

## AUTOMOTIVE GLOCALISATION AND SECTOR SUCCES IN THE CEE COUNTRIES

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### **Abstract**

*There has been a long way since the reestablishment of the country's industrial network up to flourishing of the automotive industry situated in the heart of world class developments. Central and Eastern Europe (CEE) Countries from some point of new investments can reach more than newcomer countries in the other parts of the world. Basically:*

- *evolution in the living level,*
- *increase in the continental role,*
- *big increase in the sophisticated production without negative environmental influence,*
- *work proposal for talent young generation,*
- *important share in the division of labour.*

*The paper is a short analysis concentrating on decision, trends, results and possibilities from CEE countries to be preparing for continental divide of labour in automotive industry. Labour force share by occupation – average world, EU 15 and Central Europe – selection. GDP<sub>PPP</sub> – gross domestic product in purchasing power parity, the trend of Slovak industrial production, system and module supplies from Slovak area for CE “sitting” places of OEM are presented in the paper.*

**Keywords:** *automotive production, Central Europe, strategy, transition process*

### **1.0 INTRODUCTION**

Automotive industry was key attraction in Foreign Direct Investment (FDI) for Central Europe last decade.

- **From yeasterday**

...In contradistinction to the advanced nations situation (and then eventually spreading to other parts of the world - also to C. Europe), to 90's in C. and E. Europe countries

- oil products were plentiful and cheap,
- weight of products was not a real problem,
- lightweight materials were expansive (plastic, aluminium, magnesium),
- manufacturers had a strong „mechanical culture“,
- protecting of environment was not between priorities as it is today ...

- **Today's material choice criteria are more stringent**

- consumer demands (performance, safety, comfort, price) [L1],
- technical constraints (mechanical and thermal factors, material usage) [L5],

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- environmental constraints (consumption, pollution, noise, recycling ) [L7], for all not only j.v. companies...

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 (South America, China, South Europe) in the world, which are “newcomers” too. Last ten years the automotive sector is the biggest success mainly for the Czech and Slovak economic transition. From 1997 to 2005 production in the sector increased over 100 % of revenue. Potential of V4 (CR, SR, H, PL) countries is for next 50-100% of increase in output and over 50% in human resources for automotive and related production... also in some economical criterions and goals...**Fig. 1.**

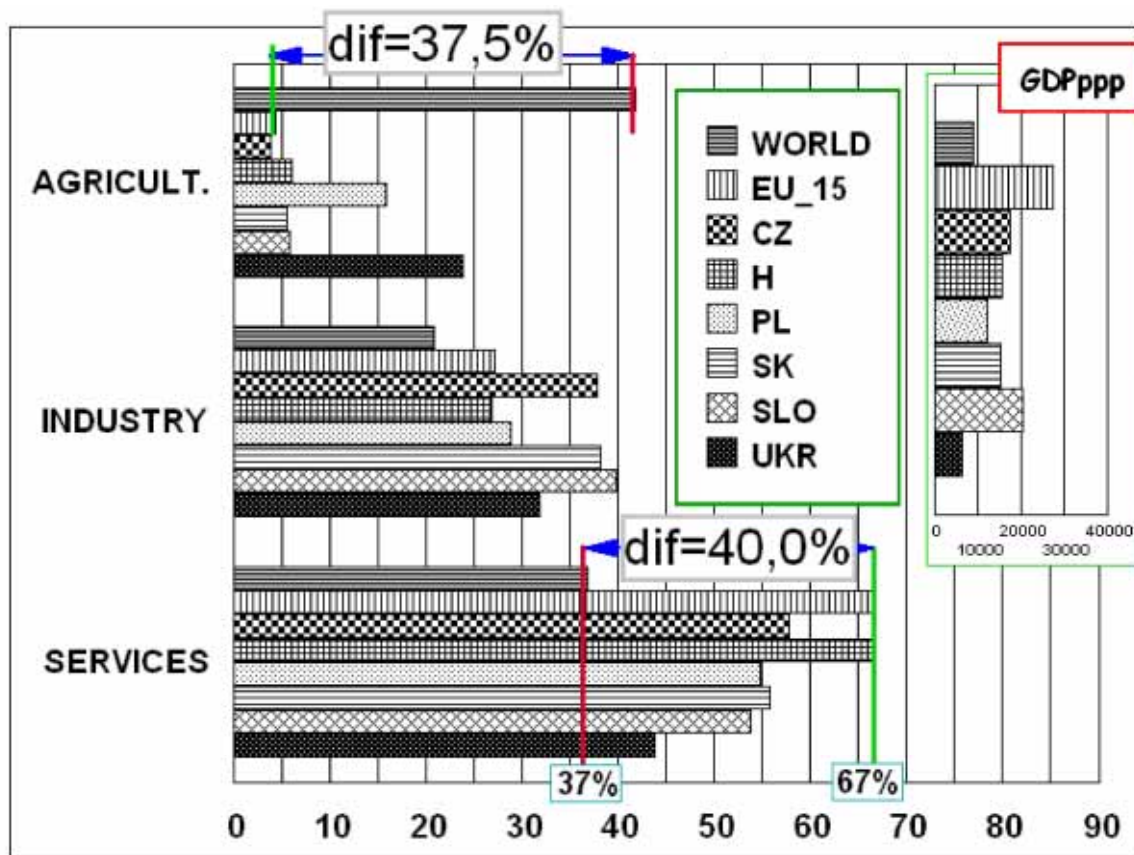


Fig. 1.: Labour force share by occupation – average world, EU\_15 and Central Europe – selection. GDPppp – gross domestic product in purchasing power parity [Source: UNCTAD]

## 2.0 “EXPANSION” OF AUTOMOTIVE INDUSTRY TO THE CE – 1<sup>st</sup> STAGE

Ending of last 100 years in the automotive production were extremely different. One plant, one head, one hands, (one vehicle) in the starting position and now division of labour, for productivity of labour, bring decrease of OEM by direct volume of the work participation on vehicle production and increase of the volume of work for suppliers – from production of components, then systems, then modules and now 53% of the price of vehicle is from suppliers and 17% from assembly by VBO (vehicle brand owner). All to 100% is price creation. By 200 000 units per day! Last 15 years was traditionally named in the CE as a transition process era – privatisation of 50 years long “state owned” produced sectors - industry and agriculture, but also services. Together with this processes foreign capital bring to the CE countries new philosophy for the life –

INDIVIDUALISATION. In the first stage of the production expansion to CE countries were very interesting also main questions from P.E.S.T.L.E. (political-economical-social-technological-law-ecological factors) investors determinations method: the quality and local skills, industrial reliability, qualification process, logistics, time, planning of needs, after sale service, lack and local purchasing structure, ethic and social and cultural level and tradition.

In this stage of the production are important:

- partnership strategies OEM and suppliers,
- globalisation effects and reduction of the number of suppliers,
- deployment of methods to assess optimum of Total Life Cycle (Price, CO2)
- optimisation of the PUBLIC – PRODUCER – OWNER relationship
- and purchasing in countries with low cost labour.

If we add to this area new technology and lean production system results we can see that companies in the CE countries can be fully successful, with high level of operative reaction, not only for mass producers but also for “one container” volume of production (engineering inclusive).

### 3.0 INFLUENCE OF CE SUPPLIER NETWORK ON TRANSITION PROCESSES

Creation of supplier network in CE countries is the result of today “division of labour” between OEM and suppliers and J.I.T. system of supplies necessity. One of the biggest preferences for CE countries is demographical position between 19 million units production capacity in the west and anticipated 4,5 + 10 million units capacity in the CE and South Europe + East European (CIS) countries. Systematic building of the network was started together with second stage of investment (first stage main investor VW Gr. 1992 – 2002). In the second stage main influence had PSA Gr. and from Asia – Toyota Gr. and Hyundai Gr. In the suppliers area biggest investors were only from USA.

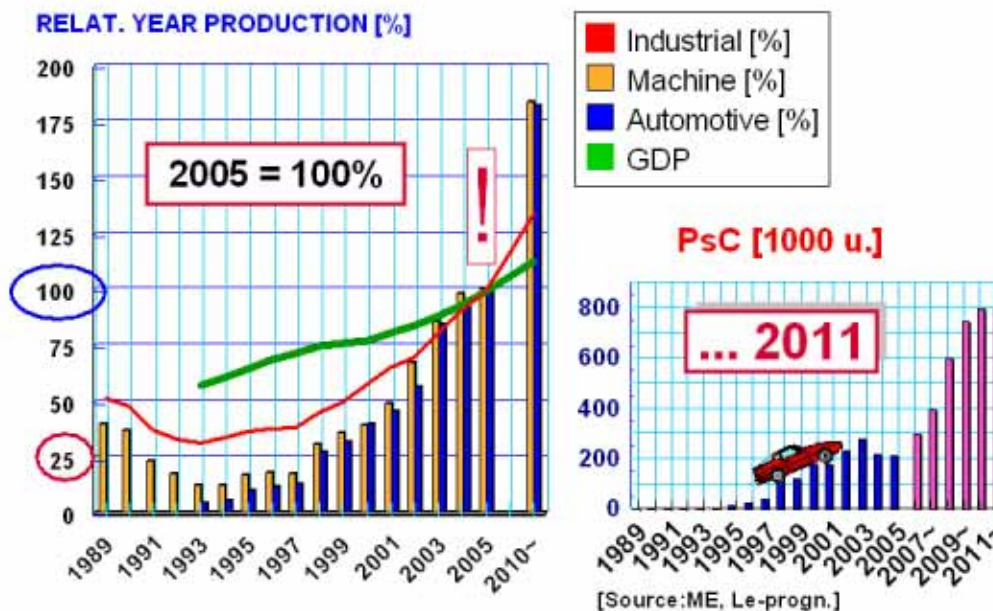


Fig. 2.: The trend of Slovak industrial production

Next impact of CE countries to new EU for automotive industry has some positives:

- a) The opportunities for ever better performance are very good
- b) large volume suppliers in machinery and support industry
  - for world wide customers



- with latest technology
- c) standardised producers
- d) positive environment
- e) small dependence on added import
  - good raw materials and energy base potential
  - high quality of steel, aluminium, glass, plastics and fuel producers
  - broad-gauge railway line to East Europe (SR - the only in Central Europe)
- f) in human resources:
  - flexibility and skills labour
  - price of work is good innovation potential for new productivity plants.

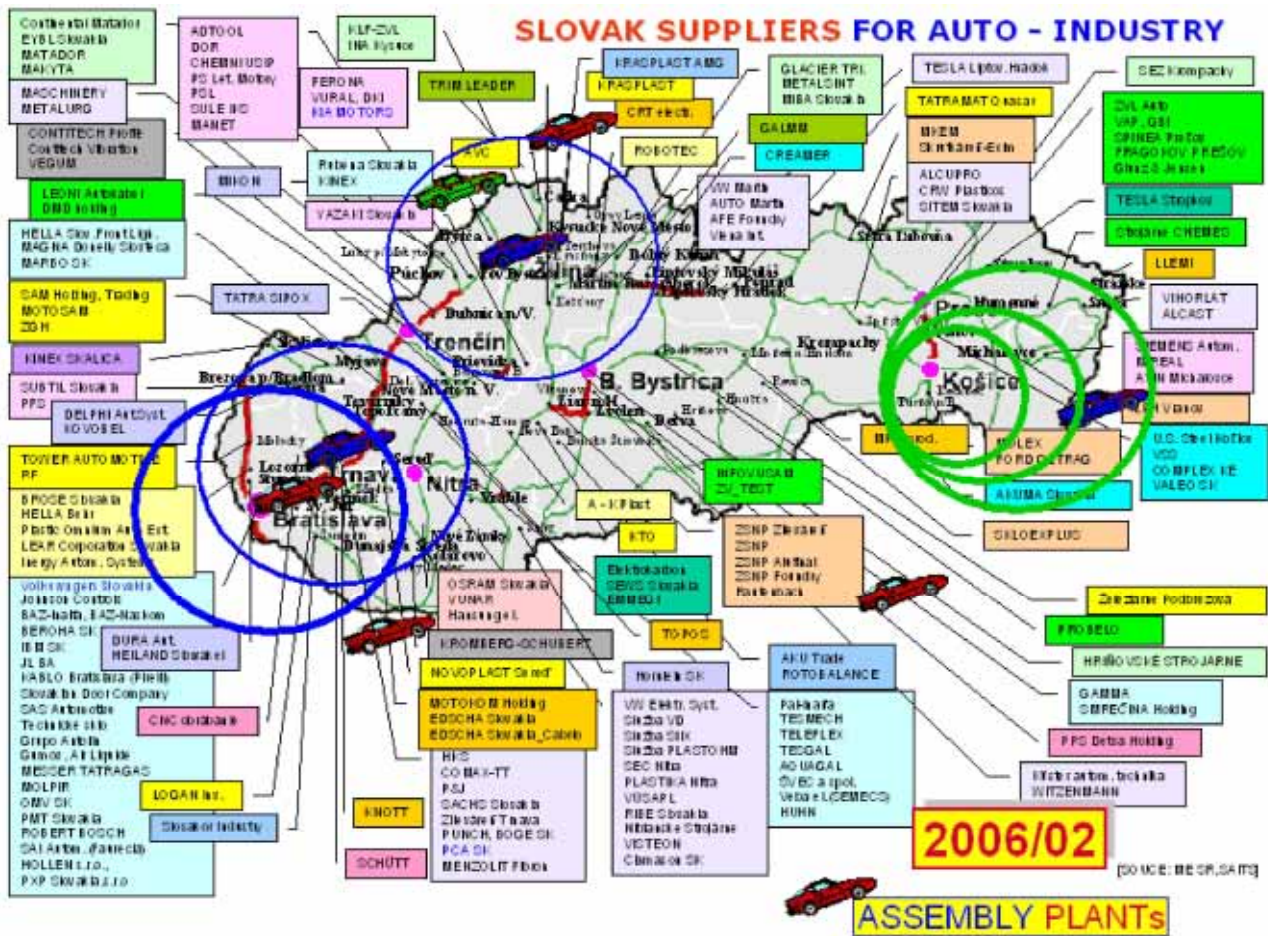


Fig.3: System and module supplies from Slovak area for CE "sitting" places of OEM.

Share of employment between OEMs and suppliers are in the classic production countries 4 : 1, with high volume of own production and import of parts and systems, in the central Europe is the relation between 1 : 4, or 1 : 5. The world average is excepted 1 : 2. For Europe and price of logistic is very convenient new situation of sophisticated production by CE countries.

**REMARKS**

There are some automotive industry tendencies and terms, which in Europe win new outputs and motivations for co-operation:

- 4a) 2005 – 2010 gradually pedestrian safety increase (in car design)
- 4b) 2007 – 2015 full recycling solution
- 4c) 2008 – 2012 Kyoto protocol by emission decrease (140 – 120 gCO<sub>2</sub>/km)

**Resolution: 20 – 25 % increase of average car price**

- 4d) increase of car fleet in EU25
- 4e) decrease of mechanical part volume in the vehicle
- 4f) decrease of material consumption
- 4g) finished of electronic (- alisation) of vehicle
- 4h) trend for (R&D) volume of money = (production & sale) volume of money

**Resolution: stability of the employment, increase for talent and tolerance**

- 4i) increase of TIER 0.5 suppliers ( but No. of OEM + TIER 0.5 = const. )
- 4j) decrease of No. TIER 1 and TIER 2 suppliers

**Resolution: high urgent need of co-operation**

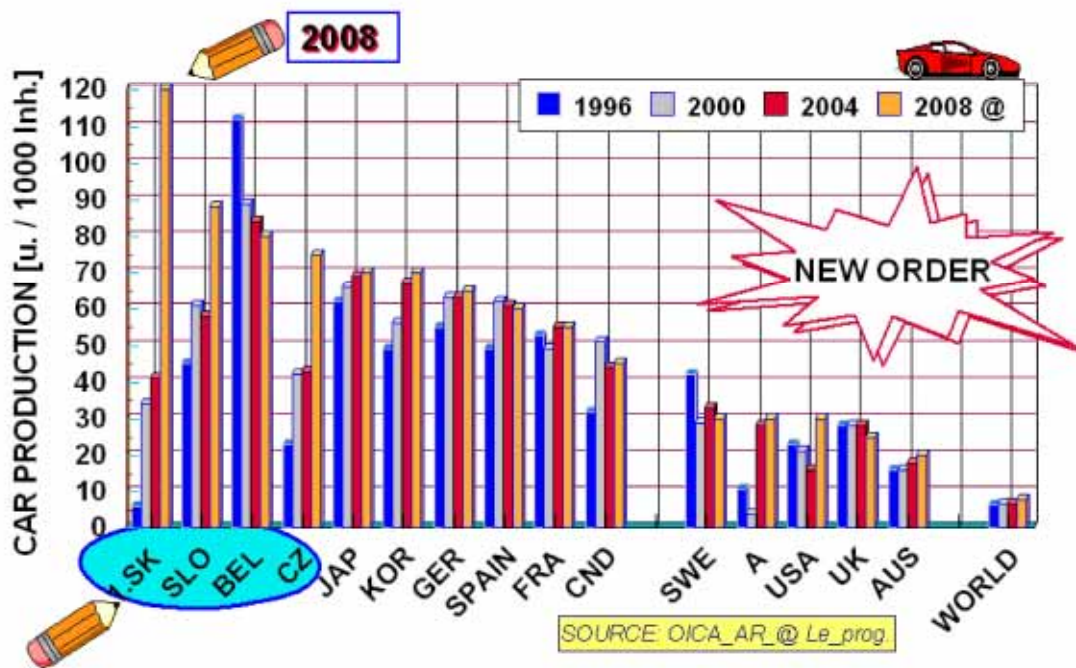


Fig.4: Car production density in year 2008 - TOP 15 countries (Source: OICA, Le-progn.)

We can add now also global dependence all of us, extremely fast networking expansion, real price of car decrease and high model increase from 4 to 14 groups of types in the last 25 years! This brings perspectives for new generation, and finally for Europe successful production. Export of automotive products from Europe can be in the future further as export NAFTA and Japan together.

**4.0 CONCLUSION**

Global dependence of players in the automotive production is very high. Price of materials and price of labour in the production stage, price of oil, R&D, and cars, together with infrastructure, external price of mobility, recycling and new norms and standards are influences and conditions for the future. Automotive industry in the co-operative Europe can be in the future better. COMMUNICATION and INFORMATION, TECHNOLOGY, TALENT and TOLERANCE for CREATIVITY can support next decade evolution of the biggest Europe co-operation. For the next decade we are waiting also increase of the ASIA investment to WE and CE countries, and increase of USA investment to East Europe.

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