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Revisiting the Competitiveness of Romanian Manufacturing Industry

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Abstract. Since the early 1990s the Romanian manufacturing industry has improved in many ways. This headway concerns the labour-intensive sector rather than the technology-intensive one. Apart from local entrepreneurship, foreign direct investments (FDI) have been instrumental in enhancing industrial competitiveness. The Lisbon Agenda revival and Romania's EU accession will be further inducements for Western businesses to shift production here to fight back both low-cost producers (typically from emerging Asia) and more quality-oriented producers (typically from OECD countries). Hopefully, the FDI spillover effects will send positive vibrations across the economy, and tone down the asymmetry at the core of the manufacturing industry.

Keywords: competitiveness, manufacturing industries, FDI spillovers

1. The Lisbon Agenda and its Implications for Romania

The European Union (EU) has long harboured under the specter of falling competitiveness in the world economy (Tsoukalis, 2003). Back in 2000 EU policy-makers embarked upon an ambitious, yet unsubstantiated endeavour to build "the most competitive knowledge-intensive economy" in a decade (www.euractiv.com). Five years later the Spring European Council (March 2005) revised the Lisbon Strategy downwards and postulated "a partnership for economic growth and jobs" counting on member states' genuine involvement via national action plans and appointments of national representatives on this front (a Mr. or Ms. Lisbon).

Indeed, recent statistics support the view that the EU *as a whole* is not faring so well although no less than six member countries (Denmark, Sweden, Germany, Finland, the United Kingdom, and the Netherlands) populate the top-10 of the *2007-2008 Global Competitiveness Index* computed by the World Economic Forum in Davos. The EU-25 economic growth rate is half the world average (estimated at about 4 % in 2005), while the two Asian champions (China and India) are racing at more than double this average, and the US economy is humming along at that same average (Lancelot et al., 2006). Specialized indicators suggest that the EU-25 is doing even worse in point of the knowledge economy as they score well below the OECD average in terms of research and development (R&D) intensity. Further, the other two triad poles by far surpass the EU in the overall share of ICT (information and communication technologies) in GDP, the GDP percentage dedicated to venture capital and the share of private investment in R&D. Specialized human resources (students enrolled in tertiary education as well as researchers and scientists) and the average number of patents per 1,000 inhabitants rank higher in the US than in the EU (Amable, 2006).

After the fall of the Iron Curtain countries in Central and Eastern Europe (CEE) have altered both their industrial structure and the geographical orientation of their international trade. To

be more precise, they mostly abandoned heavy industry, the spearhead of the now defunct Soviet model, and moved into low value-added industries (mining and labour-intensive manufacturing industries, such as textiles and garments) and directed more than half of their exports toward the European Economic Community (EEC) (Bal, 2006). Since the mid 1990s foreign direct investments (FDI) from the EU multinational companies (MNC) have helped upgrade these economies' international specialization, particularly in Poland and Hungary, with more countries to join the club later on.

Romania became an attractive destination for FDI in the manufacturing industry thanks to its business-friendly trade and investment regimes, highly qualified, yet fairly cheap human resources, its geostrategic positioning in-between Western Europe and the Middle East and, last but not least, its recent EU membership, and subsequent inclusion into the Single Market.

Since high wages in the EU have been uplifting cost structures, the incentive to tap into labour inputs from developing nations is quite understandable. Actually, EU businesses are just one step in their further trajectory eastwards. For instance, some of the apparel industry in such high-cost locations like Italy and France has first moved to Romania, then Turkey, and ultimately, China and Vietnam, as eager producers are chasing the "lowest-priced needle" (de Jonquières, 2004, *The Economist*, 23 February 2006. On the other hand, as employees are headed towards Western locations to maximize their salaries, these intermediate markets (in the CEE) may face a shortage of workforce, hence the need for "imports" from low-cost locations. With Romanians leaving for more sunny destinations (Italy and Spain), the Romanian authorities are thinking about fetching Chinese workers to fill this void.

Speaking about Romania's mining and manufacturing industries, they both followed an upward trend in between 1990-2004 in value terms at constant prices. The former was downsized by more than half in order to cut heavy losses (some coal mines in Valea Jiului were closed down). A break-down of the Romanian manufacturing industry between 1994-2004 shows that the food and beverage industry accounts for the lion's share (60% of the total), with metallurgy (12%), metallic constructions and products (3-4%), textile products (about 3 %), and others (about 18%) completing the picture. Hence, Romania's manufacturing structure is more related with the Common Agricultural Policy (CAP) rather than with the new economy. Ironically enough, this plays out in Romania's favour: supposedly, it will find it easier to bridge the knowledge-geared gap given the *statu quo* in the EU: CAP, the old Community "relic" still took up more than 45% of the EU budget in 2004 as opposed to a slim 3% for R&D (Drăgan, 2005). However, the EU is moving away from its CAP focus as it contemplates building a competitive edge over its international competitors, and is "lisbonising" both its trade and cohesion policies to this effect (www.euractiv.com).

2. Industrial Competitiveness - a Tentative Definition

To begin with, competitiveness cannot be conceived of in a vacuum, rather it is an outgrowth of the interactions among the players operating in a certain market. Once artificial barriers to market entry are removed (typically, restrictions on foreign trade and investments), supply-side parameters come into play. Therefore, competitiveness may be analyzed along two dimensions: costs and quality. By and large, corporate strategy studies have pointed to three main vistas whereby a company can secure a competitive advantage, namely: differentiation, cost cutting, and focus (in Michael Porter's parlance). In today's global economy, ever increasing competitive pressure turns knowledge and/or costs into basic ingredients of industrial competitiveness.

Competitiveness involves benchmarking and may be gauged in terms of a business's capability to gain market share, especially in the international arena, as well as via its export performance as captured by its profitability.

Going back to the three aforementioned ways to acquire a competitive advantage, empirical evidence has shown that strategy mixes are commonplace. For instance, supplying a good quality-price ratio has been at the root of Japan's economic success story, which has ultimately outraged the Western world, and prompted them to wield both trade and exchange rate policy-related weapons (Gilpin, 2000) at the "culprit" to contain the invasion of low-cost products. At the time this country's exports claimed a 22 % share of the American market (Rumbaugh and Blancher, 2004). This neomercantilist development model has been taken over by a handful of East Asian countries (the new industrialized economies, the new dragons, and China), albeit their economic takeoff occurred at different points in time, and did not reach the scope of their master's sophistication. As Japan refined its industrial structure and moved out of less evolved industries, its dutiful disciples picked them up, and strove to capitalize upon their large pool of cheap relatively skilled labour, undervalued currencies and low cost of capital (due to high household savings and intermediation). FDI has been a major ingredient in the East Asian Miracle, and, looking at the bright side, it seems to be a competitiveness engine (in point of cost-saving and quality improvement) vehicle for ex-Communist countries, too.

3. Long-Term Average Costs and Industry Structure

The world economy is slowing down at present, with energy prices on the rise and the US dollar weakening (see Appendix 1). Over the past five years oil prices have exhibited an average growth rate of 9 %, and outstripped the real interest rate, which makes perfect sense in the case of non-renewable resources[1]. The quick pace of technological change entails a shift towards *oligopoly* market structures where a small number of players typically resort to collusive behaviour, especially in point of price setting at high levels and market splitting (Gilpin, 2000). This holds true for such high-tech industries as ICT, the aerospace industry, biotechnologies, chemical products, etc. In this case, long-run average costs tend to take a U-shaped form lopsided to the right (Shy, 1995), meaning that it will prove unprofitable for one single firm to serve the market beyond the minimum point Q*, i.e. the minimum efficiency scale.

However, certain scholars claim that the knowledge economy can yield increasing returns to scale (Bal, 2006) and thus legitimate *natural monopolies*. In this case, average costs over the long term decline, and one company alone may take control of the whole market. Microsoft seemed an adequate illustration of this case, nonetheless, anti-trust legislation in both the US and the EU has opposed this move. Pure and perfect competition will emerge as a natural choice if the long-run average cost curve is U-shaped or horizontal: in the former case, this means that numerous small companies will be more effective in serving the market up to the Q* point provided their production amounts to just a small share of the total industry output, whereas in the latter case, big and small companies alike will incur constant average unit costs in doing so (Shy, 1995).

4. Mapping out Romania's Champion Manufacturing Industries

According to a major study (Voiculescu and Mereuță, 1998), electrical and mechanical products (products made of metal; machinery and transport materials; scientific, medical, optical, measurement and control equipment; sound recording and reproducing devices)

[1] The relationship in question is $P_t = P_0 * e^{it}$, where i is the real interest rate and t stands for time.

claimed the highest share in Romania's manufacturing output and exports in the 1980s. Insofar as changes in market share in industrialized countries' imports accurately reflect comparative advantage, Romania was highly specialized in the following product groups in the early 1980s: agricultural equipment, railways vehicles, and household electrical appliances. Another stronghold of Romanian manufacturing industry concerned such commodity groups like apparel, textiles, footwear, leather and furniture articles. Over the same time span a top of Romania's most competitive manufacturing industries accounting for over 0.5% of advanced countries' total imports included the following items: furniture, fertilizers, garments, shoes, leather shoes and articles, steel products, agricultural equipment.

In 1993 Romania's top exports in excess of 1 % of the international market featured products as diverse as manufactured fertilizers, cast iron and steel profiles, railways vehicles, leather manufactures, steam engines, furniture and miscellaneous furniture articles, vegetable fats. In the late 1990s, the most high-performing components of manufacturing industry according to another indicator (i.e. profitability) corresponded to the following CANE divisions (see Appendices 2 and 3): 18, 33, 31, 32, 25, 19, 26, 20, 36, 30, and 28. A remarkably complex study by Professor Ovidiu Nicolescu (2007) enlarged upon Cezar Mereuță's (2003) analysis model to pinpoint the Romanian manufacturing industry's competitive branches. Six assessment criteria were used to this effect the corresponding values thereof (over the 1998-2004 time span) are compared to the overall manufacturing industry's averages. Thus, the treatment of competitiveness is twofold: both a static and a dynamic approach are used. In this last case, industries pertaining to the following CAEN divisions are placed in a favourable position: 18, 19, 26, 27, 31, and 36. In a strictly dynamic approach the industries that fall under the scope of the 24 and 35 divisions are also well positioned.

If the Revealed Comparative Advantage (RCA) indicator is used over the 1990–2006 period to analyze the export performance of various manufacturing industry components, several product groups score well throughout, namely: the wooden products group (IX), the textiles group (XI), the footwear group (XII), the metals group (XV)[2] , the miscellaneous group, and especially the furniture group (XX) score high on the comparative advantage front. As far as the other groups are concerned, this indicator is placed on a downward trend, and even scores negative values. Likewise, the footwear group (XII) exhibits an upward positive comparative advantage due to cheap qualified labour: foreign investors capitalized upon this by introducing high-performing production lines. And yet, market changes may induce them to shift their plants and corresponding technologies elsewhere. The metals group (XV) also features comparative advantages, poised on a descending trend, though.

Generally speaking, comparative advantages mostly occur in labour-intensive groups, while the technology–intensive group (XVI) is fraught with comparative disadvantages. This asymmetry notwithstanding, it is undeniable that the manufacturing industry has made huge strides over the past two decades: its performance is encapsulated in a surge in exports, FDI and, hence, in *relative* overall competitiveness.

Concluding Remarks

Especially in the wake of Romania's joining the EU, foreign businesses in search of cheap production locations and sales avenues can play a critical role in the transfer of technology and management practices and send positive vibrations across the manufacturing industries by upgrading the quality of human resources and local suppliers. Up until now some of these spillover effects of FDI have been actualized, and complemented local efforts to boost competitiveness. And yet, Romanian companies have a long way to cover in point of refining

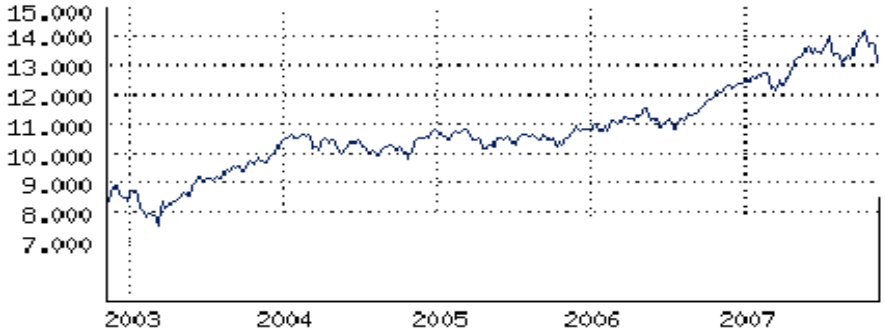
[2] Except for last year (2006), when it scored negative.

production technologies, employees' skills, and management techniques. Motivating highly qualified staff may ultimately fashion out a competitive advantage if they can be a vehicle for Western-style effectiveness.

Appendix 1:

Trends in stock market prices for gold (A), the Dow Jones Index (B), oil (C) and the US dollar (D) between 10.11.2002 – 9.11.2007

A. *Gold prices* (US$/ounce)
maximum level 841.10
minimum level 320.10



B. Dow Jones Index
maximum level 14164.53
minimum level 7524.06

C. Oil price (US $/barrel)
maximum level 95.03
minimum level 22.56

D. US$/€ exchange rate
maximum level 1.676
minimum level 0,.904

Source: Spiegel online, 11.11.2007

Appendix 2: CANE Divisions

Activities	CANE Divisions
"Food and beverages"	15
"Tobacco products"	16
"Textile products"	17
"Clothing products"	18
"Leather goods and footwear"	19
"Wood and wooden products processing (excluding furniture)"	20
"Pulp, paper and cardboard"	21
"Publishing houses, polygraphy, recording and copying"	22
"Petroleum processing, coal coking and treatment of nuclear fuels"	23
"Chemical substances and products"	24
"Rubber products and plastics products"	25
"Construction materials manufacturing and other products of non metallic minerals"	26
"Metallurgy"	27
"Metallic construction and metal products"	28
"Machinery and equipment (excluding electrical and optical equipments)"	29
"Computers"	30
"Electric machinery and apparatus"	31
"Radio, TV and communication equipment apparatus"	32
"Medical, precision, optical and watchmaking instruments and "apparatus"	33
"Means and road transport"	34
"Means of transport not included at road transport"	35
"Furniture and other industrial activities non – classified elsewhere"	36

Appendix 3

SECTIONS OF THE COMBINED NOMENCLATURE (C.N.)	***C.N.CODE***
Live animals and animal products	I
Vegetable products	II
Animal or vegetable fats and oils	III
Prepared foodstuffs, beverages and tobacco	IV
Mineral products	V
Chemical products	VI
Plastics, rubber and articles thereof	VII
Raw hides and skins, leather, furskins and articles thereof	VIII
Wood and articles of wood, excluding furniture	IX
Pulp of wood, paper, paperboard and articles thereof	X
Textiles and textile articles	XI
Footwear, headgear, umbrellas and similar articles	XII
Articles of stone, plaster, cement, ceramic, glass and similar materials	XIII
Base metals and articles of base metal	XV
Machinery and mechanical appliances; electrical equipment; sound and image recorders and reproducers	XVI
Vehicles and associated transport equipment	XVII
Optical, photographic, cinematographic, medical or surgical instruments and apparatus and similar; clocks and watches; musical Instruments; parts and accessories thereof	XVIII
Miscellaneous manufactured articles	XX
Goods non-included in Combined Nomenclature other sections	XXII

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