AUTOINDUSTRY IN CEE COUNTRIES – REALITY AND THE FUTURE

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Abstract
Some producers after Year 2000 increase their product efficiency a) by reducing the number of platforms (and in the new plant then apply the new platform), b) some are investing in new plants for designing vehicles more suited to “car functionality” of CEE countries inhabitant taste. Others c) are trying to move into higher value segments, however they will have to work on significant productivity improvements. The increased of the automotive industry competition in the Central European Countries (CEE) is coming from West Europe since 1995. Automotive industry was key attraction in Foreign Direct Investment (FDI) for Central and Eastern Europe last decade and substantial development of mobility in road transport is expected.

Keywords: Mobility, Central Europe, Suppliers, Economy, Car density

1. Introduction
CEFTA Countries - the Central European Countries – Czech and Slovak Republics, Hungary and Poland, Slovenia and Romania can more competitively satisfy the needs of automotive industry – final producer and supplier companies - than any other regions in the world. Given the world-class supply base, high intellectual capital and ability is demanded to achieve European (global) levels of productivity. Last ten years the automotive sector is the biggest success of the Czech and Slovak economic transition. And it brings to countries very effectively working companies. The Czech Republic now hosts the first and the Slovak Republic the third large volume car producer in Central and Eastern Europe, more than 200 high quality supplier companies; from 1997 to 2001 production in the sector increased over 100 % of revenue. Potential of CR and SR is for next 100% of increase in output and over 20% in human resources for automotive and related production. New activities of final producers in the CR – project TPCA – Toyota, Peugeot and Citroen and in the SR - project PSA – Peugeot, Citroen, for 2 x 300 000 units per year could bring new module and systems integrators for them.

1.1 The present state
Present distribution in car industry [L8] according to passenger and light trucks production – trend of last 7 years:
- from 75 to 67,5 % in so called "high-tech" countries (with stress on creation and development of new products)
- from 25 to 32,5 % in "newcomer" countries (assembly, production, national car, detail design)
Transport of the people and goods is a factor of the economic movement. The individual auto - mobility can be expressed as follows: at the average number of ~ 100 passenger cars per 1000 inhabitants in the world, the car density in individual TRIAD zones is according Tab. 1, [L8]:

**Table 1: Parameters of car density according to individual territories – 1990 – 2000 – 2010**

<table>
<thead>
<tr>
<th>TERRITORY</th>
<th>No. of inh. [mil]</th>
<th>Car density [PsC’s/1000 inh.]</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAFTA</td>
<td>~ 380</td>
<td>400 ... 400</td>
</tr>
<tr>
<td>EU</td>
<td>~ 380</td>
<td>431 ... 465</td>
</tr>
<tr>
<td>JAP+KOR</td>
<td>~ 170</td>
<td>217 ... 347</td>
</tr>
<tr>
<td>C.-E. EUROPE</td>
<td>~ 175</td>
<td>120 ... 170</td>
</tr>
<tr>
<td>Russia</td>
<td>~ 148</td>
<td>46 ... 135</td>
</tr>
<tr>
<td>CEFTA</td>
<td>~89,0</td>
<td>163 ... 232</td>
</tr>
<tr>
<td>SLO</td>
<td>~2,0</td>
<td>333 ... 410</td>
</tr>
<tr>
<td>CZ</td>
<td>~10,3</td>
<td>260 ... 365</td>
</tr>
<tr>
<td>PL</td>
<td>~38,6</td>
<td>176 ... 236</td>
</tr>
<tr>
<td>H</td>
<td>~10,0</td>
<td>172 ... 235</td>
</tr>
<tr>
<td>SR</td>
<td>~ 5,4</td>
<td>196 ... 236</td>
</tr>
<tr>
<td>ROM</td>
<td>~22,7</td>
<td>72 ... 128</td>
</tr>
</tbody>
</table>

1.2  ... and Central Europe Region

In contradiction to the advanced nations situation (and then possible spreading to other parts of the world - also to C. Europe), before 90’s but also now in C. and E. Europe countries

- average age of car fleet is high,
- infrastructure for transport and services be behind the times,
- state support is small
- external price of auto mobility is high,
- vehicles recycling was not between priorities as it is today ...

Today’s economy and car density comparison between V4 countries (CZ, H, PL, SK) and EU can be seen in Fig. 2. ... And chance for change is possible also over production expansion.

2. Production

It is the Central and Eastern Europe that satisfy for automotive industry the today’s criteria:
a) CEEC "suck" the necessary stage of technology (for production),
b) pay for the final product (solvent population is increased),
c) developed the level of the car industry (qualified human resources) and
d) increase of the profit and productivity (lean production plants, labour, material and energy resources) nearly in full scale and fast [L2], [L7], [L9].

![Exhibit 2: Car density and GDPppp/cap. –comparison 2002-country V4 and EU](https://example.com/exhibit2)

[Source: OECD, Author]

For next years are conditions for a) big revitalisation of today’s industries, b) creation of new connections West - Central Europe, c) increase of number of supplier companies (module and system integrator by technology parks), d) building of infrastructure, e) evolution of economy truth reciprocity, f) increase of inhabitants solvency, g) decrease of differences between V4 and EU countries bring next increase in production of cars. New motivation come after 2004 – year of the next increase of EU... Situation and trends by CEFTA countries production we can see in the Fig. 3.
3. **Final producer and suppliers**

The automotive industry is global and monumental creation. The final manufacturer retains only the essential activities related to car design and production – welding hall, painting shop and assembly line, and build connection to customer and services. While the suppliers (precisely divided into individual groups and subgroups) take over new functions – module design, production and assembly by module integrator and R&D, design, assembly and production by system integrator. Higher productivity of groups and alliances is realised over new production system and new lean plants. For CEEC suppliers is this way for stabilisation of labour over new projects and preferences – high level of labour, industry production tradition and infrastructure for logistic.

4. **Effects**

The production of car in any country can be evaluated from several points of view. From the relative numbers (per 1000 inhabitant), from point of economy progress, from point of company or brand number. Trends by production in this decade you can see in [Exhibit 4](#).

5. **Conclusion**

Slovakia is in the way to increase of production and assembled cars over 600 000 per year in VW Bratislava and planned PSA project in Trnava. Last 10 years in the Slovakia was increase in component production and preparation of mass production of components for automobile industry. Big changes in surrounding countries (mainly Czech Republic, Poland and Hungary) stimulate revitalisation of our machinery industry. To the whole CEE part of continent a much larger co-operation with a higher number of giants in automotive industry is expected in this decade by means of the built up large suppliers network.
6. References


