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## **METAL SECTOR IN CEECs AND RUSSIA** **A comparative analysis in the European context**

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### **Abstract**

This paper deals with the situation of the metals sector in Russia and Central Eastern Europe, as well as with their EU trade. In both CEECs and Russia, the metals sector inherited huge production overcapacities from the command economy, which are not viable under the market economy conditions. Russian metals sector focuses mainly on basic metals, whereas CEECs specialize rather on fabricated metal products. Due to more active industrial restructuring during the past decade, basic metals became less important in the CEECs' economies, whereas in Russia, due to the lack of restructuring, the opposite occurred. In Russia, metals exports to the EU are concentrated on basic precious and non-ferrous metals. In the CEECs, the sector's exports to the EU come also from fabricated metal products. Russian basic metals exports to the EU grew more dynamically than those of the CEECs, when at the same time fabricated metal products exports to the EU grew faster in the CEECs than in Russia. There is no evidence that the EU would discriminate against basic metals

imports from Russia. On the contrary, Russian exporters of basic iron and steel were more successful on the EU market than those from CEECs. The takeover of the “acquis communautaire” would require additional investment, but lead to benefits in the medium and long run.

**KEYWORDS:** Transition economies, metals, Russia, Central and Eastern Europe

**JEL classification:** F13; F21; L61

## **Introduction**

The Russian metals sector - due to its abundant raw material resources and the heritage of the past – seems at first to have a clear comparative advantage. The former links with the Central and East European Countries (CEECs) by the Council for Mutual Economic Assistance (CMEA) through the exchange of cheap raw materials from Russia versus finished engineering products from CEECs, were broken up with the collapse of communism in 1990. Since then the CEECs were - more or less - forced to change their industrial policies, especially regarding foreign direct investments (FDIs). FDI inflows contributed to active industrial restructuring and helped the CEECs to move up the “quality ladder” towards more sophisticated industrial segments, such as electrical engineering or transport equipment. The metals sector has not been a preferred target for foreign investors. Huge excess capacities were existants in West European steel plants as well,<sup>1</sup> and existing plants in CEECs were inefficient and environmentally polluting. Lacking the necessary investment resources, the state authorities were hesitant to restructure and privatise the existing metals enterprises because of the fear of related social and political costs. In Russia, however, the pressure for change was even smaller. The overall industrial restructuring was largely passive due to the adopted mass privatisation program which discouraged foreign investors, hence the economy remains, even today, dominated by resource-intensive sectors (metals, fuels).

This study provides an overview of the “basic metals and fabricated metal products” sector, in short metals sector,<sup>2</sup> in Russia and the seven Central and Eastern European

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<sup>1</sup> *Over the last 20 years, Western Europe witnessed the closure of some 30 million tons of excess steel production capacities which resulted in the loss of over half a million jobs – see Enterprise Europe, No. 7, April-June 2002.*

<sup>2</sup> *In the NACE rev. 1 classification system (Statistical classification of economic activities in the European Community) the metals sector denotes the sub-section ‘DJ’, which consists of two industries: ‘basic metals’ (27) and ‘fabricated metal products’ (28). Russian statistics distinguish*

Countries (CEECs), including Bulgaria, the Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia.<sup>3</sup> It gives a comparative analysis of the main sectoral economic trends, in particular regarding production and employment, factors affecting the competitiveness and the key features regarding the trade with the European Union (EU). Data come from the WIIW Industrial Database - Central and Eastern Europe (IDB-CEE), from Russian Goskomstat (Russian data were available only until 1999) and from the EUROSTAT Comext Database (EU foreign trade statistics).

### **Metals sector: an overview**

The metals sector still plays an important role in the economies of the CEECs and Russia with a total production volume of respectively, EUR 30 billion in the year 2000 (CEECs), and EUR 15 billion in the year 1999 (Russia). The sector employs a workforce of 860.2 thousand people in the CEECs and over 1 million people in Russia. Simply comparing the levels of production and employment between the CEECs and Russia reveals a significantly lower output per employee (productivity) in Russia. With about 14.4 th EUR per worker in 1999, the Russian nominal labour productivity in the metals sector was about 40% of the CEECs level (Table 1).

Among the CEECs, Poland is the largest producer of metal products in terms of current production in 2000 (EUR 12 billion), followed by the Czech Republic (EUR 6.2 billion) and Hungary (EUR 3.3 billion – see Table 1). Regarding employment, Poland takes again the lead among the CEECs, followed by the Czech Republic and Romania. In Poland about 277,400 people are employed in the metals sector, in the Czech Republic 177,000 and in Romania 166,800. The sectoral labour productivity was highest in Poland and Hungary (about EUR 43 th per worker).

The metals sector is among the key manufacturing sectors in the region both in terms of production and employment. In the year 2000, the sector accounted for 17% of the total manufacturing production in Russia and Slovakia, and for 16% in the Czech Republic and Romania. In Bulgaria, Slovenia and Poland the production shares ranged between 13% and 11% of total manufacturing. Only in Hungary was the metals sector's size slightly smaller, with a share of just 8%. Shares for employment ranged between 10% and 17% of total manufacturing in the CEECs, and were slightly smaller in Russia with less than 9% (Table 1). In terms of GDP, the metals sector is most important in the Czech and Slovak Republics (shares of 12% and 14%, respectively) and less important in other CEECs, as well as in Russia (8% of GDP). With the exception of Slovakia, the

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*between 'ferrous metals', 'non-ferrous metals' and 'metal-working'. For a more detailed analysis of the metals sector in CEECs see Hanzl (2002).*

<sup>3</sup> *Metals sector plays a minor role in the Baltic States.*

sector has not been an important target for FDI. As far as the macroeconomic importance of the metals sector is concerned, one can conclude that its current role is more important in CEECs than in Russia (see Table 1). However, these comparisons are affected by different sectoral structures: Russia focuses mainly on basic metals whereas the CEECs – especially the more advanced – specialize relatively more on higher value added fabricated metal products.<sup>4</sup>

### **Developments of the metals sector during the 1990s**

After the collapse of the old system, both the CEECs and Russia experienced a severe transformational recession, during which the production of the metals sector declined. Until 1992, production plummeted in the CEECs, while in Russia it fell further until 1994. Since then, metals sector production stagnated in most countries and recovered only in Poland and Hungary. The initial decline of production could be, however, offset only in Poland, where the production of the metals sector surpassed the 1989 level already in 1997 and reached 130% of that level in the year 2000. In other CEECs, the metals sector did relatively better in Slovakia, Hungary and Slovenia (it reached 90-80% of the 1989 level in 2000). In the Czech Republic and especially in Romania, however, metals sector production declined substantially during the last decade, without any sign of recovery yet (see Figure 1).

In Russia, the metals sector production dropped by nearly 40% between 1990 and 1994, after which, it stagnated at about 60-70% of the initial level until 1999 (see Figure 2). Russian production decline in the metals sector during the last decade can thus be compared to that of the Czech Republic. Compared to the performance of total manufacturing industry, the metals sector was less successful in the CEECs (its production declined more than total manufacturing), and hence it can be termed as a relative “loser of transition”.<sup>5</sup> In contrast, the metals sector in Russia performed relatively better than total manufacturing, and hence was a relative “winner of transition”. These diverging trends in CEECs and in Russia have been largely due to a much larger dynamics and a more profound industrial structural change in the CEECs’ manufacturing (fostered especially by foreign direct investments - FDI), whereas the Russian manufacturing industry did not actively restructure, and is still dominated by heavy industry sectors relying on raw materials, and FDI inflows have been very small. Russia is the fifth world largest producer of steel (after the EU, China, Japan and USA)

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<sup>4</sup> *In Russia, the share of basic metals in the sector’s output accounted for 95% in 1999. In Bulgaria and Romania, the respective share reached about 80%, and in other CEECs about 50% (year 2000).*

<sup>5</sup> *‘Losers’ of transition are here defined as industries that performed worse than total manufacturing in terms of production growth, ‘winners’ are those that performed relatively better - see Urban (1999), p.22.*

and the world biggest net steel exporter. Russia is also the leading producer of aluminium, nickel, copper, palladium and other precious metals.

Reasons behind initially falling and then stagnating metals production in the region include:

- In the whole region (both CEECs and Russia), a lower demand on the domestic market caused by the declining need for investment goods as well as for military equipment. In the CEECs, the collapse of the CMEA market had a decisive negative impact as well. It had been not only an important target for exports but also a significant supplier of cheap raw materials. In the previous command economy, the metals sector was oversized; it simply could not survive in this form in the new market economic conditions. This led to a “supply-side shock”, the redundant production capacities having to be substantially scaled down. During transition, demand on the domestic CEEC-markets (e.g. in the booming and mostly foreign-owned automotive industry) also shifted to higher-quality products, initially largely met by imports.
- Export expansion constrained by the trade restrictions prevalent in this “sensitive” sector (especially steel). These restrictions were also relevant for Russia, which tried to compensate declining domestic demand for investment and military hardware by exports and hence increased exports aggressively. In fact, Russia became the world leading steel exporter, from formerly being a net importer, with around 50% of domestic output exported. During 1970s and 1980s, the Soviet Union (Russia) had been a major importer of steel products (especially steels tubes and steel plates) from Western Europe (mainly Germany, Italy) and from Japan.
- The specificity of CEECs' and Russian metals sector's problems lie in the incomplete restructuring and delayed privatization of former big state-owned enterprises with thousands of employees. The restructuring process has started, but is difficult and often delayed due to the related social, environmental and political problems, and hence growth impulses are largely missing. Foreign direct investors have often been deterred by these uncertainties (frequently changing privatization programmes, annulling of contracts, renationalization of companies etc.). The participation of large EU groups in CEECs' steel companies has largely failed to date. Non-European steel groups have invested in the Slovak company VSŽ Košice (U.S. Steel) and in the Romanian company Sidex (LNM-Ispat).<sup>6</sup> Both companies are now

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<sup>6</sup> *Neue Zürcher Zeitung* (2001), 1/2 September.

relatively successful, efficient and competitive, but these are rather exceptions to the rule.

- The CEECs are pressured to restructure their steel industries in their accession process to the European Union. They are required to present credible restructuring plans and to reduce subsidies. This requires further capacity reductions, questioning the viability of existing companies, and the solving of related social, technical and environmental problems. In addition, the CEECs will have to comply with the EU rules of state aid (see below), which are already important in the pre-accession negotiations in the closing of the competition chapter (this is especially relevant for Poland and the Czech Republic). All this takes place in the backdrop of the expiry of European Coal and Steel Treaty in July 2002 and the recent highly controversial US decision to impose tariffs on imported steel.
  
- Russian metals sector companies have been formally privatized during 1993 to 1994 by the mass privatization (voucher) method, management and employees getting most of the shares while lacking new investment resources.<sup>7</sup> The privatisation was followed by battles for control between various groups of shareholders. Today ownership rights remain unclear and outside investors are generally not welcome.<sup>8</sup> The experience of other transition countries (especially the Czech Republic and Slovakia) has shown that such a privatization (by voucher method) is grossly inefficient and has to be subsequently corrected. In Russia, ownership rights remain frequently unsettled and poorly respected until today.<sup>9</sup> The main related problem of the Russian metals industry is the lack of restructuring, i.e. the missing closure of non-viable inefficient producers and delayed layoffs of redundant employees (see the low Russian productivity mentioned above). This is mainly due to ; still existing soft budgets, implicit government subsidies via barter and the tolerance of payment (including wage and tax) arrears (barter accounts for 80% of domestic steel sales). This in turn creates a not fully transparent business environment and facilitates the milking of formally private companies (asset stripping and capital flight). In addition, very low labour mobility caused by the registration system and housing shortages, makes wages free to adjust downward with again little incentive for active

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<sup>7</sup> *A description and the reasoning behind the Russian mass privatization was provided by Boycko et al. (1995)*

<sup>8</sup> *For the evolution of ownership structure in Russian ferrous metallurgy see Kommersant Vlast', No. 37 (2001), in non-ferrous metallurgy see Kommersant Vlast', No. 40 (2001).*

<sup>9</sup> *More on the property rights and investment climate in Russia see OECD (2001).*

restructuring.<sup>10</sup> Restructuring is further hampered by the existence of “one company towns”. Furthermore, a still relatively cheap energy and poor environmental regulations weaken the pressure on restructuring as well.

- Small and medium-sized enterprises in the 'fabricated metal products' industry seem to have been developing quite dynamically in the more advanced CEECs, but less so in Bulgaria, Romania and also in Russia, possibly due to constraints in investments and delayed or incomplete privatization. In fact, the metal-working industry developed very disappointingly in Russia, its decline (by more than 60% between 1999 and 1990) has been much stronger than metals sector average (see Figure 2).

### **Factors of international competitiveness**

The Russian metals sector seems to have a natural competitive advantage mainly due to existing raw material resources and low wages, hence low unit labour costs (see Figure 3). In the year 1999, nominal wage rates of just EUR 100 per month (gross wages at exchange rates per employee) reached only 24% of the Polish level and hence were even lower than in other low-cost countries like Bulgaria and Romania (33%).<sup>11</sup> However, the wage costs do not play a decisive role in the metals sector – especially if the price and quality competition is fierce.<sup>12</sup> In terms of labour productivity, the Russian metals sector performs relatively better than in Bulgaria and Romania, although proper estimates are difficult. After correcting for the undervalued Rouble exchange rate (this is especially relevant in the year 1999, last figures available for comparisons with Russia) and using the purchasing power parity for conversion of production values instead of current exchange rates, the Russian metals sector labour productivity is about 80% of the Polish level, ranking just behind Slovakia (103% of the Polish level) and Hungary (96%), but before the Czech Republic (75%), and before Bulgaria, Romania and Slovenia (see Figure 3). Combining relative wages and estimated labour productivity, the unit labour costs in the metals sector were lowest in Russia with less than 30% of the Polish level in 1999. In Slovenia, where wages are the highest in the region, unit labour costs reached almost 260% of the Polish level. Presumably, Rouble appreciation since 1999 has eroded a significant part of Russian competitive cost advantage. In real terms, the Rouble has appreciated by about 50% between January 1999 and February 2002 and the unit labour costs increased accordingly.

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<sup>10</sup> *Mc Kinsey Global Institute (1999).*

<sup>11</sup> *Polish wages again are much lower than those in the West European countries. See Hanzl (2002), p. 10.*

<sup>12</sup> *In Russian metals sector, wage costs (including indirect costs) amounted to 14% (steel industry) to 18% (non-ferrous metallurgy) of total costs in 1999.*

### **Trade with the european union**

Metals sector exports from the here studied region take a prominent position on the European market. In the year 2000, CEECs metals sector exports to the EU (15) reached nearly EUR 11 billion, 15% of market share, hence were larger than those from Russia (EUR 8 billion) with a market share of less than 11% (all shares without intra EU-trade). The largest CEEC-exporters to the EU are Poland and the Czech Republic with market shares around 4% each, followed by Hungary with a 2% market share in the EU. All other CEECs held shares around 1%. Between 1995 and 2000, metals sector exports from Russia grew less (+37%) than those from the CEECs (+52%). As a consequence, the Russian market share in the EU declined from 12% in 1995 to 11% in 2000, while the CEECs share remained roughly constant during this period at about 15%. Russian market shares, during that same period, have fluctuated partly because of fluctuating world commodity prices and presumably also due to the effects of the August 1998 financial crisis (see Table 2).

In total manufacturing exports to the EU, the metals sector is of major importance – especially in Russia. However, it belongs to important exporting segments in several CEECs (mostly the less advanced) as well. In the CEECs, it accounted for 6% (Hungary) to 32% (Bulgaria) of all manufacturing industry exports to the EU in the year 2000 (Table 5). However, in Russia, the metals sector exports take an especially large share - 42% of all manufacturing exports to the EU in the year 2000 – as a consequence of an export structure which is still dominated by resource-intensive branches such as basic metals, coke, refined petroleum products & nuclear fuels (the latter account altogether for 75% of Russian manufacturing exports to the EU – see Table 5). In the CEECs, where the export composition is much more diversified, the metals sector accounts for much smaller export shares. Hence, it was the largest exporting branch in Bulgaria and ranked second in Romania (behind the textiles & textile products sector). In Poland and Slovenia, metals exports are also relatively important (second after the transport equipment sector), whereas the latter is nearly lacking in Russian exports.

Finally, a detailed comparison of CEECs and Russian export gains and losses in the EU during the period 1995-2000 is telling. Refraining only to metals industry, Russian export gains were impressive in precious and non-ferrous metals (market share in the EU reached 14.8% in 2000), in basic iron and steel (15.9% market share) and in coke oven products (6.9%). This compares with an overall Russian share in EU manufacturing industry imports of just 2.4% (Table 6). Russian basic metals market shares in the EU grew on average faster than its total manufacturing exports to the EU. Russia thus experienced market share gains in basic metals exports (on the whole, with

a growth by just 9.6% per year, the Russian manufacturing industry exports performance was not very impressive). In contrast, the CEECs' manufacturing exports expanded by nearly 18% per year during the same period (twice as fast as Russia's). Their market share in the EU reached nearly 12% in the year 2000 while the metals sector – especially the basic metals – played a secondary role in this exports growth (Table 7). The main drivers of CEECs' exports to the EU are motor vehicles (including parts), TV, radio and recording apparatus, office machinery and other electrical equipment. These exports are fostered by substantial FDI inflows from leading world multinational companies like Volkswagen, Ford/Opel, Siemens, Nokia, Sony, Matsushita, General Electric, etc. who located their export production plants in the CEEC region.

Basic precious and non-ferrous metals industries, fabricated metal products and structural metal products gained in the CEECs' exports to the EU as well (especially structural metal products with an exceptionally high market share in the EU (nearly 60%), but with not a decisive importance for overall export performance. In fact, basic iron and steel is among the CEECs' losing industries (though it still holds a more than 25% market share in the EU – as compared with 16% yet dynamically increasing market share of Russia - see Tables 6 and 7).

At this more detailed level other additional characteristic features of the metals sector can be identified:

- Russian exports to the EU are dominated by “basic metals”, above all precious and non-ferrous metals, which accounted for 99% of all metals sector exports to the EU in the year 2000. In the CEECs, the respective share of basic metals ranged between 60% (Hungary) and 95% (Bulgaria), except in the Czech Republic (44%), where exports of “fabricated metal products” were more important in the sectoral export structure (see Table 3a).
- In Russia, (basic) metals exports are concentrated on “basic precious and non-ferrous metals” with 73% of total metals exports to the EU, followed by “basic iron and steel, ferro-alloys (ECSC)” with a share close to 21% (Table 3a).<sup>13</sup> In the CEECs, exports from these two sub-branches are also important, but “fabricated metal products” play a crucial role – especially in the more advanced CEECs. The latter are nearly non-existent in Russian exports to the EU whereas the precious and non-ferrous metals exports from Russia dominate.

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<sup>13</sup> *On the four-digit classification level, the most important Russian export products to the EU were : aluminium and aluminium products, copper products, other non-ferrous metal products, basic iron and steel and ferro-alloys, and precious metals. See Soos et al (2002).*

- Import structure is more balanced: both CEECs and Russia split their metals imports from the EU nearly equally between basic metals and fabricated metal products (Table 3b).
  
- Between 1995 and 2000, “basic metals” exports to the EU grew more dynamic in Russia than in the CEECs, whereas “fabricated metal products” exports grew faster in the CEECs. Looking more in detail at the gaining and losing industries in exports to the EU during this period, “basic precious and non-ferrous metals, as well as iron and steel, ferro alloys” were among the main gaining export industries in Russia, but in fact basic iron and steel were among the largest losers in the CEECs (except in Slovenia – see Tables 6 and 7).<sup>14</sup> At the same time, “basic precious and non-ferrous metals” was a major winner in both Russia and the CEECs (except in Poland). In addition, “cutlery, tools and general hardware” and “other fabricated metal products” exports from the CEECs experienced a competitive gain also (the latter industry also in Russia).
  
- There is thus no evidence that the EU would specifically discriminate against basic metals imports from Russia. On the contrary, Russian basic iron and steel exporters were more successful than those from the CEECs : Russian iron and steel exports to the EU grew faster (7.8% per year versus 2.5% per year in CEECs) and Russia recorded a significant competitive gain in this product group (EUR 124 million) whereas, at the same time, the CEECs incurred a competitive loss (nearly EUR 500 million). Nevertheless, CEECs’ market share in EU’s basic iron and steel (25.6% in 2000) is still higher than that of Russia (15.9%) – see Tables 6 and 7.
  
- Interestingly enough, the price and hence the associated quality of Russian “basic metals” exports to the EU is better than in CEECs’ exports, and it is even better than average EU imports of this industry in 2000 (see Table 4). These gaps are estimated by the price/quality gap indicator, which shows the difference between CEECs and Russian average export price compared to the average EU import price of a particular product. A positive value of this indicator suggests that these exports are more expensive, and thus presumably have a better quality, than average EU imports. A negative figure suggests that the exported products are cheaper, and therefore presumably have a lower quality. In the year 2000, the price/quality gap indicator was slightly negative for CEECs’ “basic metals” exports, but slightly

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<sup>14</sup> Measured by a “shift and share analysis” of developments in market shares during 1995-2000. A competitive gain (loss) is defined as an increase (decline) of market share, weighed by the volume of industry exports in the base period (1995). See Havlik et al. (2001).

positive for Russian ones. At the same time, the price/quality gap was very large and negative for “fabricated metal products” exports from the CEECs, and even more so for those from Russia, for which the price/quality gap indicator was in fact the largest (-41%, see Table 4). Between 1997 and 2000, prices (and hence presumably also quality) of all basic metals exports from both CEECs and Russia improved. However, in Russian “fabricated metal products” exports the huge negative price/quality gap remained unchanged (Table 4).

### **Metals sector and the eu “ACQUIS COMMUNAUTAIRE”**

Basic metals and fabricated metal products belong to the industrial sectors which are the most affected by EU’s “acquis communautaire”, especially regarding the costly requirements from the environmental *acquis*, the occupational health and safety requirements and the single market legislation. The full compliance with *acquis* requires additional investments, a change of production processes, and changes in working conditions frequently leading to increased indirect costs. Nevertheless, investments made by the CEE candidate countries to comply with the *acquis* will lead to improved competitiveness for many enterprises - in the medium and long term - as regulations will be simplified and the doors to the European Single Market will open. On an aggregate level, the CEECs’ industry should benefit from the introduction of common standards. Products will only be subject to one conformity assessment procedure even when they are exported, as opposed to actual different procedures existing for national and international markets. This will, in many cases reduce production and transaction costs considerably. Positive effects associated with the introduction of the single market already observed in the EU will become visible in the CEE candidate countries as well.

Reviewing industry information, it has been estimated that only a minor part of metals sector (8-9% of goods produced) in CEE candidate countries is affected by the Single Market legislation.<sup>15</sup> However, the compliance with EU’s Integrated Pollution Prevention and Control (IPPC) directive would require, for example in Poland, pollution control investments amounting to at least 20% of total investments in non-ferrous smelters and metal plating plants, and at least 10% of new investments in iron and steel plants.

The main part of the *acquis* that relates to labour markets is made up of the European Social Charter, which sets out minimum standards in areas of the institutional bargaining system, social welfare, migrant workers’ rights, conditions of work,

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<sup>15</sup>For a more detailed analysis related to CEE candidate countries see Havlik et al. (2001). Downloadable at [http://europa.eu.int/comm/enterprise/enterprise\\_policy/enlargement/doc/composite\\_paper.pdf](http://europa.eu.int/comm/enterprise/enterprise_policy/enlargement/doc/composite_paper.pdf).

severance protection, protection of workers' claims in the case of bankruptcy, and right of workers' representatives. The candidate countries have some choice about how far above the minima they pitch their labour market policies. In this regard, several studies have critically investigated the potential impact of a rigorous adoption of the Social Charter on flexibility.<sup>16</sup> In particular, it has been emphasized that in a context where candidate countries continue to require significant adjustment, labour market policies should rather be defined in the context of what the candidate countries need to and can realistically accomplish. Moreover, the enforcement of EU-style regulation of labour markets may have adverse consequences on the formation of new firms and industries, and therefore on competitiveness. High start-up costs may lead to fewer new firms than would otherwise exist. What more, such a slower business formation, due to excessive costs of hiring, employing, and firing labour, may inhibit the transition towards a private-sector-based economy and may ultimately slowdown the process catching up of CEECs' income levels with those in the EU.

When comparing the enterprise structure of an industry to its FDI/production share, it is generally found that industries dominated by large enterprises receive a higher share of FDI than their contribution to the manufacturing sector's output.<sup>17</sup> FDI enterprises have, in general, more resources and know how for complying with *acquis*' requirements. For the metals sector the inverse applies (it attracted less FDI) and the sector is thus less prepared for the *acquis* takeover. Metals sector in most CEE candidate countries (as well as in Russia) faces environmental problems. The metals sector is characterized by great structural difficulties as well as excess capacity with little foreign investing interest.

In addition to the environmental problems, the sector also faces future difficulties with the EU's rules on state aid. The rules covering state aid constitute one of four components in the competition *acquis*,<sup>18</sup> and are perhaps the most difficult for the CEE candidate countries to comply with – particularly in those sectors of the economy where privatization has not been completed (such as metals sector), but also because of investment incentives granted to foreign investors which may breach the EU competition rules. Furthermore, although fiscal restrictions limits the governments' ability to intervene in the market, the metals sector still benefits from levels of assistance higher than the conformity rate practices by the EU. It is estimated that state

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<sup>16</sup> IMF (2000b).

<sup>17</sup> Hunya (2003) provides an analysis of effects of FDI on manufacturing by industry and enterprise size.

<sup>18</sup> The other three areas are : rules against abusive company behaviour (due to market dominant position) ; limitations to merger and acquisition activity in order to avoid abuse of dominant market position ; and monitoring of state monopolies of a commercial character, public undertakings and undertakings with special and exclusive rights.

aid paid by candidate countries varies from 0.5% of GDP to 4.3%, excluding deferrals of tax payments offered by some candidate governments. This compares with an average 1.2% of GDP in the EU.<sup>19</sup> Hence, a reduction of state subsidies might threaten indebted companies with bankruptcy.

For example, in Poland, the restructuring programme of the steel and iron industries together were estimated at PLN 12 billion over the period 1998-2002 (about 0.5% of GDP on an annual basis), which includes PLN 8.4 billion for investment, PLN 2.5 billion for recapitalization of steel companies, PLN 0.8 billion for severance payments, and PLN 0.3 billion for environmental protection.<sup>20</sup> The levels of government subsidies, either through capital injections, arrears to the budget or government guarantees, are unlikely to be in conformity with EU state aid legislation. However, it should be kept in mind that the steel industry is subject to sector-specific state aid rules in the EU as well.

### **Overview and policy conclusions**

The key economic indicators for the metals sector in the studied region are summarized in Table 8. The metals sector still plays an important role in both CEECs and in Russia – despite a substantial downsizing that had occurred during the transition to a market economy, when redundant production capacities inherited from the previous system had to be scaled down. The process of privatization and restructuring is not yet completed – especially in Russia where ownership rights remain unclear and difficult to enforce – and the sectoral productivity and overall efficiency is very low (we find productivity growing relatively fast only in Hungary and Poland). The sector did not attract much FDI (except for Slovakia), its exports are strongly oriented on the EU and is – especially for Russia – relatively important for exports (and the trade balance). The existing revealed comparative advantage in basic metals (relative to the rest of manufacturing industry) has been gradually eroding. Russia attained very high market share in the EU (nearly 11%), with higher export prices in basic metals than other competitors on the EU market, but the Russian price/quality gap in fabricated metal products is huge. Russian (and Bulgarian) trade in basic metals has recorded growing trade surpluses with the EU in the second half of 1990s and the sector is therefore competitive. There is no evidence that the EU would discriminate against Russian metals producers: basic metals exporters gained market shares in the EU and reduced their export price gaps since 1995. At the same time, Russian exports of fabricated metal products stay in low quality/price segments which suggests the necessity of more active restructuring and quality upgrading.

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<sup>19</sup> *Financial Times*, 20-21 January 2001.

<sup>20</sup> *IMF (2000a)*.

More efforts (and investments, including FDI) will be needed to increase the efficiency of metals producers in the region and to upgrade the production structure towards higher value added goods. In Russia, basic metals (both ferrous and non-ferrous) are dominating whereas fabricated metal products prevail in CEECs (especially more advanced). The takeover of EU's "*acquis communautaire*" would entail substantial additional investments, but would bring benefits in medium- and long-term. Simultaneously, a diversification of Russian manufacturing industry structure (reducing of the present excessive reliance on basic metals and fuels) is urgently needed.

ANNEX

**Table A.1.**  
**The major steel-producing countries, 1999 and 2000**  
**Crude steel production in million metric tonnes**

	2000		1999	
	RANK	TONNAGE	RANK	TONNAGE
European Union		163,2		155,5
Mainland				
China	1	127,2	1	124
Japan	2	106,4	3	94,2
United States	3	101,5	2	97,4
Russia	4	59,1	4	51,5
FR Germany	5	46,4	5	42,1
Republic of				
Korea	6	43,1	6	41
Ukraine	7	31,4	7	27,5
Brazil	8	27,9	8	25
India	9	26,9	10	24,3
Italy	10	26,7	9	24,7
Poland	19	10,5	19	8,8
Czech				
Republic	23	6,2	24	5,6

Romania	27	4,8	27	4,4
Slovakia	32	3,7	31	3,6
Hungary	.	1,9	.	1,8
Slovenia	.	0,4	.	0,5

Source: International Iron and Steel Institute Internet Homepage  
www.worldsteel.org.

**Table A.2.**  
**Largest steel-producers in the CEEC region and Russia, 1999 and 2000**

2000		1999		Name
Rank	Mn. ton.	Rank	Mn. ton.	
15	10	18	8,9	Magnitogorsk (RU)
18	9,6	17	9	Severstal (RU)
21	8,2	23	7,5	Novolipetsk (RU)
35	5,3	38	4,7	Zapsib (RU)
39	4,9	43	4	Nizhny Tagil (RU)
45	4,4	48	3,7	Huta Katowice (PL)
56	3,7	68	2,9	Chelyabinsk (Mechel)

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				(RU)
59	3,6	69	2,8	Kuznetzk (RU)
61	3,4	60	3,2	Sidex (RO)
67	3,1	70	2,7	Orsko-Khalilovsky (Nosta) (RU)
80	2,5	80	2,4	Nová Hut Kuncice (CZ)

Source: International Iron and Steel Institute Internet Homepage  
www.worldsteel.org.

**Table A.3.**

**Crude steel production by process and product, 2000**

	Production million metric tonnes	Production by process in percentage of total			Production by product in percentage of total	
		OH	BOF	EAF	Total	Continuous casting
Czech Republic	6,2	0,6	91,0	8,4	100,0	87,1
Hungary	1,9	.	87,5	12,5	100,0	100,0
Poland	10,5	3,8	64,8	31,4	100,0	72,4
Romania	4,8	.	72,2	27,8	100,0	65,3
Slovak Republic	3,7	.	92,3	7,7	100,0	99,3
Russia	59,1	27,4	58,1	14,6	100,0	49,7
Ukraine	31,4	50,0	46,9	3,1	100,0	19,6

<b>European Union(15)</b>	<b>163,2</b>	<b>.</b>	<b>60,3</b>	<b>39,7</b>	<b>100,0</b>	<b>96,3</b>
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Notes: OH = open hearth furnace, BOF = basic oxygen furnace, EAF = electric arc furnace.

Source: International Iron and Steel Institute Internet-Homepage [www.worldsteel.org](http://www.worldsteel.org).

Poland: The Metallurgical Chamber of Industry and Commerce [www.hiph.com.pl](http://www.hiph.com.pl).

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