantitative information is ranked by subdividing it into categories based on a system of thresholds. The coded information is then normalized over a scale of zero to six. These data are then aggregated into basic or 'low-level' indicators by assigning subjective weights to the various regulatory requirements. Given the normalization of the basic data, all the low-level indicators also have a scale of zero to six, reflecting increasing restrictiveness of regulatory areas.¹¹

Basic indicators are then aggregated into broader regulatory domains. Higher level indicators are calculated as weighted averages of their constituent lower level indicators. The attribution of lower-level indicators to each higher-level indicator, and the weights used in the aggregation, are based on principal component analysis (Nicoletti et al., 1999). At the highest level of aggregation the overall indicator of product market regulation summarizes the restrictiveness of the regulatory framework in the product market. The structure of the PMR system, with progressive levels of aggregation, has the advantage of allowing a decomposition of higher-level indicators, with an increasing degree of detail, into the values of the more disaggregated indicators, each corresponding to specific regulatory provisions.

Data refer to the fourth quarter of 2007 for Croatia and Albania, to the second quarter of 2006 for Bulgaria and Romania, to end-2003 for OECD countries and 2004 for Brazil.

As to benchmarks, the most obvious ones for Croatia are Bulgaria and Romania, who accessed the EU in 2007, and the countries of Central and Eastern Europe that are also OECD members and that accessed the EU in a prior wave in 2004. These include the Czech Republic, Hungary, Poland and the Slovak Republic and we refer to them as the OECD CEE. The fact that the data for Bulgaria and Romania and for the OECD CEE are from 2006 and 2003 respectively, when these countries had not yet completely fulfilled the legislative and regulatory obligations connected with EU membership makes them interesting benchmarks. Nevertheless, when assessing Croatia's relative performance, it should be kept in mind that the OECD CEE countries are likely to have made further substantial progress in various areas of product market regulation since EU accession.

Extension of the benchmarking exercise to Brazil, Mexico and Turkey offers a broader perspective on other middle income countries (MICs) with different historical experiences. Finally, comparison with the OECD or high income EU15 countries helps identify longer term objectives for policymakers.¹²

These benchmarks are used in the graphs. However, Croatia's score relative to the full sample of countries (30 OECD members plus Brazil, Ukraine, Bulgaria, Romania and Albania) is shown in Annex I for all PMR indicators.

¹¹ The calculation of low-level indicators, including the weights used, is based on Conway et al. (2005).

¹² EU15 countries are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom.

Comparisons with full sample

Table A1. 1: PMR

	Product regulation	market	Inward- oriented policies	Outward- oriented policies
Australia	0.9		0.9	0.9
United Kingdom	0.9		1.2	0.5
Iceland	1.0		1.4	0.4
United States	1.0		1.2	0.8
Ireland	1.1		1.4	0.6
Denmark	1.1		1.3	0.9
New Zealand	1.1		1.3	0.9
Canada	1.2		1.2	1.2
Albania	1.2		1.7	0.5
Sweden	1.2		1.5	0.9
Luxembourg	1.3		1.6	0.8
Japan	1.3		1.5	1.0
Finland	1.3		1.7	0.8
Belgium	1.4		2.0	0.5
Netherlands	1.4		1.8	0.8
Austria	1.4		1.8	0.8
Slovak Republic	1.4		1.3	1.5
Germany	1.4		1.9	0.8
Norway	1.5		1.9	0.9
Korea	1.5		1.7	1.3
Portugal	1.6		2.0	0.9
Spain	1.6		2.1	0.9
Romania	1.6		1.8	1.4
Switzerland	1.7		2.1	1.1
France	1.7		2.1	1.1
Czech Republic	1.7		2.2	1.1
Bulgaria	1.8		2.1	1.4
Greece	1.8		2.2	1.3
Italy	1.9		2.3	1.3
Brazil	1.9		1.8	1.9
Hungary	2.0		2.4	1.5
Croatia	2.0		2.4	1.5
Mexico	2.2		2.1	2.3
Turkey	2.3		2.6	1.8
Poland	2.8		2.9	2.5

NOTE: The values of indicators refer to 2007 for Albania and Croatia, 2006 for Bulgaria and Romania, 2004 for Brazil, and to 2003 for all other countries (Conway et al. 2005).

Table A1. 2 State Control

	State control	Public ownership	Involvement in business operation
Australia	0.6	0.8	0.3
Iceland	1.1	1.8	0.3
United States	1.2	1.2	1.2
Denmark	1.3	1.7	0.8
Slovak Republic	1.4	1.9	0.8
New Zealand	1.4	1.9	0.8
Japan	1.5	0.8	2.4
Canada	1.7	1.7	1.5
Korea	1.7	1.8	1.5
United Kingdom	1.7	1.9	1.6
Mexico	1.9	2.3	1.4
Sweden	1.9	2.2	1.6
Netherlands	1.9	2.5	1.2
Austria	1.9	2.2	1.6
Ireland	2.0	1.8	2.1
Luxembourg	2.0	2.6	1.2
Albania	2.2	2.4	1.9
Germany	2.2	2.8	1.5
Switzerland	2.2	2.4	2.1
Finland	2.3	3.2	1.3
Belgium	2.4	2.2	2.6
Brazil	2.4	2.1	2.8
Czech Republic	2.5	3.0	1.9
France	2.7	3.3	1.9
Spain	2.7	2.7	2.7
Portugal	2.7	3.1	2.2
Norway	2.8	3.5	1.8
Greece	2.8	2.4	3.3
Turkey	2.8	3.1	2.5
Italy	3.2	3.8	2.3
Bulgaria	3.2	3.5	2.8
Romania	3.2	4.1	2.2
Hungary	3.3	3.8	2.6
Croatia	3.5	4.2	2.6
Poland	3.6	4.2	2.8

NOTE: The values of indicators refer to 2007 for Albania and Croatia, 2006 for Bulgaria and Romania, 2004 for Brazil, and to 2003 for all other countries (Conway et al. 2005).

Table A1. 3 Barriers to Entrepreneurship

	Barriers to entrepreneurship	Administrative burdens on startups	Regulatory administrative opacity	and barriers to competition
Romania	0.5	0.7	0.1	0.6
United Kingdom	0.8	0.7	1.2	0.4
Canada	0.8	0.9	0.5	0.7
Ireland	0.9	0.5	2.1	0.3
Norway	1.0	1.0	1.2	0.6
Sweden	1.1	1.2	1.1	0.6
Finland	1.1	1.3	1.2	0.4
Bulgaria	1.1	1.4	1.2	0.4
Australia	1.1	1.0	1.2	1.5
New Zealand	1.2	0.8	2.2	0.4
United States	1.2	1.0	1.3	1.5
Slovak Republic	1.2	1.9	0.7	0.3
Luxembourg	1.2	1.8	1.1	0.1
Denmark	1.2	0.5	2.1	1.7
Portugal	1.3	1.7	1.2	0.5
Brazil	1.3	1.5	1.4	0.6
Albania	1.3	1.5	1.3	0.8
Croatia	1.4	1.5	1.3	1.2
Italy	1.4	2.4	0.4	0.6
Japan	1.4	1.9	1.2	0.6
Hungary	1.4	2.3	0.4	1.1
Germany	1.6	1.6	2.2	0.5
Iceland	1.6	1.4	2.4	0.7
Greece	1.6	2.6	0.6	0.5
Spain	1.6	2.8	0.4	0.4
France	1.6	1.9	1.3	1.4
Belgium	1.6	1.7	2.2	0.6
Austria	1.6	2.8	0.4	0.8
Netherlands	1.6	1.6	2.5	0.6
Korea	1.7	2.2	1.2	1.0
Switzerland	1.9	1.7	3.1	0.7
Czech Republic	1.9	2.3	2.3	0.5
Mexico	2.2	3.1	0.4	2.9
Poland	2.3	3.7	1.5	0.3
Turkey	2.5	2.7	3.4	0.5

NOTE: The values of indicators refer to 2007 for Albania and Croatia, 2006 for Bulgaria and Romania, 2004 for Brazil, and to 2003 for all other countries (Conway et al. 2005).

Table A1. 4: Barriers to trade and investment

	Barriers to trade and investment	Explicit barriers	Other barriers
Iceland	0.3	0.5	0.1
Belgium	0.3	0.5	0.1
Albania	0.4	0.5	0.2
United Kingdom	0.4	0.5	0.2
Ireland	0.5	0.8	0.2
Finland	0.6	1.0	0.2
Germany	0.6	0.6	0.7
Netherlands	0.7	1.0	0.3
Spain	0.7	0.7	0.6
Austria	0.7	1.0	0.2
Luxembourg	0.7	1.1	0.2
United States	0.7	1.1	0.2
Norway	0.8	0.9	0.6
Sweden	0.8	1.2	0.3
Portugal	0.8	1.2	0.3
Denmark	0.8	1.0	0.7
New Zealand	0.8	1.3	0.2
Australia	0.9	1.4	0.2
Czech Republic	0.9	1.4	0.3
Japan	0.9	1.4	0.3
France	1.0	1.5	0.3
Switzerland	1.0	1.5	0.4
Canada	1.1	1.7	0.4
Italy	1.1	1.7	0.4
Greece	1.2	1.4	1.0
Korea	1.3	1.9	0.4
Bulgaria	1.3	2.0	0.4
Romania	1.3	1.9	0.5
Croatia	1.4	0.7	2.2
Hungary	1.4	2.1	0.6
Slovak Republic	1.6	1.6	1.5
Turkey	1.7	2.5	0.6
Brazil	1.9	2.3	1.5
Mexico	2.4	3.4	1.0
Poland	2.4	3.0	1.7

NOTE: The values of indicators refer to 2007 for Albania and Croatia, 2006 for Bulgaria and Romania, 2004 for Brazil, and to 2003 for all other countries (Conway et al. 2005).

Table A1. 5 State Control: values of the low-level indicators

	Scope of public enterprise sector	Size of public enterprise sector	Direct control over business enterprises	Use of command & control regulation	Price controls
United Kingdom	0.8	1.6	2.9	2.3	0.4
Slovak Republic	1.6	0.0	3.5	0.0	0.4
Belgium	1.8	3.3	1.5	4.5	1.0
Japan	2.0	0.0	0.6	3.0	2.5
Korea	2.0	2.8	1.0	1.1	2.0
Iceland	2.3	2.8	0.7	0.0	0.3
New Zealand	2.3	0.8	2.6	0.8	0.0
Albania	2.5	4.8	0.5	3.8	0.3
Denmark	2.5	2.3	0.8	1.4	0.0
Ireland	2.5	2.6	0.8	3.8	0.8
United States	2.5	0.6	0.8	1.5	0.8
Australia	2.8	0.1	0.0	0.4	0.0
Canada	2.8	2.1	0.8	1.3	2.0
Netherlands	2.8	2.8	2.0	1.7	0.3
Brazil	2.9	0.0	3.0	4.2	1.3
Romania	2.9	4.8	4.4	2.3	1.1
Greece	3.0	3.8	0.9	5.1	2.3
Mexico	3.0	3.6	0.9	1.7	1.0
Germany	3.3	3.2	2.3	1.8	0.5
Austria	3.5	4.0	0.0	2.2	1.3
Finland	3.5	3.2	2.9	1.4	0.3
Hungary	3.5	3.0	4.8	2.3	2.0
Spain	3.5	2.5	2.3	4.4	0.8
Luxembourg	3.5	1.2	2.9	1.5	0.0
Sweden	3.7	2.7	0.7	2.3	1.0
Bulgaria	3.7	3.5	3.3	3.8	1.4
Czech Republic	3.8	3.2	2.3	2.3	1.3
Portugal	3.8	1.7	3.8	2.0	1.8
Switzerland	3.8	0.9	2.6	1.2	2.6
France	4.5	4.1	1.9	3.0	0.3
Italy	4.5	3.7	3.5	1.9	2.0
Croatia	4.6	3.8	4.2	3.5	0.8
Norway	4.8	4.0	2.4	2.2	0.8
Turkey	4.8	4.3	1.0	4.4	0.6
Poland	5.8	4.6	3.0	3.5	1.6

NOTE: The values of indicators refer to 2007 for Albania and Croatia, 2006 for Bulgaria and Romania, 2004 for Brazil, and to 2003 for all other countries (Conway et al. 2005).

Table A1. 6 Barriers to entrepreneurship: values of the low-level indicators

	Licence and permits system	Communication and simplification of rules and procedures	Administrative burdens for corporations	Sector specific administrative burdens	Legal barriers	Antitrust exemptions
Austria	0.0	0.5	3.0	3.4	0.3	1.0
Canada	0.0	1.0	0.8	0.9	0.9	0.6
Greece	0.0	1.1	2.3	2.9	1.6	0.0
Hungary	0.0	0.5	2.3	2.0	1.6	0.9
Italy	0.0	0.5	2.8	2.1	1.9	0.0
Mexico	0.0	0.3	3.3	3.2	1.9	3.5
Portugal	0.0	2.6	1.5	1.8	1.4	0.0
Slovak Republic	0.0	1.4	2.0	1.9	0.6	0.0
Spain	0.0	0.6	2.8	2.4	1.1	0.0
Romania	0.0	0.1	0.8	0.8	2.0	0.0
Australia	2.0	0.2	1.3	0.3	1.6	1.5
Finland	2.0	0.3	1.3	1.1	1.4	0.0
France	2.0	0.3	2.0	1.6	2.2	1.1
Japan	2.0	0.3	1.5	2.3	1.4	0.3
Korea	2.0	0.0	2.7	1.9	1.9	0.6
Luxembourg	2.0	0.0	2.5	0.3	0.3	0.0
Norway	2.0	0.2	1.0	0.9	2.2	0.0
Poland	2.0	0.8	4.3	4.1	0.6	0.0
Sweden	2.0	0.0	1.0	0.9	2.0	0.0
United Kingdom	2.0	0.2	0.8	0.6	1.4	0.0
United States	2.0	0.4	0.8	1.0	1.4	1.6
Brazil	2.0	0.6	0.5	1.3	2.0	0.0
Bulgaria	2.0	0.3	1.4	1.9	1.1	0.0
Croatia	2.0	0.5	1.3	1.1	1.4	1.1
Albania	2.0	0.3	1.0	1.6	2.9	0.0
Belgium	4.0	0.3	1.8	1.7	1.6	0.0
Czech Republic	4.0	0.5	3.0	2.2	1.4	0.0
Denmark	4.0	0.0	1.0	0.3	1.4	1.9
Germany	4.0	0.3	2.3	1.4	1.4	0.0
Iceland	4.0	0.7	1.3	1.6	2.3	0.0
Ireland	4.0	0.2	0.8	0.3	0.9	0.0
Netherlands	4.0	0.9	2.0	1.3	1.9	0.0
New Zealand	4.0	0.3	1.0	0.8	0.3	0.4
Switzerland	6.0	0.0	2.3	0.8	2.2	0.0
Turkey	6.0	0.5	2.3	3.2	1.4	0.0

NOTE: The values of indicators refer to 2007 for Albania and Croatia, 2006 for Bulgaria and Romania, 2004 for Brazil, and to 2003 for all other countries (Conway et al. 2005).

Table A1. 7 Barriers to Trade and Investment: values of the low-level indicators

	Ownership barriers	Discriminatory procedures	Regulatory barriers	Tariffs
Albania	0.0	0.7	0.0	1.0
Belgium	0.3	0.0	0.0	1.0
Germany	0.3	0.7	0.7	1.0
United Kingdom	0.3	0.3	0.0	1.0
Croatia	0.5	0.7	2.9	1.0
Romania	0.8	0.0	0.0	5.0
Spain	0.8	0.3	0.7	1.0
Iceland	1.1	0.0	0.0	0.0
Denmark	1.2	0.5	0.7	1.0
Ireland	1.2	0.0	0.0	1.0
Netherlands	1.2	0.5	0.0	1.0
Greece	1.3	2.0	0.7	1.0
Austria	1.5	0.3	0.0	1.0
Finland	1.5	0.0	0.0	1.0
Luxembourg	1.5	0.3	0.0	1.0
Sweden	1.5	0.7	0.0	1.0
Portugal	1.6	0.7	0.0	1.0
United States	1.8	0.0	0.0	1.0
Norway	1.9	0.3	0.7	0.0
Hungary	1.9	1.2	0.0	3.0
Brazil	2.0	0.7	1.3	4.0
Czech Republic	2.0	0.7	0.0	1.0
Switzerland	2.0	1.1	0.0	1.0
Korea	2.2	0.0	0.0	3.0
New Zealand	2.3	0.0	0.0	1.0
France	2.3	0.5	0.0	1.0
Slovak Republic	2.3	1.1	1.6	1.0
Japan	2.4	0.3	0.0	1.0
Australia	2.4	0.0	0.0	1.0
Mexico	2.8	1.4	0.0	6.0
Italy	2.8	0.7	0.0	1.0
Canada	2.9	0.5	0.0	1.0
Bulgaria	3.0	0.0	0.0	2.0
Turkey	3.1	0.7	0.0	3.0
Poland	3.7	0.3	1.6	4.0

NOTE: The values of indicators refer to 2007 for Albania and Croatia, 2006 for Bulgaria and Romania, 2004 for Brazil, and to 2003 for all other countries (Conway et al. 2005).

Table A2. 1

Scope of public enterprise sector

Scope of public enterprise sector					Bulgaria	Romania	Croatia	Albania	OECD	EU15	Slovak Republic	Poland
<i>Do the national, state or provincial government hold equity stakes in the largest firm in the sector:</i>												
ISIC (Rev. 3.1) code	Sector	Weight (a_i)	Coding of answers									
			Yes	No								
16	Manufacture of tobacco products	1	6	0	yes	no	no	no	na	na	no	yes
232	Manufacture of refined petroleum products	1	6	0	yes	yes	yes	yes	na	na	no	yes
27	Manufacture of basic metals	1	6	0	yes	no	no	no	na	na	no	yes
28, 29	Manufacture of fabricated metal products, machinery and equipment	1	6	0	no	no	yes	no	na	na	no	yes
4010	Electricity: electricity generation/import or electricity transmission or electricity distribution or electricity supply	1	6	0	yes	yes	yes	yes	na	na	yes	yes
4020	Gas: gas production/import or gas transmission or gas distribution or gas supply	1	6	0	yes	yes	yes	no	na	na	yes	yes
4100	Collection, purification and distribution of water	1	6	0	yes	yes	yes	yes	na	na	-	yes
50, 51	Wholesale trade, incl. motor vehicles	1	6	0	no	no	no	no	na	na	no	yes
55	Restaurant and hotels	1	6	0	no	no	yes	no	na	na	no	yes
601, 6303	Railways: Passenger transport via railways, Freight transport via railways, operation of railroad infrastructure	1	6	0	yes	yes	yes	yes	na	na	no	yes
6021	Other urban, suburban and interurban passenger transport	1	6	0	no	yes	yes	yes	na	na	yes	yes
6021	Other scheduled passenger land transport	1	6	0	n.a.	n.a.	n.a.	n.a.	na	na	n.a.	n.a.
6023	Freight transport by road	1	6	0	no	no	no	no	na	na	no	yes
6303	Operation of road infrastructure	1	6	0	yes	yes	yes	yes	na	na	no	no
61	Water transport	1	6	0	yes	no	yes	no	na	na	no	yes
6303	Operation of water transport infrastructure	1	6	0	yes	yes	yes	yes	na	na	no	yes
62	Air transport	1	6	0	yes	yes	yes	no	na	na	yes	yes
6303	Operation of air transport infrastructure	1	6	0	yes	yes	yes	no	na	na	no	yes
642	Telecommunication fixed line services, mobile services, internet services.	1	6	0	yes	yes	yes	no	na	na	yes	yes
6519, 659, 671	Financial institutions	1	6	0	no	no	yes	no	na	na	no	yes
66, 672	Insurance	1	6	0	no	no	yes	yes	na	na	no	yes
74	Other business activity	1	6	0	no	no	yes	no	na	na	no	yes
851	Human health activities 851	1	6	0	yes	no	-	-	na	na	yes	yes
9211, 9212	Motion picture distribution and projection	1	6	0	no	no	no	yes	na	na	no	yes
percent of sectors with state ownership					60.87%	47.83%	77.27%	40.91%	52.41%	53.63%	27.27%	95.83%
Country score (0-6) if number of answers ≥ 20 then $(\sum_i a_i \text{ answer}_i) / \sum_i a_i$					3.65	2.87	4.64	2.45	3.14	3.22	5.75	1.64

Table A2. 2 Size of public enterprise sector

	Privatization proceeds as (pct of GDP)	Size of public sector (0 to 6 index)*
1994	0.37	5.96
1995	0.67	5.88
1996	0.64	5.80
1997	0.33	5.76
1998	1.42	5.59
1999	4.39	5.06
2000	2.04	4.82
2001	3.35	4.41
2002	1.40	4.25
2003	1.80	4.03
2004	0.18	4.01
2005	0.25	3.98
2006	1.15	3.84
2007e	0.72	3.75

*/ We assume full state ownership in 1993. Data for subsequent years were calculated relying on a perpetual inventory method type of approach: $I_t = I_{t-1} + 0.2 \cdot (P_t - 1)$, where the first I_{t-1} is the original index (equal to zero for 1996) and $P_t - 1$ is the privatization proceeds flow for the year. We are grateful to Paul Conway for his help in calculating these data in a manner consistent with the overall PMR.

Table A2. 3 Extent of direct control over business enterprise

Direct control over business enterprise													
	Weight w_i	Weight b_i	Weight a_i	Coding of answers		Bulgaria	Romania	Croatia	Albania	OECD	EU15	Poland	Slovakia
				Yes	No								
General constraints													
There are any legal or constitutional constraints to the sale of the stakes held by government in these firms	30% * w_i (% of business sectors in which the state controls at least a firm)	1		6	0	yes	yes	yes	no	18/30 yes	n.a.	no	yes
Strategic choices of any publicly-controlled firms have to be reviewed and/or cleared in advance by national, state, or provincial legislatures	20% * w_i (% of business sectors in which the state controls at least a firm)	1		6	0	no	yes	yes	yes	16/30 yes	n.a.	no	no
Golden shares													
National, state or provincial governments have special voting rights (e.g. golden shares) in any firms within the business sector	50%	1/2		6	0	yes	yes	yes	no	11/30 yes	n.a.	yes	yes
Extent of the special rights													
These special rights can be exercised in merger with or acquisition by another company			1	6	0	yes	yes	yes	n.a	9/30 yes	n.a.	yes	yes
These special rights can be exercised in change in controlling coalition			1	6	0	no	yes	no	n.a	23/30 no	n.a.	yes	yes
These special rights can be exercised in choice of management			1	6	0	no	yes	no	n.a	25/30 no	n.a.	yes	yes
These special rights can be exercised in strategic management decisions			1	6	0	yes	yes	no	n.a	6/30 yes	n.a.	yes	yes
Weight:% of business sector in which the state controls at least a firm (scope of public enterprise sector/6)		1/2	$(\sum_i a_i \text{ answer}_i) / \sum_i a_i$			61%	48%	77%	41%	53%	56%	96%	27%
Country scores (0-6)		$\sum_i w_i * b_i * \text{answer}_i$				3.3	4.4	4.2	0.5	1.9	1.9	3.0	3.5

Table A2. 4 Price Controls

Price Controls													
	Industry weights (b_j)	Question weights (c_k)	Coding of answers		Bulgaria	Romania	Croatia	Albania	OECD	EU15	Slovak Republic	Poland	
			Yes	No									
Air travel	1/4												
Prices of domestic air fares are regulated		1/2	6	0	no	no	no	no	na	na	no	yes	
Relatif number of 5 or 4 busiest routes subject to price regulation		1/2	(n/5)*6 or (n/4)*6		0.8	0.8	0	0	na	na	0.25	0.8	
Road freight	1/4												
Retail prices of road freight services are regulated in some way by the government		1/3	6	0	no	no	no	no	na	na	no	no	
Government provides pricing guidelines to road freight companies		1/3	6	0	no	no	no	no	na	na	no	no	
Professional bodies or representatives of trade and commercial interests are involved in specifying or enforcing pricing guidelines or regulations		1/3	6	0	-	no	no	no	na	na	no	no	
Retail distribution	1/4		Scale for Retail		Score	3	2	3	1	2	1.63	1	1
Retail prices of certain products are subject to price controls			Yes or -	Yes or -	No								
Retail prices of certain staples (e.g. milk and bread) are subject to price controls		1/6	6	0	0	yes	yes	yes	no	na	na	yes	yes
Retail prices of gasoline are subject to price controls		1/6	6	0	0	-	no	yes	no	na	na	no	no
Retail prices of tobacco are subject to price controls		1/6	6	0	0	yes	no	no	no	na	na	no	no
Retail prices of alcohol are subject to price controls		1/6	6	0	0	no	no	no	no	na	na	no	no
Retail prices of pharmaceuticals are subject to price controls		1/6	6	0	0	yes	yes	yes	yes	na	na	no	yes
Retail prices of other product are subject to price controls		1/6	6	0	0	-	yes	yes	-	na	na	yes	no
Telecommunication													
Retail prices of digital mobile service in telecommunications are regulated	1/4	1	6	0	no	no	no	no	na	na	no	no	
Country scores (0-6)			$\sum_j b_j \sum_k c_k \text{ answer}_{jk}$		Overall score	1.35	1.10	0.75	0.25	1.01	0.83	1.60	0.44

Table A2. 5. Use of command and control regulation

Use of command and control regulation														
	General vs industry-specific weights (a)	Industry weights (b)	Question weights (c)	Coding of answers		Bulgaria	Romania	Croatia	Albania	OECD	EU15	Poland	Slovak Republic	
				Yes	No									
General information	1/2													
Regulators are required to assess alternative policy instruments (regulatory and non-regulatory) before adopting new regulation			1/2	0	6	no	yes	yes	no	n.a.	n.a.	yes	yes	
Guidance has been issued on using alternatives to traditional regulation			1/2	0	6	no	no	no	no	n.a.	n.a.	no	yes	
Sector specific information	1/2													
Road freight		1/4												
Regulations prevent or constrain backhauling (picking up freight on the return leg)			1/8	6	0	no	no	no	no	n.a.	n.a.	no	no	
Regulations prevent or constrain private carriage (transport only for own account)			1/8	6	0	no	no	no	no	n.a.	n.a.	no	no	
Regulations prevent or constrain contract carriage (contractual relation between an otherwise independent haulier and one shipper)			1/8	6	0	no	no	no	no	n.a.	n.a.	no	no	
Regulations prevent or constrain intermodal operations (operating or ownership links between firms in different transportation sectors)			1/8	6	0	no	no	no	no	n.a.	n.a.	no	no	
Retail distribution		1/4												
Shop opening hours are regulated			2/3	6	0	no	no	yes	no	n.a.	n.a.	yes	no	
Government regulations on shop opening hours apply at national level ¹⁾			1/3	6	0			no	-	n.a.	n.a.			
The regulation of opening hours became more flexible in the last 5 years			*	-0.5	0			no	-	n.a.	n.a.			
Air travel		1/4												
Carriers operating on domestic routes are subject to universal service requirements (e.g. obligation to serve specified customers or areas)			1	6	0	no	no	yes	no	n.a.	n.a.	yes	no	
Railways		1/4												
Companies operating the infrastructure or providing railway services are subject to universal service requirements (e.g. obligation to serve specified customers or areas)			1	6	0									
Country scores (0-6)			$\sum a_i \sum b_j \sum c_k c_k \text{ answer}_{ijk}$			yes	yes	yes	yes	n.a.	n.a.	yes	no	
						3.8	2.3	3.5	3.8	2.2	2.6	3.5	0.0	

Table A2. 6: Licenses and permits system

Licenses and permits system											
	<i>Question weights (c_k)</i>	Coding of answers									
		Yes	No	Bulgaria	Romania	Croatia	Albania	OECD	EU15	Poland	Slovak Rep
The 'silence is consent' rule (i.e. that licenses are issued automatically if the competent licensing office has not acted by the end of the statutory response period) is used at all	1/3	0	6	no	yes	no	yes	n.a.	n.a.	no	yes
There are single contact points ("one-stop shops") for getting information on notifications and licenses	1/3	0	6	yes	yes	yes	yes	n.a.	n.a.	yes	yes
There are single contact points ("one-stop shops") for issuing or accepting on notifications and licenses	1/3	0	6	yes	yes	yes	no	n.a.	n.a.	yes	yes
Country scores (0-6)		$\sum_k c_k \text{ answer}_{jk}$		2	0	2	2	2.2	2	2	0

Table A2. 7 Communication and simplification of rules and procedures

	Weights by theme (b _j)	Question weights (c _k)	Coding of answers		Bulgaria	Romania	Croatia	Albania	OECD	EU15	Poland	Slovakia	
			Yes	No									
Communication	1/2												
There are systematic procedures for making regulations known and accessible to affected parties		2/12	0	6	-	yes	yes	yes	yes	n.a.	n.a.	yes	yes
There is a general policy requiring "plain language" drafting of regulation		1/12	0	6	-	yes	yes	yes	no	n.a.	n.a.	yes	yes
Affected parties have the right to appeal against adverse enforcement decisions in individual cases		4/12	Yes or in all cases 0	In some cases 3	No 6	-	in all cases	in all cases	in all cases	n.a.	n.a.	in all cases	in some cases
There are inquiry points where affected or interested foreign parties can get information on the operation and enforcement of regulations		3/12	0	6	-	yes	yes	yes	yes	n.a.	n.a.	yes	yes
Government policy imposes specific requirements in relation to transparency/freedom of information government wide		2/12	Government wide 0	For some sectors 3	No 6	-	government wide	government wide	government wide	n.a.	n.a.	government wide	government wide
Simplification	1/2*(W _i -Min W)/(Max W ₉₈ - Min W)												
National government (all ministries and agencies) keeps a complete count of the number of permits and licenses required		1/3	0	6		yes	no	no	no	n.a.	n.a.	yes	no
There is an explicit program to reduce the administrative burdens imposed by government on enterprises and/or citizens		1/3	0	6		no	yes	yes	yes	n.a.	n.a.	yes	yes
There is a program underway to review and reduce the number of licenses and permits required by the national government		1/3	0	6		yes	yes	yes	yes	n.a.	n.a.	no	no
Country scores (0-6)			$\sum_j b_j \sum_k c_k \text{ answer}_{jk}$			0.3	0.1	0.5	0.3	0.5	0.5	0.8	1.4

Weight for the simplification element W_i	
	Weights (d_k)
Administrative burdens for corporation	1/4
Administrative burdens for sole proprietor firms	1/4
Sector specific administrative burdens	1/4
Communication	1/4
Country weight (0-1)	$\sum_k d_k \text{ score}_k$

Table A2. 8 Administrative burden on sole proprietor firms

Administrative burdens for Sole Proprietor Firms																
	Weight on compliance type (c_k)	Scale 0-6						Croatia	Albania	OECD	EU-15	Poland	Slovakia	Republic	Hungary	
		0	1	2	3	4	5									6
Number of mandatory procedures required to register a sole proprietor firm (pre-registration+registration)	1/4	<=3	<=5	<=8	<=12	<=16	<=20	>20	16	10	8.6	7.3	7	12	7	9
Number of public and private bodies to contact to register a sole proprietor firm(pre-registration+registration)	1/4	0	1	2	3	4	5	6	2.5	2	3.4	3.5	5	7	3	6
Number of working days required to complete all mandatory procedures for registering a sole proprietor firm (pre-registration+registration)	1/4	<=16.4	<=32.8	<=49.2	<=65.6	<=82	<=98.4	>98.4	8	9.5	12.3	8.7	7	24	30	19
Total cost (euros) of registering a sole proprietor (pre-registration+registration)	1/4	<=500	<=1000	<=1500	<=2500	<=5000	<=7500	>7500	90.8	0.82	227.8	283.4	248	1572	32.967033	473.35411
Country scores (0-6)	$\sum_k c_k \text{ answer}_k$							2.25	1.75	1.9	1.8	3.25	2.25	2	3	

Table A2. 9 Administrative burden on corporations

Administrative burdens for corporations		Scale 0-6							Bulgaria	Romania	Croatia	Albania	OECD	EU15	Poland	Slovak Republic
	Weight on compliance type (c_k)	0	1	2	3	4	5	6								
Number of mandatory procedures required to register a public limited company (pre-registration+registration)	1/4	<=3	<=5	<=8	<=12	<=16	<=20	>20	11	5	21	15	14.9	14.5	28	15
Number of public and private bodies to contact to register a public limited company (pre-registration+registration)	1/4	0	1	2	3	4	5	6	-	-	2	2	5.0	5.1	6	8
Number of working days required to complete all mandatory procedures for registering a public limited company (pre-registration+registration)	1/4	<=16.4	<=32.8	<=49.2	<=65.6	<=82	<=98.4	>98.4	32	11	6	12	23.8	22.3	90	15
Total cost (euros) of registering a public limited company (pre-registration+registration)	1/4	<=500	<=1000	<=1500	<=2500	<=5000	<=7500	>7500	180.33	107.54	455.5	247.82	1108.14	283.40	n.a	721.97
Country scores (0-6)		$\sum_k c_k \text{ answer}_k$							1.37	0.80	1.25	1.00	1.90	1.83	4.33	2.00

NOTE: Values for Bulgaria and Romania were obtained based on Doing Business 2005 data. Since Doing Business information on number of procedures, number of days and cost connected with starting a company are not directly comparable to the same information in the OECD International Regulation Database, a normalization process was necessary to homogenize the scores obtained. The normalization process proceeded as follows.

1) A standard score (also called z-score or normal score) was obtained as $Z = (\text{raw score} - \text{meanOECD-DB}) / \text{standard deviationOECD-DB}$ based on the Doing Business sample, where the values for OECD countries refer to Doing Business 2003. The z-score reveals how many units of the OECD standard deviation Croatia and Romania are above or below the OECD mean.

2) A transformed score, comparable to OECD scores obtained from the OECD International Regulation Database, is calculated for Croatia and Romania as $T = Z * (\text{standard deviation OECD-PMR}) + \text{mean OECD-PMR}$

Table A2. 10. Sector specific administrative burdens

Sector specific administrative burdens

Overall weight	Industry weights (b _j)	Question weights (c _k)	Coding of answers							Bulgaria	Romania	Croatia	Albania	OECD	EU15	Slovak Republic	Poland
			No or missing	Yes	No or missing	No or missing	No or missing	No or missing	No or missing								
Road freight																	
	1/2																
In order to establish a national road freight business, operators need to obtain a license (other than a driving license) or permit from the government or a regulatory agency			Yes	No or missing	No or missing	No or missing	No or missing	No or missing	yes	yes	yes	yes	na	na	yes	yes	
In order to establish a national road freight business, operators need to notify any level of government or a regulatory agency and wait for approval before they can start operation		1/3	No or missing	Yes	No or missing	No or missing	No or missing	No or missing	no	no	-	-	na	na	yes	No	
Registration in transport register is required in order to establish a new business in the road freight sector			No or missing	No or missing	Yes	No or missing	No or missing	No or missing	yes	yes	yes	yes	na	na	yes	no	
In order to operate a national road freight business, operators need to notify any level of government or a regulatory agency			No or missing	No or missing	No or missing	Yes	No	-	no	no	-	-	na	na	yes	No	
Scale for the first element of road freight			4	3	2	1	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		Yes			0		yes	no	yes	-	na	na	yes	yes	
These entry regulations apply also if a firm wants to transport only for its own account	Normalised value of the indicator of general administrative burdens on startups $w = w_i / \text{Max } w_{i0}$	1/3		1			0		no	yes	no	yes	na	na	no	no	
Retail distribution																	
	1/2		"always required"		"depends on type of"		"no requirement"										
Registration in commercial register is needed to start up a commercial activity for selling food products		1/8	6		3		0		always required	always required	not a requirement	always required	na	na	depends on size of outlet	always required	
Registration in commercial register is needed to start up a commercial activity for selling clothing products		1/8	6		3		0		always required	always required	not a requirement	always required	na	na	depends on size of outlet	Always required	
Notification to authorities is needed to start up a commercial activity for selling food products		1/8	6		3		0		always required	always required	not a requirement	always required	na	na	depends on size of outlet	always required	
Notification to authorities is needed to start up a commercial activity for selling clothing products		1/8	6		3		0		always required	always required	not a requirement	-	na	na	depends on size of outlet	Always required	
Licenses or permits are needed to engage in commercial activity (not related to outlet siting) for selling food products		1/8	6		3		0		always required	depends on size of outlet or type of goods sold	not a requirement	always required	na	na	depends on size of outlet	always required	
Licenses or permits are needed to engage in commercial activity (not related to outlet siting) for selling clothing products		1/8	6		3		0		-	depends on size of outlet or type of goods sold	not a requirement	-	na	na	depends on size of outlet	-	
Licenses or permits are needed for outlet siting (in addition to compliance with general urban planning provisions) for selling food products		1/8	6		3		0		always required	always required	always required	always required	na	na	always required	always required	
Licenses or permits are needed for outlet siting (in addition to compliance with general urban planning provisions) for selling clothing products		1/8	6		3		0		always required	always required	always required	always required	na	na	always required	depends on size of outlet	
Country scores (0-6)			$w \cdot \sum_j b_j \cdot \sum_k c_k \cdot \text{answer}_{jk}$							1.88	0.75	1.05	1.55	1.67	1.56	4.11	1.91

Table A2. 11. Legal barriers to entry

Legal barriers to entry												
National, state or provincial laws or other regulations restrict the number of competitors allowed to operate a business in at least some markets in:			Coding of answers									
ISIC (rev. 3.1) code	Sector	Weight (a _i)	Yes	No	Bulgaria	Romania	Croatia	Albania	OECD	EU15	Poland	Slovak Rep.
16	Manufacture of tobacco products	1	6	0	-	no	no	no	n.a.	n.a.	no	no
232	Manufacture of refined petroleum products	1	6	0	no	no	no	yes	n.a.	n.a.	no	no
27	Manufacture of basic metals	1	6	0	no	no	no	no	n.a.	n.a.	no	no
28, 29	Manufacture of fabricated metal products, machinery and equipment	1	6	0	no	no	no	no	n.a.	n.a.	no	no
4010	Electricity: electricity generation/import or electricity transmission or electricity supply	1	6	0	yes	yes	yes	yes	n.a.	n.a.	yes	yes
4020	Gas: gas production/import or gas transmission or gas supply	1	6	0	yes	yes	yes	yes	n.a.	n.a.	yes	yes
4100	Collection, purification and distribution of water	1	6	0	yes	no	yes	yes	n.a.	n.a.	no	-
50, 51	Wholesale trade, incl. motor vehicles	1	6	0	no	no	no	no	n.a.	n.a.	no	no
55	Restaurant and hotels	1	6	0	no	no	no	no	n.a.	n.a.	no	no
601, 6303	Railways: Passenger transport via railways, Freight transport via railways, Operation of railroad infrastructure	1	6	0	no	yes	yes	no	n.a.	n.a.	no	no
6021	Other urban, suburban and interurban passenger transport	1	6	0	-	no	no	no	n.a.	n.a.	no	no
6021	Other scheduled passenger land transport	1	6	0	no	-	-	-	n.a.	n.a.	-	-
6023	Freight transport by road	1	6	0	no	no	no	no	n.a.	n.a.	no	no
6303	Operation of road infrastructure	1	6	0	no	yes	no	yes	n.a.	n.a.	no	no
61	Water transport	1	6	0	no	no	no	no	n.a.	n.a.	no	no
6303	Operation of water transport infrastructure	1	6	0	no	no	no	yes	n.a.	n.a.	no	no
62	Air transport	1	6	0	no	no	no	no	n.a.	n.a.	no	no
6303	Operation of air transport infrastructure	1	6	0	yes	yes	no	yes	n.a.	n.a.	no	no
642	Telecommunication: fixed-line network, fixed-line services, mobile services, internet services	1	6	0	no	yes	yes	yes	n.a.	n.a.	no	no
6519, 659, 671	Financial institutions	1	6	0	no	no	no	yes	n.a.	n.a.	no	no
66, 672	Insurance	1	6	0	no	no	no	yes	n.a.	n.a.	no	no
74	Other business activity	1	6	0	no	yes	no	no	n.a.	n.a.	no	no
851	Human health activities	1	6	0	-	-	-	-	n.a.	n.a.	-	-
9211, 9212	Motion picture distribution and projection	1	6	0	no	no	no	no	n.a.	n.a.	no	no
		proportion of sectors with legal barriers to entry			19%	33%	24%	48%	5%	23%	10%	10%
Country scores (0-6)		if number of answers >= 20 then $(\sum a_i \text{ answer}_i) / \sum a_i$			1.1	2.0	1.4	2.9	1.4	1.4	0.6	0.6

Electricity: Yes if national, state or provincial government controls at least one firm in one of the four following sectors: electricity generation/import or electricity transmission or electricity supply

Gas: Yes if national, state or provincial government controls at least one firm in one of the four following sectors: gas production/import or gas transmission or gas supply

Railways: Yes if national, state or provincial government controls at least one firm in one of the three following sectors: Passenger transport via railways, Freight transport via railways, Operation of railroad infrastructure

Telecommunication: Yes if national, state or provincial government controls at least one firm in one of the four following sectors: fixed-line network, fixed-line services, mobile services, internet services.

Table A2.12. Antitrust exemptions for public enterprises or state-mandated actions

Antitrust exemptions for public enterprises or state-mandated actions												
Overall weight	Question weights (c _k)	Coding of answers		Bulgaria	Romania	Croatia	Albania	OECD	EU15	Poland	Slovakia	
		Yes	No									
	Is there rule or principle providing for exclusion or exemption from liability under the general competition law for conduct that is required or authorized by other government authority (in addition to exclusions that might apply to complete sectors)?	1/4	6	0								
	Publicly-controlled firms or undertakings are subject to an exclusion or exemption from competition law such as horizontal cartels	1/4	6	0	no Country is not concerned by the question	no Country is not concerned by the question	yes Country is not concerned by the question	no Country is not concerned by the question	n.a.	n.a.	no Country is not concerned by the question	no
	Publicly-controlled firms or undertakings are subject to an exclusion or exemption from competition law such as vertical restraints or to abuse of dominance	1/4	6	0	concerned by the question	concerned by the question	concerned by the question	concerned by the question	n.a.	n.a.	concerned by the question	-
	Publicly-controlled firms or undertakings are subject to an exclusion or exemption from competition law such as mergers	1/4	6	0	concerned by the question	concerned by the question	concerned by the question	concerned by the question	n.a.	n.a.	concerned by the question	-
Country scores (0-6)		$w_i * \sum_k c_k \text{ answer}_k / w_i^{\max}$		0	0	1.1	0	0.4	0.3	0.0	0.0	

Table A2. 9. Foreign ownership barriers

Foreign ownership barriers															
	Weights by theme (b.)	Question weights (c _k)	Coding of answers					Bulgaria	Romania	Croatia	Albania	OECD	EU15	Poland	Slovak Rep.
			Yes		No										
General barriers	1/2														
There are statutory or other legal limits to the number or proportion of shares that can be acquired by foreign investors in publicly-controlled firms		2/3*w _i (% of business sectors in which the state controls at least a firm)	6		0		yes	no	no	no	n.a.	n.a.	yes	yes	
Special government rights can be exercised in the case of acquisition of equity by foreign investors		1/3	6		0		yes	yes	no	Country is not concerned with this question	n.a.	n.a.	yes	yes	
Sector-specific barriers	1/2														
Foreign ownership restrictions in telecommunications		1/2	Yes 6	Partly 3	No 0		none	none	none	none	n.a.	n.a.	none	none	
			<50%	<40%	<35%	<30%	<25%								
Ceiling on foreign investment in an airline company		1/2	0	1	3	4	6	0.49	0.49	0.5	none	n.a.	n.a.	0.49	49% after 01/05/2004 also EU community concept of the ownership and control could be applicable
Country scores (0-6)			$\sum_j b_j \sum_k c_k \text{ answer}_{jk}$					3.0	1.8	0.5	0.0	1.8	1.3	3.7	2.3
Memo item			Memo item: % of business sectors in which the state controls at least a firm					61%	48%	77%	41%	n.a.	n.a.	96%	27%

Table A2. 10. Discriminatory procedures

Discriminatory procedures																																															
Weights by theme	Question weights	Coding of answers																Bulgaria	Romania	Croatia	Albania	OECD	EU15	Poland	Slovak Rep.																						
		Yes																								No																					
General discrimination		2/3																																													
	Country has any specific provisions which require or encourage explicit recognition of the national treatment principle when applying regulations, so as to guarantee non-discrimination between foreign and domestic firms, goods or services	3/6	0																6	yes	yes	yes	yes	n.a.	n.a.	yes	yes																				
	When appeal procedures relating to regulatory decisions are available in domestic regulatory systems, they are open to affected or interested foreign parties as well	2/6	0																6	yes	yes	yes	yes	n.a.	n.a.	yes	yes																				
	There are specific provisions which require that regulations, prior to entry into force, be published or otherwise communicated to the public in a manner accessible at the international level	1/6	0																6	yes	yes	no	no	n.a.	n.a.	no	yes																				
Competition discrimination		1/3																		0-6 Scale for competition discrimination																											
	When business practices are perceived to restrict competition foreign firms can have redress through competition agencies	Yes	Yes	Yes	Yes	Yes	No/-	Yes	Yes	Yes	No/-	Yes	No/-	No/-	No/-	No/-	No/-	yes	yes	yes	yes	n.a.	n.a.	yes	yes																						
	When business practices are perceived to restrict competition foreign firms can have redress through trade policy bodies	Yes	Yes	No/-	No/-	Yes	Yes	No/-	Yes	No/-	Yes	No/-	No/-	Yes	No/-	Yes	No/-	yes	yes	yes	yes	n.a.	n.a.	yes	no																						
	When business practices are perceived to restrict competition and hence prevent effective access of foreign firms (foreign owned or controlled) to such markets, foreign firms can have redress through regulatory authorities involved	Yes	No/-	Yes	No/-	Yes	Yes	Yes	No/-	Yes	No/-	No/-	No/-	Yes	Yes	Yes	No/-	yes	yes	yes	yes	n.a.	n.a.	yes	yes																						
	When business practices are perceived to restrict competition foreign firms can have redress through private rights of action	Yes	Yes	Yes	Yes	No/-	Yes	No/-	No/-	Yes	Yes	No/-	Yes	No/-	No/-	No/-	No/-	yes	yes	yes	yes	n.a.	n.a.	yes	yes																						
		0	0.75	0.75	1.5	2.625	2.625	3.375	3.375	3.375	3.375	4.125	4.125	5.25	5.25	5.25	6																														
Country scores (0-6)		$\sum_k b_k \sum_{i \in C_k} answer_{ik}$																0.00	0.00	0.00	0.00	0.49	0.49	0.25	1.13																						

Table A2. 15. Tariffs trade barriers

Tariffs trade barriers								Bulgaria	Romania	Croatia	Albania	OECD	EU15	Poland	Slovak Republic
Coding of answers															
Average production-weighted tariff	<=3%	<=6%	<=9%	<=12%	<=15%	<=18%	>18%	8.6	15.8	4.9	5.7	5.5	7.4	13.4	5.1
Country scores (0-6)	0	1	2	3	4	5	6	2.0	5.0	1.0	1.0	1.4	1.0	4.0	1.0

Table A2. 11. Regulatory barriers to trade and investment

Regulatory barriers											
	Question weights (c_k)	Coding of answers		Bulgaria	Romania	Croatia	Albania	OECD	EU15	Slovak Republic	Poland
		Yes	No								
The country has engaged in Mutual Recognition Agreements (MRAs) in at least a sector with any other country	2/5	0	6	yes	yes	yes	yes	na	na	yes	yes
There are specific provisions which require or encourage regulators to consider recognizing the equivalence of regulatory measures or the result of conformity assessment performed in other countries, wherever possible and appropriate	4/15	0	6	yes	yes	no	yes	na	na	no	no
There are specific provisions which require or encourage regulators to use internationally harmonized standards and certification procedures wherever possible and appropriate	2/9	0	6	yes	yes	no	yes	na	na	yes	yes
There are any specific provisions which require or encourage regulatory administrative procedures to avoid unnecessary trade restrictiveness	1/9	0	6	yes	yes	yes	yes	na	na	yes	yes
Country scores (0-6)	$\sum_k c_k \text{ answer}_{jk}$			0.00	0.00	2.93	0.00	0.22	0.18	1.60	0.00

Annex II: The OECD ETCR Indicators (from Conway and Nicoletti, 2006)

The OECD indicators of regulation in energy, transport and communication (ETCR) are calculated using a bottom-up approach in which the regulatory data are quantified using an appropriate scoring algorithm and then aggregated into summary indicators by sector of activity in each of the four areas or across them. While this approach involves a degree of discretion, notably in choosing scores and aggregation weights, it has the merit of transparency and makes it possible to trace each indicator value to the underlying detailed information about policies and market conditions.

All of these indicators are constructed from the perspective of regulations that create barriers to entrepreneurship and restrict competition in domestic markets where technology and demand conditions make competition viable. It is important to note from the onset that the sole objective of the indicators is to quantify the degree to which regulatory settings in a given sector are anti-competitive. They make no attempt to measure the stance of regulation with respect to public policy goals other than promoting competition. Including public ownership among regulations that hinder competition in some sectors reflects the idea that, with public enterprises often enjoying soft budget constraints and state guarantees, the playing field is not level in markets where they operate.

Given the sectoral focus of the indicators, the coverage of the various regulatory areas – such as public ownership, barriers to entry or price controls – is tailored to the structural characteristics of each industry. In addition, the indicators are nested, aggregating detailed information into progressively larger regulatory areas according to a pyramidal structure (see Figure). This allows specific aspects of regulation – such as barriers to entry – to be assessed in isolation in country benchmarking or empirical research.

In general, the computation of sectoral indicators involved three main steps:

- First, the basic information is coded into quantitative scores that are increasing in restrictions to competition.
- Second, these basic scores are aggregated into indices that cover specific areas of regulation (henceforth low-level indicators). In all sectors, these low-level indicators cover barriers to entry, i.e. regulations that curb entry and/or distort market structure relative to a competitive outcome (for instance limiting the number of competitors in a given market or the proportion of consumers who can choose between competing suppliers).
- In the third step, the low-level indicators are aggregated into an overall indicator of regulation for the sector.

The way in which the basic scores and/or the low-level indicators are aggregated differs across sectors depending on how many regulatory data are available. One potential difficulty with measuring the impact of regulation on competition is accounting for the influence of enforcement. Stringent regulations may not bite on competition if not enforced, and even the most liberal regulatory settings may not promote competition if not implemented correctly. Similarly, in some cases, regulations enacted at the national level may have little impact on markets if applied by local authorities (as gas sector in Croatia) or if local legislation is contradictory in spirit. To go some way towards overcoming this difficulty, data on actual market and industry structure (such as market shares or the degree of vertical integration) are incorporated into some of the sectoral

indicators so as to proxy for the impact of policy enforcement. However, the indicator results may still incur some bias in countries with a federal structure, when regulatory policies are controlled by the sub-central levels of government.⁵ Moreover, as already mentioned, barriers to competition may not be fully captured by the indicators when they are mostly informal.

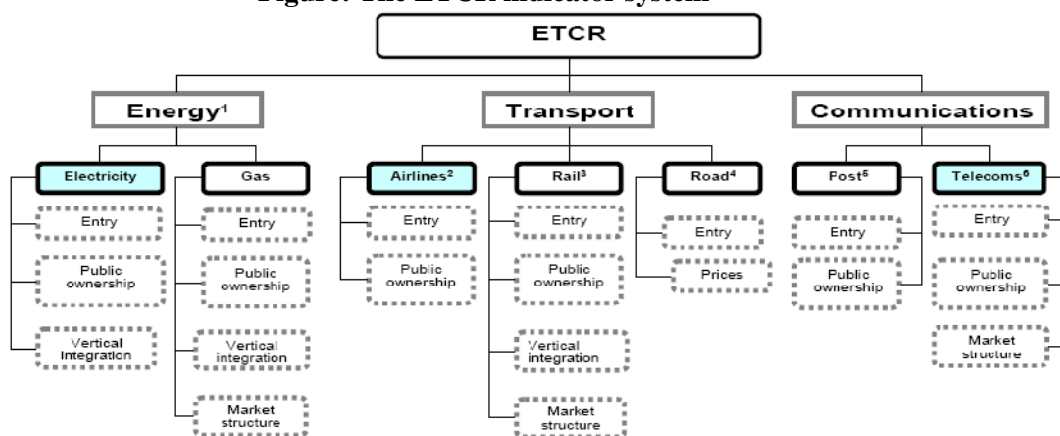
The non-manufacturing regulation (henceforth NMR) indicators can be divided into two broad categories. The first group of indicators measure regulatory restrictions in energy, transport and communication (henceforth ETCR). The second group of indicators assess regulation in retail distribution and some business services (henceforth RBSR), which are already covered in the companion OECD PMR indicator.

Table: Coverage of ETCR and RBSR indicators

	N. of items in indicator	Activities covered
ETCR	Gas	production/import, transmission, supply
	Electricity	generation, transmission, distribution, supply
	Airlines	passenger transport, international and domestic routes
	Railways	passenger and freight transport, operation of infrastructure
	Road transport	freight
	Post	basic letter, basic parcel, courier
	Telecoms	trunk, international, mobile
RBSR	Retail distribution	generic outlets, foodstores, clothing stores
	Business services	legal, accounting, architectural, and engineering services

Source: Conway and Nicoletti (2006)

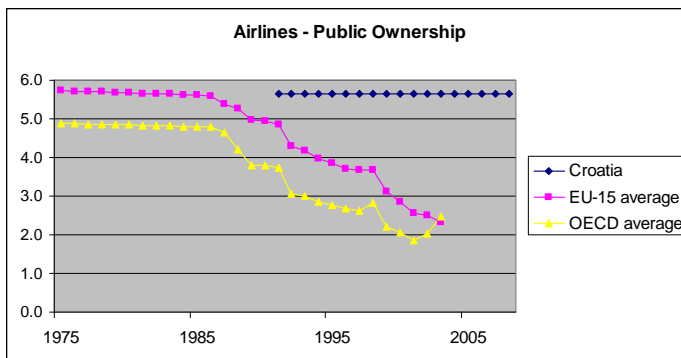
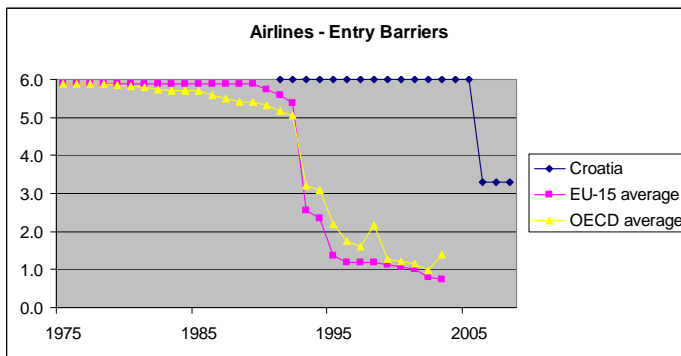
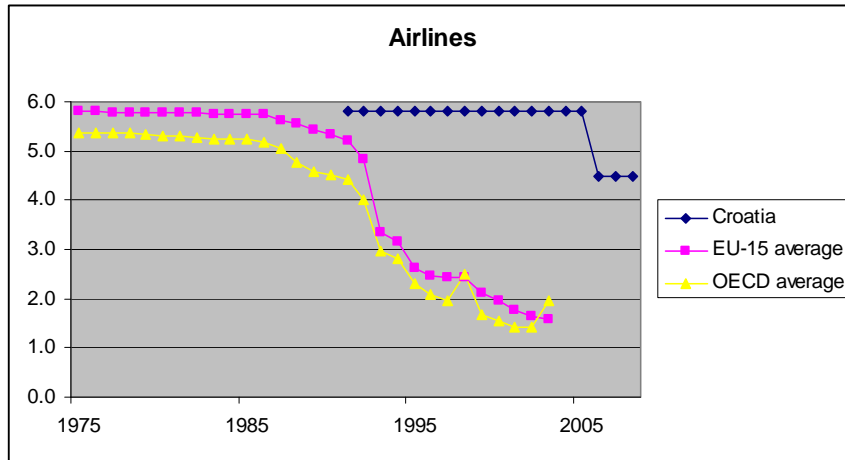
Figure: The ETCR indicator system

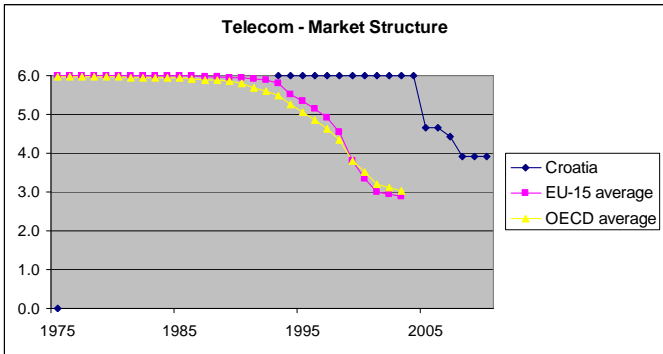
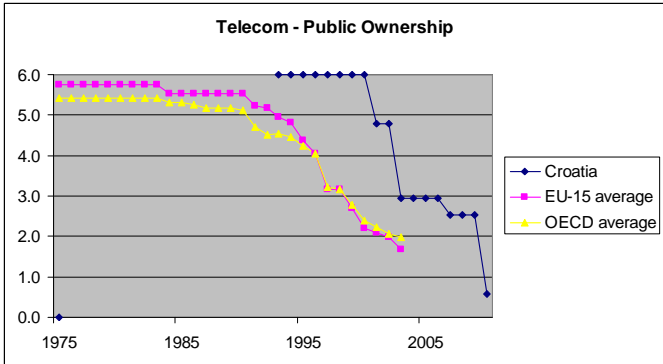
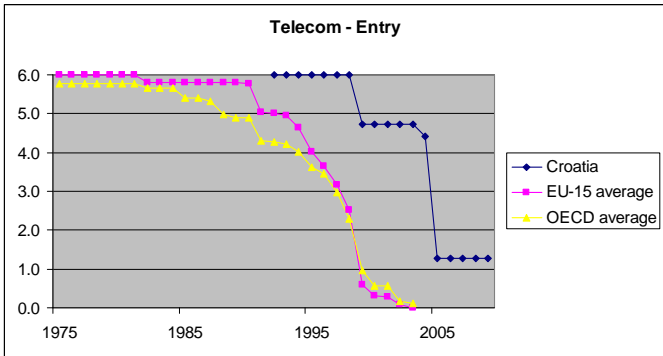
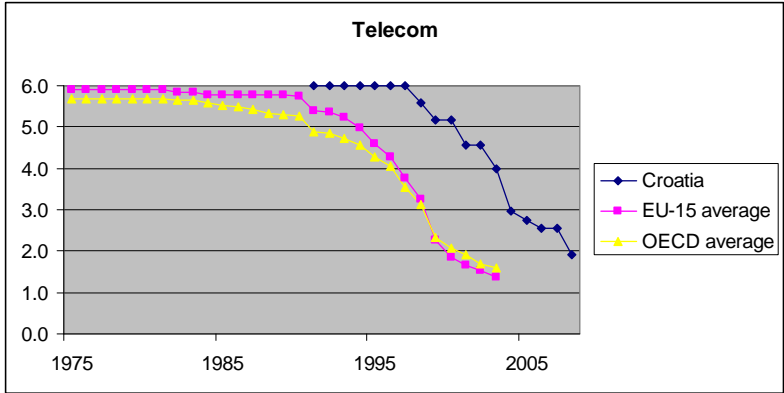


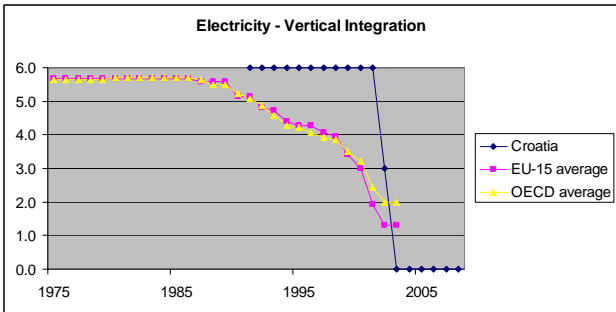
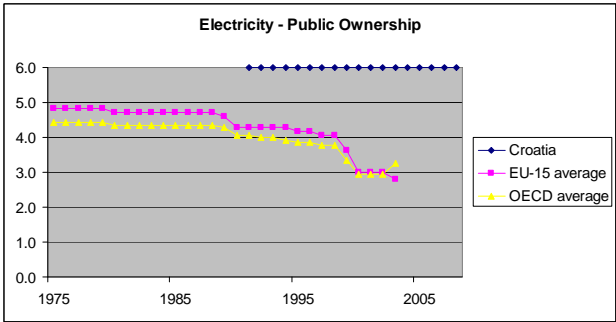
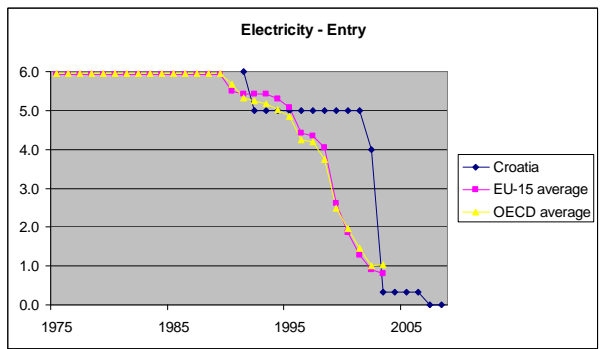
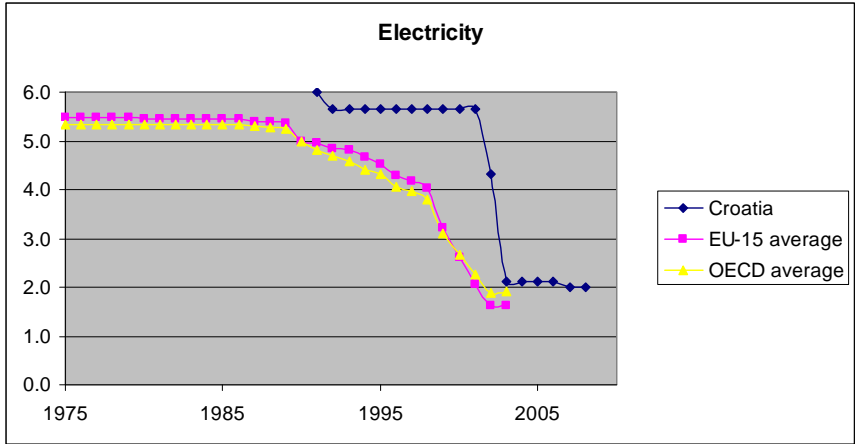
1. The indicators cover production, transmission and supply.
2. The indicator covers passenger service.
3. The indicator covers both passenger and freight services.
4. The indicator covers freight services.
5. The indicator covers basic letter, parcel and courier services.
6. The indicator covers trunk and long distance fixed telephony as well as mobile telephony.

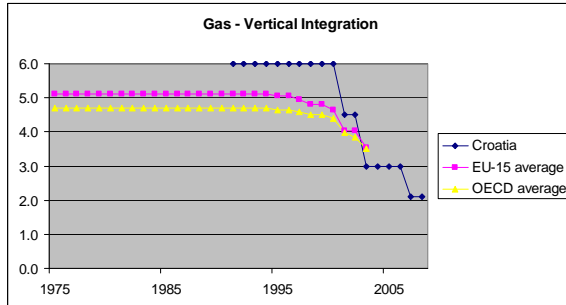
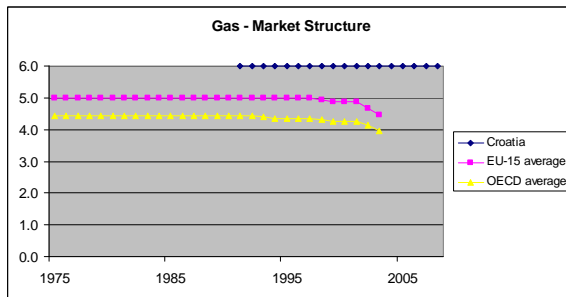
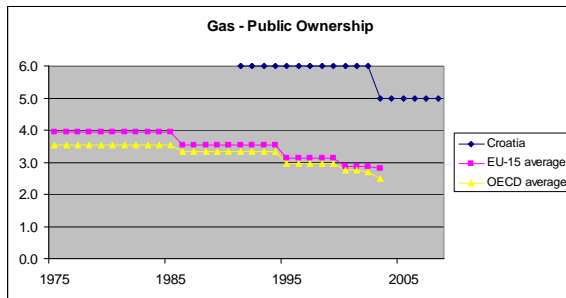
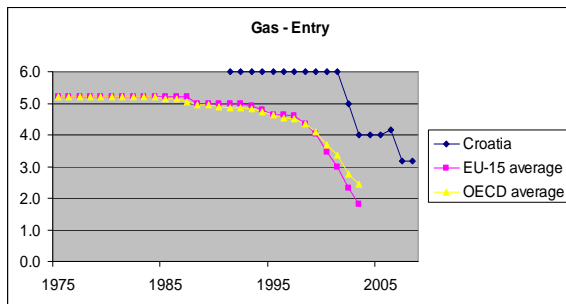
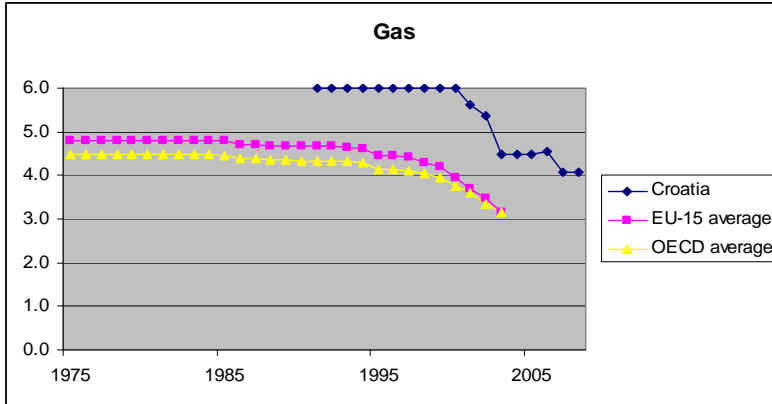
Source: Conway and Nicoletti (2006)

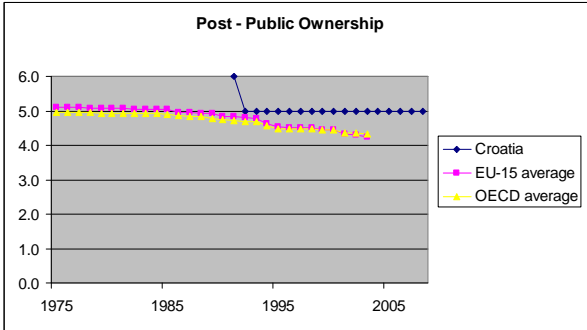
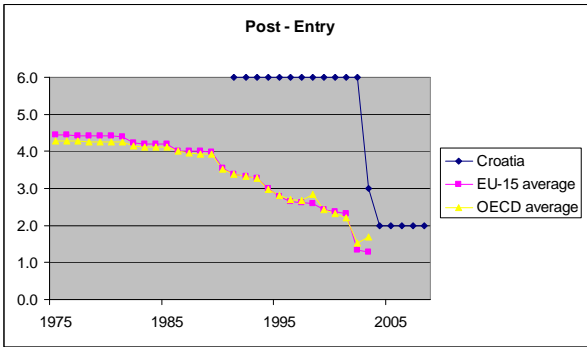
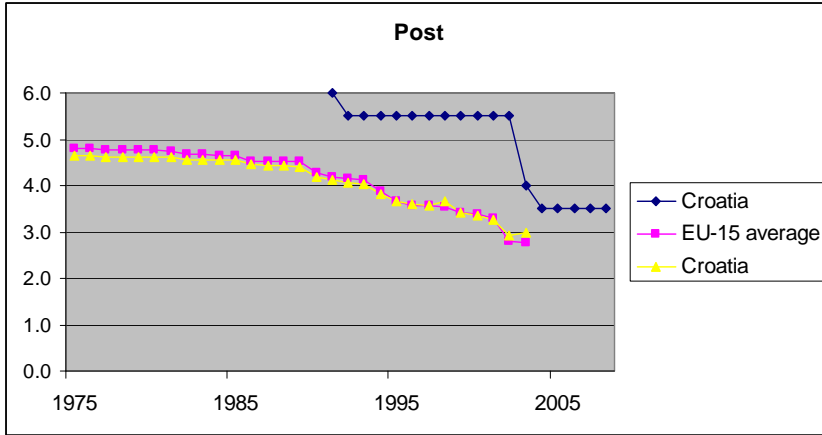
Croatia - Sectoral ETCR indicators

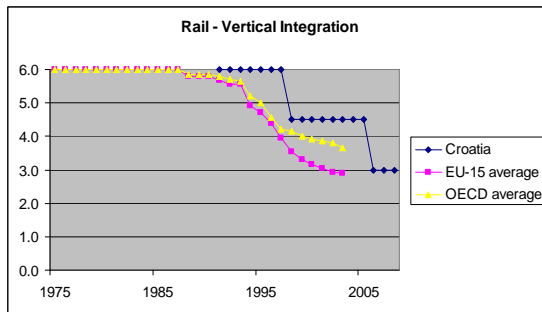
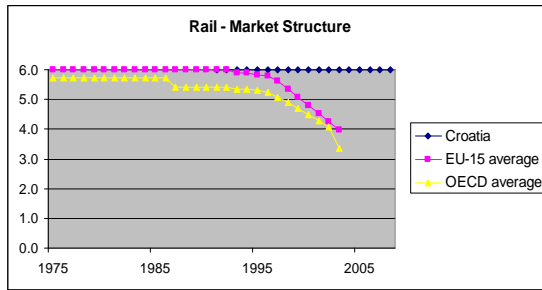
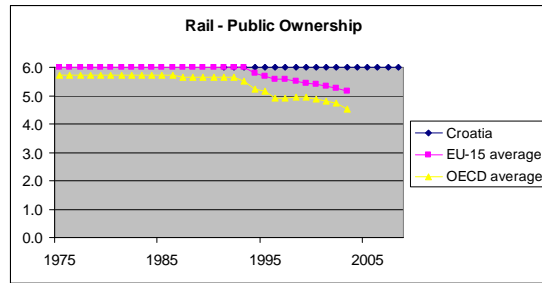
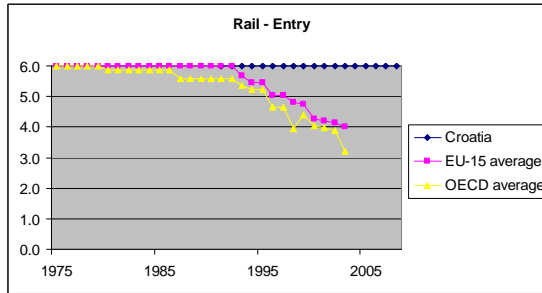
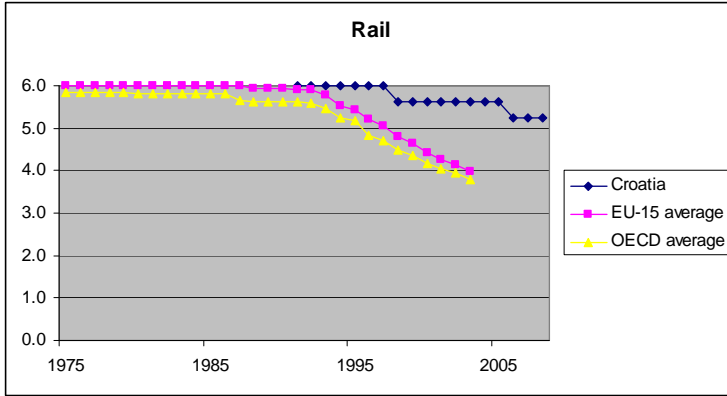


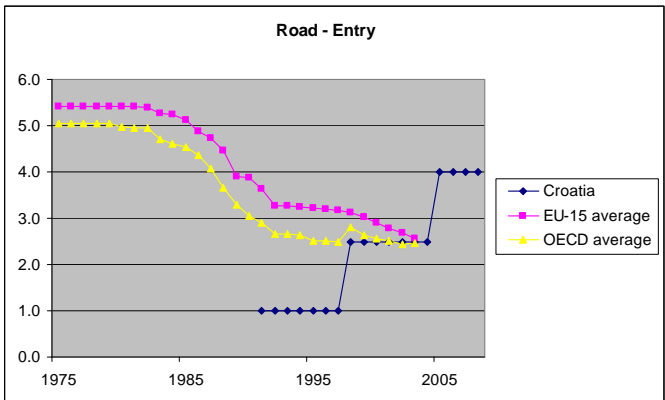
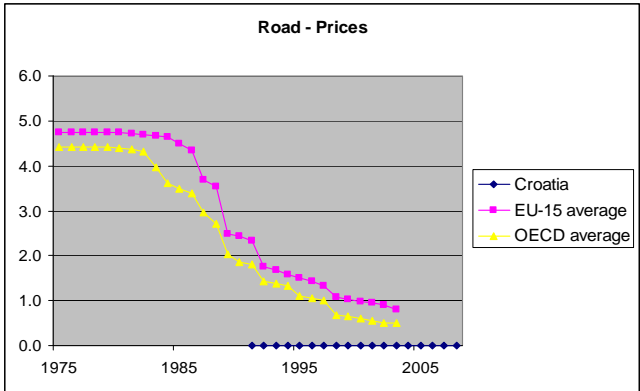
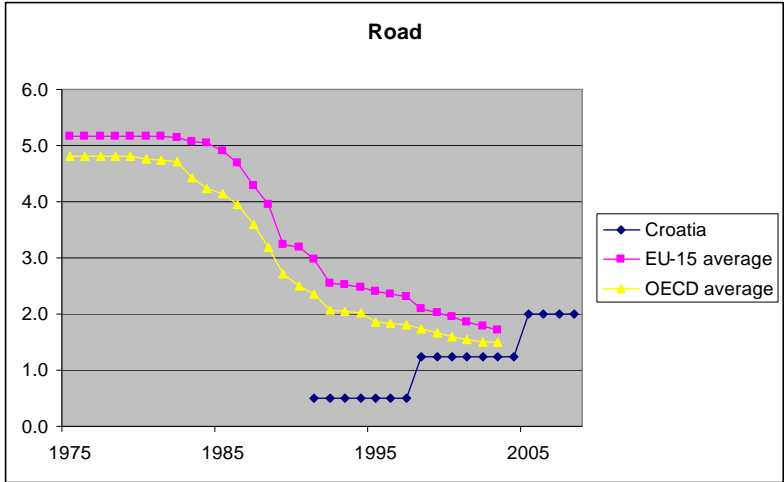












Aggregate ETCR			
year	Croatia	EU-15 average	OECD average
1975	na	5.4	5.1
1976	na	5.4	5.1
1977	na	5.4	5.1
1978	na	5.4	5.1
1979	na	5.4	5.1
1980	na	5.4	5.1
1981	na	5.4	5.1
1982	na	5.4	5.1
1983	na	5.4	5.0
1984	na	5.4	5.0
1985	na	5.3	5.0
1986	na	5.3	4.9
1987	na	5.2	4.8
1988	na	5.1	4.6
1989	na	5.0	4.5
1990	na	4.9	4.4
1991	5.2	4.8	4.3
1992	5.1	4.6	4.2
1993	5.1	4.3	3.9
1994	5.1	4.2	3.8
1995	5.1	3.9	3.6
1996	5.1	3.8	3.4
1997	5.1	3.6	3.3
1998	5.1	3.5	3.2
1999	5.0	3.1	2.8
2000	5.0	2.9	2.6
2001	4.9	2.7	2.5
2002	4.6	2.4	2.3
2003	3.9	2.3	2.2
2004	3.7	na	na
2005	3.8	na	na
2006	3.5	na	na
2007	3.4	na	na
2008	3.3	na	na

Airlines			
year	Croatia	EU-15 average	OECD average
1975	na	5.8	5.4
1976	na	5.8	5.4
1977	na	5.8	5.4
1978	na	5.8	5.4
1979	na	5.8	5.3
1980	na	5.8	5.3
1981	na	5.8	5.3
1982	na	5.8	5.3
1983	na	5.8	5.2
1984	na	5.8	5.2
1985	na	5.7	5.2
1986	na	5.7	5.2
1987	na	5.6	5.0
1988	na	5.6	4.8
1989	na	5.4	4.6
1990	na	5.3	4.5
1991	5.8	5.2	4.4
1992	5.8	4.8	4.0
1993	5.8	3.4	3.0
1994	5.8	3.2	2.8
1995	5.8	2.6	2.3
1996	5.8	2.5	2.1
1997	5.8	2.4	2.0
1998	5.8	2.4	2.5
1999	5.8	2.1	1.7
2000	5.8	2.0	1.6
2001	5.8	1.8	1.4
2002	5.8	1.6	1.4
2003	5.8	1.6	1.9
2004	5.8	na	na
2005	5.8	na	na
2006	4.5	na	na
2007	4.5	na	na
2008	4.5	na	na

Airlines						
year	Entry Barriers			Public Ownership		
	Croatia	EU-15 average	OECD average	Croatia	EU-15 average	OECD average
1975	na	5.9	5.9	na	5.7	4.9
1976	na	5.9	5.9	na	5.7	4.9
1977	na	5.9	5.9	na	5.7	4.9
1978	na	5.9	5.9	na	5.7	4.9
1979	na	5.9	5.9	na	5.7	4.8
1980	na	5.9	5.8	na	5.7	4.8
1981	na	5.9	5.8	na	5.7	4.8
1982	na	5.9	5.7	na	5.6	4.8
1983	na	5.9	5.7	na	5.6	4.8
1984	na	5.9	5.7	na	5.6	4.8
1985	na	5.9	5.7	na	5.6	4.8
1986	na	5.9	5.6	na	5.6	4.8
1987	na	5.9	5.5	na	5.4	4.6
1988	na	5.9	5.4	na	5.3	4.2
1989	na	5.9	5.4	na	5.0	3.8
1990	na	5.7	5.3	na	4.9	3.8
1991	6.0	5.6	5.2	5.6	4.9	3.7
1992	6.0	5.4	5.0	5.6	4.3	3.1
1993	6.0	2.5	3.2	5.6	4.2	3.0
1994	6.0	2.3	3.1	5.6	4.0	2.8
1995	6.0	1.4	2.2	5.6	3.8	2.8
1996	6.0	1.2	1.8	5.6	3.7	2.7
1997	6.0	1.2	1.6	5.6	3.7	2.6
1998	6.0	1.2	2.2	5.6	3.7	2.8
1999	6.0	1.1	1.3	5.6	3.1	2.2
2000	6.0	1.1	1.2	5.6	2.9	2.0
2001	6.0	1.0	1.2	5.6	2.6	1.9
2002	6.0	0.8	1.0	5.6	2.5	2.0
2003	6.0	0.7	1.4	5.6	2.3	2.5
2004	6.0	na	na	5.6	na	na
2005	6.0	na	na	5.6	na	na
2006	3.3	na	na	5.6	na	na
2007	3.3	na	na	5.6	na	na
2008	3.3	na	na	5.6	na	na

Telecom			
year	Croatia	EU-15 average	OECD average
1975	na	5.9	5.7
1976	na	5.9	5.7
1977	na	5.9	5.7
1978	na	5.9	5.7
1979	na	5.9	5.7
1980	na	5.9	5.7
1981	na	5.9	5.7
1982	na	5.9	5.6
1983	na	5.9	5.6
1984	na	5.8	5.6
1985	na	5.8	5.5
1986	na	5.8	5.5
1987	na	5.8	5.4
1988	na	5.8	5.3
1989	na	5.8	5.3
1990	na	5.8	5.3
1991	6.0	5.4	4.9
1992	6.0	5.4	4.8
1993	6.0	5.2	4.7
1994	6.0	5.0	4.6
1995	6.0	4.6	4.3
1996	6.0	4.3	4.1
1997	6.0	3.8	3.6
1998	5.6	3.3	3.1
1999	5.2	2.3	2.3
2000	5.2	1.8	2.1
2001	4.6	1.7	1.9
2002	4.6	1.5	1.7
2003	4.0	1.4	1.6
2004	3.0	na	na
2005	2.7	na	na
2006	2.6	na	na
2007	2.6	na	na
2008	1.9	na	na

Telecom									
year	Entry			Public Ownership			Market Structure		
	Croati a	EU-15 averag e	OECD averag e	Croati a	EU-15 averag e	OECD averag e	Croati a	EU-15 averag e	OECD averag e
1975	na	6.0	5.8	na	5.7	5.4	na	6.0	6.0
1976	na	6.0	5.8	na	5.7	5.4	na	6.0	6.0
1977	na	6.0	5.8	na	5.7	5.4	na	6.0	6.0
1978	na	6.0	5.8	na	5.7	5.4	na	6.0	6.0
1979	na	6.0	5.8	na	5.7	5.4	na	6.0	6.0
1980	na	6.0	5.8	na	5.7	5.4	na	6.0	6.0
1981	na	6.0	5.8	na	5.7	5.4	na	6.0	6.0
1982	na	5.8	5.6	na	5.7	5.4	na	6.0	6.0
1983	na	5.8	5.6	na	5.7	5.4	na	6.0	5.9
1984	na	5.8	5.6	na	5.5	5.3	na	6.0	5.9
1985	na	5.8	5.4	na	5.5	5.3	na	6.0	5.9
1986	na	5.8	5.4	na	5.5	5.3	na	6.0	5.9
1987	na	5.8	5.3	na	5.5	5.2	na	6.0	5.9
1988	na	5.8	5.0	na	5.5	5.2	na	6.0	5.9
1989	na	5.8	4.9	na	5.5	5.2	na	6.0	5.8
1990	na	5.8	4.9	na	5.5	5.1	na	5.9	5.8
1991	6.0	5.0	4.3	6.0	5.2	4.7	6.0	5.9	5.7
1992	6.0	5.0	4.3	6.0	5.2	4.5	6.0	5.9	5.6
1993	6.0	5.0	4.2	6.0	4.9	4.6	6.0	5.8	5.5
1994	6.0	4.6	4.0	6.0	4.8	4.5	6.0	5.5	5.2
1995	6.0	4.0	3.6	6.0	4.4	4.2	6.0	5.3	5.1
1996	6.0	3.6	3.5	6.0	4.1	4.0	6.0	5.1	4.9
1997	6.0	3.2	3.0	6.0	3.2	3.2	6.0	4.9	4.6
1999	4.7	2.5	2.3	6.0	3.2	3.2	6.0	4.5	4.4

8									
1999	4.7	0.6	1.0	4.8	2.7	2.8	6.0	3.8	3.8
2000	4.7	0.3	0.6	4.8	2.2	2.4	6.0	3.4	3.5
2001	4.7	0.3	0.6	2.9	2.1	2.2	6.0	3.0	3.2
2002	4.7	0.1	0.2	2.9	2.0	2.1	6.0	2.9	3.1
2003	4.4	0.0	0.1	2.9	1.7	2.0	4.7	2.9	3.0
2004	1.3	na	na	2.9	na	na	4.7	na	na
2005	1.3	na	na	2.5	na	na	4.4	na	na
2006	1.3	na	na	2.5	na	na	3.9	na	na
2007	1.3	na	na	2.5	na	na	3.9	na	na
2008	1.3	na	na	0.6	na	na	3.9	na	na

Electricity			
year	Croatia	EU-15 average	OECD average
1975	na	5.5	5.3
1976	na	5.5	5.3
1977	na	5.5	5.3
1978	na	5.5	5.3
1979	na	5.5	5.3
1980	na	5.4	5.3
1981	na	5.4	5.3
1982	na	5.4	5.3
1983	na	5.4	5.3
1984	na	5.4	5.3
1985	na	5.4	5.3
1986	na	5.4	5.3
1987	na	5.4	5.3
1988	na	5.4	5.3
1989	na	5.4	5.2
1990	na	5.0	5.0
1991	6.0	5.0	4.8
1992	5.7	4.8	4.7
1993	5.7	4.8	4.6
1994	5.7	4.7	4.4
1995	5.7	4.5	4.3
1996	5.7	4.3	4.1
1997	5.7	4.2	4.0
1998	5.7	4.0	3.8
1999	5.7	3.2	3.1
2000	5.7	2.6	2.7
2001	5.7	2.1	2.2
2002	4.3	1.6	1.9
2003	2.1	1.6	1.9
2004	2.1	na	na
2005	2.1	na	na
2006	2.1	na	na
2007	2.0	na	na
2008	2.0	na	na

Electricity									
year	Entry			Public Ownership			Vertical Integration		
	Croatia	EU-15 average	OECD average	Croatia	EU-15 average	OECD average	Croatia	EU-15 average	OECD average
1975	na	5.9	6.0	na	4.8	4.4	na	5.7	5.6
1976	na	5.9	6.0	na	4.8	4.4	na	5.7	5.6
1977	na	5.9	6.0	na	4.8	4.4	na	5.7	5.6
1978	na	5.9	6.0	na	4.8	4.4	na	5.7	5.6
1979	na	5.9	6.0	na	4.8	4.4	na	5.7	5.6
1980	na	5.9	6.0	na	4.7	4.4	na	5.7	5.7
1981	na	5.9	6.0	na	4.7	4.4	na	5.7	5.7
1982	na	5.9	6.0	na	4.7	4.4	na	5.7	5.7
1983	na	5.9	6.0	na	4.7	4.4	na	5.7	5.7
1984	na	5.9	6.0	na	4.7	4.4	na	5.7	5.7
1985	na	5.9	6.0	na	4.7	4.4	na	5.7	5.7
1986	na	5.9	6.0	na	4.7	4.4	na	5.7	5.7
1987	na	5.9	6.0	na	4.7	4.4	na	5.6	5.6
1988	na	5.9	6.0	na	4.7	4.4	na	5.6	5.5
1989	na	5.9	6.0	na	4.6	4.3	na	5.6	5.5
1990	na	5.5	5.7	na	4.3	4.1	na	5.1	5.2
1991	6.0	5.4	5.3	6.0	4.3	4.1	6.0	5.1	5.1
1992	5.0	5.4	5.2	6.0	4.3	4.0	6.0	4.8	4.9
1993	5.0	5.4	5.2	6.0	4.3	4.0	6.0	4.7	4.6
1994	5.0	5.3	5.0	6.0	4.3	3.9	6.0	4.4	4.3
1995	5.0	5.1	4.9	6.0	4.2	3.9	6.0	4.3	4.2
1996	5.0	4.4	4.3	6.0	4.2	3.9	6.0	4.3	4.1
1997	5.0	4.3	4.2	6.0	4.1	3.8	6.0	4.1	3.9
1998	5.0	4.0	3.7	6.0	4.1	3.8	6.0	4.0	3.9
1999	5.0	2.6	2.5	6.0	3.6	3.3	6.0	3.4	3.5
2000	5.0	1.8	1.9	6.0	3.0	2.9	6.0	3.0	3.2
2001	5.0	1.3	1.5	6.0	3.0	2.9	6.0	1.9	2.4
2002	4.0	0.9	1.0	6.0	3.0	2.9	3.0	1.3	2.0
2003	0.3	0.8	1.0	6.0	2.8	3.3	0.0	1.3	2.0
2004	0.3	na	na	6.0	na	na	0.0	na	na
2005	0.3	na	na	6.0	na	na	0.0	na	na
2006	0.3	na	na	6.0	na	na	0.0	na	na
2007	0.0	na	na	6.0	na	na	0.0	na	na
2008	0.0	na	na	6.0	na	na	0.0	na	na

Gas			
year	Croatia	EU-15 average	OECD average
1975	na	4.8	4.5
1976	na	4.8	4.5
1977	na	4.8	4.5
1978	na	4.8	4.5
1979	na	4.8	4.5
1980	na	4.8	4.5
1981	na	4.8	4.5
1982	na	4.8	4.5
1983	na	4.8	4.5
1984	na	4.8	4.5
1985	na	4.8	4.5
1986	na	4.7	4.4
1987	na	4.7	4.4
1988	na	4.7	4.4
1989	na	4.7	4.4
1990	na	4.7	4.3
1991	6.0	4.7	4.3
1992	6.0	4.7	4.3
1993	6.0	4.6	4.3
1994	6.0	4.6	4.3
1995	6.0	4.5	4.1
1996	6.0	4.5	4.1
1997	6.0	4.4	4.1
1998	6.0	4.3	4.0
1999	6.0	4.2	4.0
2000	6.0	4.0	3.8
2001	5.6	3.7	3.6
2002	5.4	3.5	3.3
2003	4.5	3.2	3.2
2004	4.5	na	na
2005	4.5	na	na
2006	4.5	na	na
2007	4.1	na	na
2008	4.1	na	na

Gas												
year	Entry			Public Ownership			Market structure			Vertical Integration		
	Croatia	EU-15 average	OECD average	Croatia	EU-15 average	OECD average	Croatia	EU-15 average	OECD average	Croatia	EU-15 average	OECD average
1975	na	5.2	5.2	na	3.9	3.5	na	5.0	4.4	na	5.1	4.7
1976	na	5.2	5.2	na	3.9	3.5	na	5.0	4.4	na	5.1	4.7
1977	na	5.2	5.2	na	3.9	3.5	na	5.0	4.4	na	5.1	4.7
1978	na	5.2	5.2	na	3.9	3.5	na	5.0	4.4	na	5.1	4.7
1979	na	5.2	5.2	na	3.9	3.5	na	5.0	4.4	na	5.1	4.7
1980	na	5.2	5.2	na	3.9	3.5	na	5.0	4.4	na	5.1	4.7
1981	na	5.2	5.2	na	3.9	3.5	na	5.0	4.4	na	5.1	4.7
1982	na	5.2	5.2	na	3.9	3.5	na	5.0	4.4	na	5.1	4.7
1983	na	5.2	5.2	na	3.9	3.5	na	5.0	4.4	na	5.1	4.7
1984	na	5.2	5.2	na	3.9	3.5	na	5.0	4.4	na	5.1	4.7
1985	na	5.2	5.1	na	3.9	3.5	na	5.0	4.4	na	5.1	4.7
1986	na	5.2	5.1	na	3.5	3.3	na	5.0	4.4	na	5.1	4.7
1987	na	5.2	5.1	na	3.5	3.3	na	5.0	4.4	na	5.1	4.7
1988	na	5.0	5.0	na	3.5	3.3	na	5.0	4.4	na	5.1	4.7
1989	na	5.0	5.0	na	3.5	3.3	na	5.0	4.4	na	5.1	4.7
1990	na	5.0	4.9	na	3.5	3.3	na	5.0	4.4	na	5.1	4.7
1991	6.0	5.0	4.9	6.0	3.5	3.3	6.0	5.0	4.4	6.0	5.1	4.7
1992	6.0	5.0	4.9	6.0	3.5	3.3	6.0	5.0	4.4	6.0	5.1	4.7
1993	6.0	4.9	4.8	6.0	3.5	3.3	6.0	5.0	4.4	6.0	5.1	4.7
1994	6.0	4.8	4.7	6.0	3.5	3.3	6.0	5.0	4.4	6.0	5.1	4.7
1995	6.0	4.6	4.6	6.0	3.1	3.0	6.0	5.0	4.4	6.0	5.1	4.6
1996	6.0	4.6	4.5	6.0	3.1	3.0	6.0	5.0	4.4	6.0	5.1	4.6
1997	6.0	4.6	4.5	6.0	3.1	3.0	6.0	5.0	4.4	6.0	5.0	4.6
1998	6.0	4.3	4.3	6.0	3.1	3.0	6.0	4.9	4.3	6.0	4.8	4.5
1999	6.0	4.0	4.1	6.0	3.1	3.0	6.0	4.9	4.3	6.0	4.8	4.5
2000	6.0	3.5	3.7	6.0	2.9	2.8	6.0	4.9	4.3	6.0	4.6	4.4
2001	6.0	3.0	3.4	6.0	2.9	2.8	6.0	4.9	4.3	4.5	4.0	4.0
2002	5.0	2.3	2.7	6.0	2.9	2.7	6.0	4.7	4.1	4.5	4.0	3.8
2003	4.0	1.8	2.4	5.0	2.8	2.5	6.0	4.5	4.0	3.0	3.5	3.5
2004	4.0	na	na	5.0	na	na	6.0	na	na	3.0	na	na
2005	4.0	na	na	5.0	na	na	6.0	na	na	3.0	na	na
2006	4.2	na	na	5.0	na	na	6.0	na	na	3.0	na	na
2007	3.2	na	na	5.0	na	na	6.0	na	na	2.1	na	na
2008	3.2	na	na	5.0	na	na	6.0	na	na	2.1	na	na

Post			
year	Croatia	EU-15 average	OECD average
1975	na	4.8	4.6
1976	na	4.8	4.6
1977	na	4.8	4.6
1978	na	4.8	4.6
1979	na	4.8	4.6
1980	na	4.8	4.6
1981	na	4.8	4.6
1982	na	4.7	4.6
1983	na	4.7	4.6
1984	na	4.7	4.5
1985	na	4.6	4.5
1986	na	4.5	4.5
1987	na	4.5	4.4
1988	na	4.5	4.4
1989	na	4.5	4.4
1990	na	4.3	4.2
1991	6.0	4.2	4.1
1992	5.5	4.2	4.1
1993	5.5	4.1	4.0
1994	5.5	3.9	3.8
1995	5.5	3.7	3.7
1996	5.5	3.6	3.6
1997	5.5	3.6	3.6
1998	5.5	3.5	3.7
1999	5.5	3.4	3.4
2000	5.5	3.4	3.4
2001	5.5	3.3	3.3
2002	5.5	2.8	2.9
2003	4.0	2.8	3.0
2004	3.5	na	na
2005	3.5	na	na
2006	3.5	na	na
2007	3.5	na	na
2008	3.5	na	na

Post						
year	Entry			Public Ownership		
	Croatia	EU-15 average	OECD average	Croatia	EU-15 average	OECD average
1975	na	4.4	4.3	na	5.1	5.0
1976	na	4.4	4.3	na	5.1	5.0
1977	na	4.4	4.3	na	5.1	4.9
1978	na	4.4	4.3	na	5.1	4.9
1979	na	4.4	4.3	na	5.1	4.9
1980	na	4.4	4.3	na	5.1	4.9
1981	na	4.4	4.2	na	5.1	4.9
1982	na	4.2	4.1	na	5.1	4.9
1983	na	4.2	4.1	na	5.0	4.9
1984	na	4.2	4.1	na	5.0	4.9
1985	na	4.2	4.1	na	5.0	4.9
1986	na	4.0	4.0	na	5.0	4.9
1987	na	4.0	3.9	na	4.9	4.8
1988	na	4.0	3.9	na	4.9	4.8
1989	na	4.0	3.9	na	4.9	4.8
1990	na	3.5	3.5	na	4.8	4.7
1991	6.0	3.4	3.4	6.0	4.8	4.7
1992	6.0	3.3	3.3	5.0	4.8	4.7
1993	6.0	3.3	3.3	5.0	4.8	4.7
1994	6.0	3.0	3.0	5.0	4.6	4.6
1995	6.0	2.8	2.8	5.0	4.5	4.5
1996	6.0	2.6	2.7	5.0	4.5	4.5
1997	6.0	2.6	2.7	5.0	4.5	4.5
1998	6.0	2.6	2.8	5.0	4.5	4.5
1999	6.0	2.4	2.4	5.0	4.5	4.5
2000	6.0	2.4	2.3	5.0	4.4	4.4
2001	6.0	2.3	2.2	5.0	4.3	4.4
2002	6.0	1.3	1.5	5.0	4.3	4.4
2003	3.0	1.3	1.7	5.0	4.2	4.3
2004	2.0	na	na	5.0	na	na
2005	2.0	na	na	5.0	na	na
2006	2.0	na	na	5.0	na	na
2007	2.0	na	na	5.0	na	na
2008	2.0	na	na	5.0	na	na

Rail			
year	Croatia	EU-15 average	OECD average
1975	na	6.0	5.9
1976	na	6.0	5.9
1977	na	6.0	5.9
1978	na	6.0	5.9
1979	na	6.0	5.9
1980	na	6.0	5.8
1981	na	6.0	5.8
1982	na	6.0	5.8
1983	na	6.0	5.8
1984	na	6.0	5.8
1985	na	6.0	5.8
1986	na	6.0	5.8
1987	na	6.0	5.7
1988	na	5.9	5.6
1989	na	5.9	5.6
1990	na	5.9	5.6
1991	6.0	5.9	5.6
1992	6.0	5.9	5.6
1993	6.0	5.8	5.5
1994	6.0	5.5	5.3
1995	6.0	5.4	5.2
1996	6.0	5.2	4.8
1997	6.0	5.0	4.7
1998	5.6	4.8	4.5
1999	5.6	4.6	4.4
2000	5.6	4.4	4.2
2001	5.6	4.3	4.1
2002	5.6	4.1	3.9
2003	5.6	4.0	3.8
2004	5.6	na	na
2005	5.6	na	na
2006	5.3	na	na
2007	5.3	na	na
2008	5.3	na	na

Industry	Rail											
year	Entry			Public Ownership			Market Structure			Vertical Integration		
	Croatia	EU-15 average	OECD average	Croatia	EU-15 average	OECD average	Croatia	EU-15 average	OECD average	Croatia	EU-15 average	OECD average
1975	na	6.0	6.0	na	6.0	5.7	na	6.0	5.7	na	6.0	6.0
1976	na	6.0	6.0	na	6.0	5.7	na	6.0	5.7	na	6.0	6.0
1977	na	6.0	6.0	na	6.0	5.7	na	6.0	5.7	na	6.0	6.0
1978	na	6.0	6.0	na	6.0	5.7	na	6.0	5.7	na	6.0	6.0
1979	na	6.0	6.0	na	6.0	5.7	na	6.0	5.7	na	6.0	6.0
1980	na	6.0	5.9	na	6.0	5.7	na	6.0	5.7	na	6.0	6.0
1981	na	6.0	5.9	na	6.0	5.7	na	6.0	5.7	na	6.0	6.0
1982	na	6.0	5.9	na	6.0	5.7	na	6.0	5.7	na	6.0	6.0
1983	na	6.0	5.9	na	6.0	5.7	na	6.0	5.7	na	6.0	6.0
1984	na	6.0	5.9	na	6.0	5.7	na	6.0	5.7	na	6.0	6.0
1985	na	6.0	5.9	na	6.0	5.7	na	6.0	5.7	na	6.0	6.0
1986	na	6.0	5.9	na	6.0	5.7	na	6.0	5.7	na	6.0	6.0
1987	na	6.0	5.6	na	6.0	5.6	na	6.0	5.4	na	6.0	6.0
1988	na	6.0	5.6	na	6.0	5.6	na	6.0	5.4	na	5.8	5.9
1989	na	6.0	5.6	na	6.0	5.6	na	6.0	5.4	na	5.8	5.9
1990	na	6.0	5.6	na	6.0	5.6	na	6.0	5.4	na	5.8	5.9
1991	6.0	6.0	5.6	6.0	6.0	5.6	6.0	6.0	5.4	6.0	5.7	5.8
1992	6.0	6.0	5.6	6.0	6.0	5.6	6.0	6.0	5.4	6.0	5.6	5.7
1993	6.0	5.7	5.4	6.0	6.0	5.5	6.0	5.9	5.4	6.0	5.6	5.6
1994	6.0	5.5	5.2	6.0	5.8	5.2	6.0	5.9	5.4	6.0	4.9	5.2
1995	6.0	5.5	5.2	6.0	5.7	5.1	6.0	5.8	5.3	6.0	4.7	5.0
1996	6.0	5.0	4.6	6.0	5.6	4.9	6.0	5.8	5.2	6.0	4.4	4.6
1997	6.0	5.0	4.6	6.0	5.6	4.9	6.0	5.6	5.1	6.0	4.0	4.2
1998	6.0	4.8	3.9	6.0	5.5	4.9	6.0	5.4	4.9	4.5	3.5	4.2
1999	6.0	4.8	4.4	6.0	5.5	4.9	6.0	5.1	4.7	4.5	3.3	4.0
2000	6.0	4.3	4.1	6.0	5.4	4.9	6.0	4.8	4.5	4.5	3.2	3.9
2001	6.0	4.2	4.0	6.0	5.3	4.8	6.0	4.5	4.3	4.5	3.0	3.9
2002	6.0	4.1	3.9	6.0	5.3	4.8	6.0	4.2	4.1	4.5	2.9	3.8
2003	6.0	4.0	3.2	6.0	5.2	4.5	6.0	4.0	3.4	4.5	2.9	3.7
2004	6.0	na	na	6.0	na	na	6.0	na	na	4.5	na	na
2005	6.0	na	na	6.0	na	na	6.0	na	na	4.5	na	na
2006	6.0	na	na	6.0	na	na	6.0	na	na	3.0	na	na
2007	6.0	na	na	6.0	na	na	6.0	na	na	3.0	na	na
2008	6.0	na	na	6.0	na	na	6.0	na	na	3.0	na	na

Road			
year	Croatia	EU-15 average	OECD average
1975	na	5.2	4.8
1976	na	5.2	4.8
1977	na	5.2	4.8
1978	na	5.2	4.8
1979	na	5.2	4.8
1980	na	5.2	4.8
1981	na	5.2	4.7
1982	na	5.1	4.7
1983	na	5.1	4.4
1984	na	5.0	4.2
1985	na	4.9	4.1
1986	na	4.7	4.0
1987	na	4.3	3.6
1988	na	4.0	3.2
1989	na	3.2	2.7
1990	na	3.2	2.5
1991	0.5	3.0	2.4
1992	0.5	2.6	2.1
1993	0.5	2.5	2.1
1994	0.5	2.5	2.0
1995	0.5	2.4	1.9
1996	0.5	2.4	1.8
1997	0.5	2.3	1.8
1998	1.3	2.1	1.7
1999	1.3	2.0	1.7
2000	1.3	1.9	1.6
2001	1.3	1.9	1.6
2002	1.3	1.8	1.5
2003	1.3	1.7	1.5
2004	1.3	na	na
2005	2.0	na	na
2006	2.0	na	na
2007	2.0	na	na
2008	2.0	na	na

Road						
year	Prices			Entry		
	Croatia	EU-15 average	OECD average	Croatia	EU-15 average	OECD average
1975	na	4.8	4.4	na	5.4	5.0
1976	na	4.8	4.4	na	5.4	5.0
1977	na	4.8	4.4	na	5.4	5.0
1978	na	4.8	4.4	na	5.4	5.0
1979	na	4.8	4.4	na	5.4	5.0
1980	na	4.8	4.4	na	5.4	5.0
1981	na	4.7	4.4	na	5.4	5.0
1982	na	4.7	4.3	na	5.4	4.9
1983	na	4.7	4.0	na	5.3	4.7
1984	na	4.7	3.6	na	5.2	4.6
1985	na	4.5	3.5	na	5.1	4.5
1986	na	4.4	3.4	na	4.9	4.4
1987	na	3.7	3.0	na	4.7	4.1
1988	na	3.5	2.7	na	4.5	3.7
1989	na	2.5	2.0	na	3.9	3.3
1990	na	2.4	1.9	na	3.9	3.1
1991	0.0	2.3	1.8	1.0	3.6	2.9
1992	0.0	1.8	1.4	1.0	3.3	2.7
1993	0.0	1.7	1.4	1.0	3.3	2.7
1994	0.0	1.6	1.3	1.0	3.2	2.6
1995	0.0	1.5	1.1	1.0	3.2	2.5
1996	0.0	1.4	1.1	1.0	3.2	2.5
1997	0.0	1.3	1.0	1.0	3.2	2.5
1998	0.0	1.1	0.7	2.5	3.1	2.8
1999	0.0	1.0	0.6	2.5	3.0	2.6
2000	0.0	1.0	0.6	2.5	2.9	2.6
2001	0.0	0.9	0.6	2.5	2.8	2.5
2002	0.0	0.9	0.5	2.5	2.7	2.4
2003	0.0	0.8	0.5	2.5	2.6	2.5
2004	0.0	na	na	2.5	na	na
2005	0.0	na	na	4.0	na	na
2006	0.0	na	na	4.0	na	na
2007	0.0	na	na	4.0	na	na
2008	0.0	na	na	4.0	na	na

All but public ownership			
year	Croatia	EU-15 average	OECD average
1975	na	5.5	5.3
1976	na	5.5	5.3
1977	na	5.5	5.3
1978	na	5.5	5.3
1979	na	5.5	5.3
1980	na	5.5	5.3
1981	na	5.5	5.3
1982	na	5.5	5.2
1983	na	5.5	5.2
1984	na	5.5	5.2
1985	na	5.4	5.1
1986	na	5.4	5.1
1987	na	5.3	4.9
1988	na	5.2	4.8
1989	na	5.1	4.7
1990	na	5.0	4.6
1991	5.2	4.8	4.4
1992	5.1	4.7	4.3
1993	5.1	4.2	4.0
1994	5.1	4.0	3.8
1995	5.1	3.7	3.5
1996	5.1	3.6	3.3
1997	5.1	3.4	3.2
1998	5.1	3.2	3.0
1999	5.1	2.8	2.6
2000	5.1	2.6	2.4
2001	4.9	2.3	2.2
2002	4.6	2.0	1.9
2003	3.6	1.8	1.8
2004	3.3	na	na
2005	3.4	na	na
2006	3.1	na	na
2007	2.9	na	na
2008	2.9	na	na

Entry barriers			
year	Croatia	EU-15 average	OECD average
1975	na	5.6	5.5
1976	na	5.6	5.5
1977	na	5.6	5.5
1978	na	5.6	5.5
1979	na	5.6	5.4
1980	na	5.6	5.4
1981	na	5.6	5.4
1982	na	5.5	5.4
1983	na	5.5	5.3
1984	na	5.5	5.3
1985	na	5.5	5.2
1986	na	5.4	5.2
1987	na	5.4	5.0
1988	na	5.3	4.9
1989	na	5.3	4.8
1990	na	5.1	4.7
1991	4.8	4.9	4.5
1992	4.8	4.8	4.4
1993	4.8	4.3	4.0
1994	4.8	4.1	3.9
1995	4.8	3.8	3.6
1996	4.8	3.5	3.3
1997	4.8	3.4	3.2
1998	5.1	3.2	2.9
1999	5.1	2.6	2.4
2000	5.1	2.3	2.1
2001	5.1	2.1	2.0
2002	4.9	1.7	1.7
2003	3.9	1.6	1.6
2004	3.6	na	na
2005	4.0	na	na
2006	4.0	na	na
2007	3.8	na	na
2008	3.8	na	na

Public ownership			
year	Croatia	EU-15 average	OECD average
1975	na	5.2	4.7
1976	na	5.2	4.7
1977	na	5.2	4.7
1978	na	5.2	4.7
1979	na	5.2	4.7
1980	na	5.2	4.7
1981	na	5.2	4.7
1982	na	5.2	4.7
1983	na	5.2	4.7
1984	na	5.1	4.7
1985	na	5.1	4.7
1986	na	5.1	4.6
1987	na	5.0	4.5
1988	na	5.0	4.5
1989	na	4.9	4.4
1990	na	4.9	4.3
1991	5.9	4.8	4.2
1992	5.8	4.7	4.1
1993	5.8	4.6	4.0
1994	5.8	4.5	3.9
1995	5.8	4.3	3.8
1996	5.8	4.2	3.7
1997	5.8	4.0	3.5
1998	5.8	4.0	3.5
1999	5.6	3.7	3.3
2000	5.6	3.4	3.1
2001	5.3	3.3	3.0
2002	5.3	3.3	3.0
2003	5.1	3.2	3.2
2004	5.1	na	na
2005	5.0	na	na
2006	5.0	na	na
2007	5.0	na	na
2008	4.7	na	na

Notes

Introductory remarks

This Annex contains necessary explanations of the data provided in the questionnaire. First the most important legislation in force is listed, which is followed by brief explanations we considered necessary.

Only a selection of legislation in force is listed, since the final provisions of existing legislation provide references to previous acts. Only in road freight different approach was used. The reason is that in the 1990-ies separate laws regulated domestic and international transport. As a result, the legislation in force does not provide sufficient reference on previous acts regulating the sector.

In several cases (telecom, electricity and gas market) explicit legal provisions diverged from situation in the market. In cases where licences are needed, number of licences issued was used as a criterion on whether competition exists (as opposed to the legal provision which does not explicitly prohibit establishment of competition). These cases are explained in more details in notes below.

1. TELECOM SECTOR:

1.1. Selected Legal Acts – Telecom

- Telecommunications Act (Official Gazette 122/03; 158/03; 60/04)
- Act on Amendments to the Telecommunications Act (NN 70/05)
- Act on Privatisation of Croatian Telecommunications (NN 65/99,68/01)
- Act on Division of Croatian Post and Telecommunications into Croatian Post and Croatian Telecommunications (NN 101/98)
- Ordinances on Telecommunications Services (NN183/ 04)
- Ordinances on Basic Telecommunications Services (NN 123/05)
- Ordinances on Number Transferability and Operator Reselection (NN 183/04)
- List of relevant markets and operators with significant market share (OG 134/2007)

1.2. Notes

Entry regulation

According to the Telecommunications Act (Official Gazette No75/1999. Art 98 par. 4), HT - Hrvatske telekomunikacije d.d. (Croatian Telecom) had exclusive rights until 31 December 2002 in fixed network, public voice service and international telecom services (Official Gazette 76/1999, Art 98, par 4. and 5)

Services in fixed telecommunication networks (local, long distance and international) are formally liberalised from 1 January 2003.

However, amendments to the Telecommunications Act (Official Gazette No 68/2001) define transition period until the end of 2004. During transition period Croatian Telecom has not obligation to enable access to local loop.

Individual licence is needed for participation in telecom market. Until the end of 2004, only HT had the licence, and we used the licence as a legal condition (and not merely the law) for establishing competition (in both fixed and mobile market). As late in 2003 two additional

licences were issued (H1 Telekom in December 2004 and OT- Optima Telekom in November 2004), we identify 2005 as year when competition started. Currently, there are 10 operators that technically and legally can perform at fixed telecom market.

The same criterion is applied in mobile market. According to the 1994 Telecommunication Act (Art. 12.2), entry into mobile market is possible provided that company has concession issued by the Telecommunication Council. Vipnet received concession in September 1998 and started operation in 1999, as a second GSM operator in Croatia (the first being HT). The third licence was issued in December 2004 (TELE 2).

As technical preconditions for participation in international mobile market existed, the liberalization of international telephone market started in 2003, the second operator being Vipnet (i.e. mobile operator)

State ownership

Act on Privatisation of Croatian Telecommunications (NN 65/99,68/01) defined privatization procedure.

Market structure

For market structure we used data from research on telecom market conducted by Competition Agency. We consider HT as incumbent operator and all the other operators as new entrants. However, it should be noted that Vipnet (2nd mobile operator) is considered as operator with significant market share (OG 134/07). Market share of third mobile operator Tele 2 (that entered the market in 2005) was less than 5% in 2005 and 2006 (according to Competition Agency) and roughly 8 % in 2007 (according to Tele 2 data).

2. POST

2.1. Selected Legal Acts – Postal Services

- Postal Act (Official Gazette 172/03, 15/04)
- Act on Amendments to the Postal Act (OG 92/05)
- Establishment of a Croatian National Postal and Telecommunications Company Act (OG 42/90, 61/91, 109/93)

Note: the Constitutional Court of the Republic of Croatia has annulled Article 16 of this Act

- Postal Ordinances (OG 37/95, 89/95, 5/96)
- Ordinances on the Postal System of the Public Operator (OG 5/05)
- Division of Croatian Post and Telecommunications into Croatian Post and Croatian Telecommunications Act (OG 101/98)
- Ordinances on General Conditions for the Provision of Postal Services (OG 37/95;151/04)
- Ordinances on Amendments to Ordinances on General Conditions for the Provision of Postal Services (OG 122/05)
- Ordinances on Licence Fee for the Provision of General Postal Services (OG 20/04)

2.2. Notes

According to the 1994 law on postal services (Official Gazette 53/94) public operator (Croatian Post, HP-Hrvatska pošta d.d.) held monopoly for all postal services. Excluded were only parcels and printed materials sent directly by publishers.

The 2003 law provides legal ground for liberalization of postal services. Croatian Posts is the provider of Universal Postal Service provider, but its monopoly was reduced from postal items up to 2000 g to postal items up to 100 g.

Croatian Post (Hrvatska posta d.d.) operates on the basis of direct authorisation by law.

Postal services which are outside the reserved area but inside the universal service area can be provided by private operators (legal persons only) on the basis of a licence to be issued by the Council for Postal Services which is the National Regulatory Authority (NRA) in this field. The issuing (or withdrawal) of a licence is an administrative act. The licence holder needs to pay an annual licence fee. The USP is exempt from paying such fee. For the provision of courier services no licence is necessary; instead a notification is sufficient.

Croatian Post is obliged (since 1 January 2005) to ensure a separation of accounting for the reserved postal services from the one for the non-reserved postal services. Within the non-reserved postal services the accounting for universal postal services needs to be kept separate from the one for non-universal postal services and courier services. Pursuant to the Postal Act, the public operator must not subsidize postal services under free market conditions with revenues generated from reserved services.

3. RAIL

3.1. Selected Legal Acts - Railway Transport

- Law on Agency for Railway Service Market Regulation (OG 79/07)
- The Railway Act (OG 123/03, 194/03, 30/04)
- The Railway Safety Act (OG 40/07)
- Croatian Railways Division Law (OG 153/05)

- Rulebook on Railway Infrastructure (OG 127/05)
- Rulebook on criteria and procedures for certificates on safety for railway infrastructure management (OG 127/05)
- Rulebook on criteria and procedures for certificates on safety for railway transport (OG 127/05)
- Rulebook on criteria and procedures for railway transport licences and railway infrastructure management licences (OG 127/05)

- Act on the ratification of Protocol of 3 June 1999 for the modification of the Convention concerning International Carriage by Rail (COTIF) of 9 May 1980 (1999 Protocol) and the Convention concerning International Carriage by Rail (COTIF) of 9 May 1980, as amended by the Protocol of 3 June 1999 (Official Gazette - International Agreements (OG-IA)12/2000)
- Agreement on regulating border railway transport between the Government of the Republic of Croatia and the Government of the Republic of Hungary (OG 5/95).
- Agreement between the Government of the Republic of Croatia and the Government of the Republic of Hungary on international combined transport of goods (OG 20/97)

3.2. Notes

Croatia has adopted the Railway Act (Official Gazette 123/03, 194/03 and 30/04), which entered into force on 1 January 2006. The implementing legislative framework consists of four rulebooks

(OG 127/05) related to railway infrastructure, to railway infrastructure operation safety certificates, to requirements and procedures for issuing rail transport service licences and railway infrastructure operation .

The Railway Act is based on the principle of separation of railway transport and railway infrastructure. Pursuant to this act, the Croatian Railway division law (OG 153/05) defines how the national company Hrvatske željeznice (HŽ) was divided in mid 2006, i.e.

- one for infrastructure management (maintenance and construction);
- one for passenger transport services;
- one for freight transport;
- one for train traction.

These four companies are under a holding, which is 100% owned by Government. The separation of accounts between infrastructure and transport services is in force in HŽ since 1998.

4. AIR PASSANGER TRANSPORT

4.1. Selected Legal Acts– Air Passenger Transport

- Act on Amendments to the Air Traffic Act (46/2007)
- Air Traffic Act (OG 132/98, 178/94)

4.2. Notes

The Air Traffic Act (OG 132/98 and 178/04) covers almost entirely the air transport sector. Croatia signed the European Common Aviation Area (ECAA) agreement in 2006. Market access is regulated by bilateral air services agreements concluded by Croatia, and by the ECAA agreement.

Croatia Airlines is the sole scheduled national air carrier and it receives state aid notably through Public Service Obligation (PSO).

Restrictions to the liberalization of the domestic aviation market are defined by art. 15 par. 1 of the Air Traffic Act (OG 132/98, 46/2007). In case of conflict of interest among carriers, the Ministry can decide which airline is allowed to operate on domestic route.

5. ROAD FREIGHT TRANSPORT

5.1. Selected Legal Acts – Road Freight Transport

- Road Transport Act,(OG 178/04, 48/05, 151/05 and 111/06)
- Road Transport Act (OG 36/98 and 83/02 – Consolidated version OG 26/03)
- Act on the Domestic Road Transport (OG 77/1992, 26/1993)
- Act on Road Transport (OG 44/89, 47/89)

- Rulebook on licences for road transport (OG 87/05, 13/2008)

5.2. Notes

In 1990-ies, separate laws regulated international and national road freight business.

Different procedures have been applied for national allowances and international licences. The 1992 Law on internal road transport (Official Gazette 77/1992) defined procedure for obtaining national freight allowance. Procedure for obtaining allowance for participation in national freight business has been simpler and cheaper compared to the procedure for licence necessary for international road freight business (based on the Law on International Road Transport, OG 53/91).

The allowance for national freight business has been issued at local level, and for the purpose of the database, we consider it as a permit from the government.

By adoption Road Transport Act in 1998 (OG 36/1998) the activities in domestic and international road freight have been partially integrated. Still, the domestic allowances had been issued at the level of counties and by the City of Zagreb, while the international licences have been issued by the Ministry of Transport (in its headquarters and in the local offices). Based on the 1998 Act, Chamber of Commerce (HGK) and Chamber of Traders and Crafts (HOK) have adopted a rulebook defining procedure for obtaining professional qualification in the field of road transport (OG 18/1999). We consider this as start of involvement of professional bodies or representatives of trade and commercial interest in specifying or enforcing entry regulation. It should be noted, however, that the Chamber of Commerce has been in charge for distribution of international licences in the period 1992-1998 based on the Law on international road transport (Official Gazette 53/91) and Rulebook on the procedure and criteria for distribution of international licences (OG 21/1992). As this was not relevant for operators active only on domestic market, we consider that professional bodies have been involved in specifying entry regulations since 1998.

Current law (OG 178/04, 48/05, 151/05 and 111/06) defines five groups of requirements for admission into road transport: good repute, financial standing, professional competence, access to the vehicle (ownership or right to use it, based on the contract) and access to a parking place (own or rented parking places). These criteria we consider as technical and financial fitness and compliance with public safety operators.

Finally, it should be noted that Professional Association of road freight transport was established in 2004. One of its first activities was to define non-binding pricing guidelines.

6. ELECTRICITY

6.1. Selected Legal Acts – Electricity

- Electricity Market Act (OG 177/04, 76/07)
- Grid Code (OG 36/06)
- Electricity Market Rules (OG 135/06)

6.2. Notes

Until 2001, when package of 5 energy laws was adopted (OG 68/01), sector was regulated by the Act on electricity industry (OG 31/90, 47/90, 61/91, 26/93, 78/94, 105/99, 111/99 and 51/01). It defined that electricity company (Hrvatske elektroprivrede) might receive its income by offering transport services for other companies (Art. 13 par 2, OG 31/90), which provides for negotiated TPA. The 2001 Electricity Act provided for regulated TPA and for liberalisation of electricity market. Electricity market rules, enabling establishment of wholesale market, firstly based on bilateral contracts (over the counter- OTC market) were adopted in 2003 (OG 193/03, 198 /03). New rules adopted in 2006 (OG 135/2006) that define that there is one electricity market in Croatia.

Consumption threshold in order to be able to choose supplier have been defined by Electricity Market Law (initially OG 68/01, replaced by OG 177/04, 76/07)

7. GAS

7.1. Selected Legal Acts – Gas

- Gas Market Act (OG 40/07)
- Decision on the gas distribution tariffs (OG 116/97)
- Decision of the gas price for the gas suppliers (OG 77/07)
- Gas supply tariff system (OG 34/07, 47/07)
- Gas distribution tariff system (OG 32/96, 3/07)
- Basic market conditions for access to the gas transport system (OG 03/2004)
- Grid code for access to the transport system (OG 126/03)
- Gas distribution rulebook (OG 104/02, 97/03)

7.2. Notes

In 2001 the first Gas Market Act (OG 68/01 and OG 97/05) was adopted, as a part of the energy package. It recognised 3 basic segments of the industry: gas distribution, gas production/Import and gas transport. The law provided for regulated third party access to transport, and also for the first phase of liberalisation and vertical separation.

Vertical integration

By 2001 distribution and supply of gas were treated as communal activities, separated (ownership separation) from transport and production/import. Based on the reform initiated in 2001, gas transport (PLINACRO) was legally separated from production/import in 2001. At the time transport company was registered as a member of INA group, 100% owned by INA Plc, while from March 11 2003 the company became a state-owned.

As a result, in the period 2001-2007 three segments of the industry were vertically separated: production/import, transport and distribution/supply.

2007 law recognized additional activities in the gas market (transport system operator, distribution system operator, storage system operator, supply, trader) and provides for further vertical separation.

According to the regulatory agency, it was planned that during 2007 distribution and supply separate account. However, there are no reliable information on implementation.

Despite the fact that production/import and transport were vertically separated from distribution and supply, we consider that there was no separation until 2001. As a criterion for separation we use next (upstream or downstream) activity. I.e. we consider that there was initial separation in 2001 (production/transport/distribution). The distribution and supply are characterized by large number of companies (39), that are local monopolies, with different forms of structure and ownership. The largest one (Gradska plinara Zagreb) covers appx. 35.6% of Croatian gas market. City of Zagreb owns 10% of the Gradska plinara Zagreb, but there is no ownership of the central government.

Market opening

The 2001 Gas Market Act (OG 68/01) defined that consumers that are buying gas as a fuel for producing electricity, consumers that are buying gas for co-generation plants (electricity and heat) and consumers whose consumption exceeds 100 000 000 m³ of gas are free to choose supplier. Government was also entitled to define additional criteria for opening of the market, and since 2004 iron and steel companies can choose their suppliers (OG 101/2004). The 2007 law decreased consumption threshold in order to be able to choose a supplier (from 100000000 m³ gas to

25000000m3 gas a year). From July 2007 all non-household customers are free to choose supplier, while from June 2008 all customers are free to choose their supplier. Regarding competition in gas production/import sector, 2007 law defines that INA d.d. is obliged to provide gas for tariff customers. It is only INA who has the licence for gas production/import and it is the sole concessionary on over 50 oil and gas production fields in continental Croatia. Here, as in the telecom sector, we applied conservative approach. I.e. despite the fact that there is no explicit legal provision limiting competition, based on the fact that INA is the sole concessionary to production and the only licence holder for production and import, we consider it sufficient to recognize that regulations restricts the number of competitors.

Annex III: Regulation and Convergence – Regression results

RE-FE Baseline Comparison, ETCR Index

	(1) FE lrgdppc_ppp	(2) RE GLS lrgdppc_ppp	(3) RE GLS lrgdppc_ppp	(4) RE GLS lrgdppc_ppp	(5) baseline RE lrgdppc_ppp
L.lrgdppc_ppp	0.7335*** [0.0522]	0.8718*** [0.0259]	0.8777*** [0.0332]	0.8772*** [0.0328]	0.9472*** [0.0109]
linv_gdp	0.1495*** [0.0337]	0.1663*** [0.0353]	0.1640*** [0.0360]	0.1557*** [0.0361]	0.1721*** [0.0356]
L.linv_gdp	-0.1360*** [0.0311]	-0.1614*** [0.0332]	-0.1664*** [0.0340]	-0.1589*** [0.0336]	-0.1684*** [0.0345]
L.lropeness	0.0345 [0.0216]	0.0078 [0.0051]	0.0098* [0.0051]	0.0087* [0.0051]	0.0189*** [0.0040]
lyagri_empl	-0.0514*** [0.0172]	-0.0035 [0.0054]	-0.0002 [0.0067]	0.0001 [0.0066]	0.0015 [0.0034]
lyrule_law	0.1007 [0.0629]	0.0067 [0.0244]	-0.0085 [0.0235]	0.0056 [0.0252]	-0.0206 [0.0196]
lpatent_labor	-0.0074 [0.0084]	-0.0019 [0.0022]	-0.0016 [0.0027]	-0.0014 [0.0027]	-0.0040* [0.0022]
lfin_risk	0.0346 [0.0235]	0.0255 [0.0227]	0.0298 [0.0246]	0.0321 [0.0241]	0.0215 [0.0237]
lemp_lpriv	0.0156 [0.0606]	0.0770*** [0.0193]	0.0711*** [0.0228]	0.0697*** [0.0215]	0.0978*** [0.0192]
lyfertility	-0.0085 [0.0274]	0.0708*** [0.0116]	0.0680*** [0.0125]	0.0662*** [0.0123]	0.0488*** [0.0102]
lfis_burden	0.0347** [0.0142]	0.0102 [0.0114]	0.0103 [0.0113]	0.0103 [0.0114]	0.0058 [0.0107]
lave_yr_sch	-0.0458 [0.1565]	0.0406*** [0.0135]	0.0383*** [0.0138]	0.0359*** [0.0138]	0.0293** [0.0124]
L.lelect_pc	-0.0298* [0.0174]	0.0052 [0.0066]	0.0055 [0.0068]	0.0073 [0.0065]	0.0155*** [0.0060]
etcr_ave	-0.3832*** [0.0939]	-0.1709*** [0.0599]			
etcr_lrgdp	0.0388*** [0.0094]	0.0176*** [0.0059]			
etcr_pub_ownership			-0.0531 [0.0882]	-0.0088 [0.0883]	
etcr_pub_lrgdp			0.0054 [0.0087]	0.0009 [0.0087]	
etcr_other_pub				-0.1632** [0.0749]	
etcr_other_lrgdp				0.0167** [0.0075]	
etcr_entry_barrier			-0.1168 [0.0748]		
etcr_entry_lrgdp			0.0119 [0.0075]		
Constant	2.6194*** [0.7630]	0.6356** [0.3060]	0.6244 [0.3897]	0.6161 [0.3824]	-0.2297* [0.1294]
Observations	132	132	132	132	132
Number of id	16	16	16	16	16
R-squared	0.9912				

Robust standard errors in brackets; * significant at 10%; ** significant at 5%; *** significant at 1%
Year dummies are excluded in the table.

System GMM Estimators, ETCR Index

	(1)	(2)	(3)	(4)
	Sys GMM	Sys GMM	Sys GMM	Sys GMM
	lrgdppc_ppp	lrgdppc_ppp	lrgdppc_ppp	lrgdppc_ppp
L.lrgdppc_ppp	0.9390***	0.8170***	0.8277***	0.8380***
	[0.0279]	[0.0476]	[0.0736]	[0.0722]
linv_gdp	0.0363	0.0113	0.0364	0.0119
	[0.0258]	[0.0231]	[0.0269]	[0.0234]
lropenness	0.0237***	0.0139*	0.0186**	0.0142**
	[0.0070]	[0.0083]	[0.0077]	[0.0069]
lyfertility	0.0580***	0.0884***	0.0835***	0.0849***
	[0.0184]	[0.0169]	[0.0169]	[0.0173]
yagri_empl	-0.0012	-0.0017	-0.0015	-0.002
	[0.0012]	[0.0014]	[0.0015]	[0.0014]
lpatent_labor	-0.0072**	-0.004	-0.0033	-0.005
	[0.0031]	[0.0036]	[0.0046]	[0.0046]
lyrule_law	-0.0559	-0.0305	-0.0654	-0.0349
	[0.0382]	[0.0411]	[0.0400]	[0.0326]
lave_yr_sch	0.0433	0.0620**	0.0629*	0.0575*
	[0.0265]	[0.0288]	[0.0360]	[0.0327]
lempl_priv	0.1165***	0.1175***	0.1263***	0.1158***
	[0.0363]	[0.0308]	[0.0409]	[0.0357]
lelect_pc	0.0240**	0.0116	0.0139	0.013
	[0.0095]	[0.0114]	[0.0124]	[0.0114]
lfis_burden	0.0149	0.0234	0.0267	0.0227
	[0.0165]	[0.0145]	[0.0172]	[0.0142]
lfin_risk	0.0131	0.0153	0.0002	0.0203
	[0.0242]	[0.0261]	[0.0237]	[0.0223]
etcr_ave		-0.2442**		
		[0.0963]		
etcr_lrgdp		0.0248***		
		[0.0096]		
etcr_pub_ownership			-0.1629	-0.0295
			[0.2057]	[0.1920]
etcr_pub_lrgdp			0.0163	0.0032
			[0.0203]	[0.0189]
etcr_entry_barrier			-0.0407	
			[0.1286]	
etcr_entry_lrgdp			0.004	
			[0.0129]	
etcr_other_pub				-0.172
				[0.1051]
etcr_other_lrgdp				0.0174*
				[0.0105]
Constant	-0.3573**	0.9660**	0.8069	0.7492
	[0.1616]	[0.4560]	[0.6656]	[0.6798]
Observations	122	122	122	122
Number of id	16	16	16	16

Robust standard errors in brackets; * significant at 10%; ** significant at 5%; *** significant at 1%
Year dummies are excluded in the table.