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Impact on the competitiveness of the European Automotive Industry of Potential Free Trade Agreements with India and the ASEAN

2009



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List of Abbreviations

ACEA	European Automobile Manufacturers Association
AEC	ASEAN Economic Community
ASEAN	Association of South East Asian Nations
BLS	Bureau of Labour Statistics
CBU	Completely built-up
CDV	Car Derived Van
CLEPA	European Association of Automotive Suppliers
CO²	Carbone Dioxide
DDA	Doha Development Agenda
DPF	Diesel Particulate Filters
EBA	Everything But Arms
ECWVTA	EC Whole Vehicle Type Approval
ESC	Electronic Stability Control
ETS	Emissions Trading Scheme
EU	European Union
FDI	Foreign Direct Investment
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GSP	Generalised System of Preferences
GTR	Global Technical Regulations
GVW	Gross Vehicle Weight
HCV	Heavy Commercial Vehicle
HD	Heavy Duty

HDV	Heavy Duty Vehicle
HQ	Headquarters
ILO	International Labour Organisation
ITO	International Trade Organization
JV	Joint Venture
LCV	Light Commercial Vehicle
LDC	Least Developed Countries
LPG	Liquid Petroleum Gas
MFN	Most Favoured Nation
MPV	Multi Purpose Vehicles
NAFTA	North America Free Trade Area
NAMA	Non-Agriculture Market Access Negotiating Group
NMS	New Member States
NTB	Non Tariff Barriers
NOx	Nitrogen Oxide
OCT	Overseas Countries and Territories
OE	Original Equipment
OECD	Organization of Economic Cooperation and Development
OEM	Original Equipment Manufacturer
OMS	Old Member States
PM	Particulate Matter
PPP	Purchasing Power Parity
PUP	Pickups
RTA	Regional Trade Agreements
SAARC	South Asian Association for Regional Cooperation

SAFTA	South Asian Free Trade Area
TBT	Technical Barriers to Trade
TREATI	Trans-Regional EU-ASEAN Trade Initiative
TRIM	Trade-Related Investment Measures
TRIPS	Trade Related Aspects of Intellectual Property Rights
R&D	Research and Development
SUV	Sport Utility Vehicles
ULC	Unit Labour Costs
UNECE	United Nations Economic Commission for Europe
US	United State
WEF	World Economic Forum
WHDC	World Heavy Duty Certification
WTO	World Trade Organization

Automotive Glossary

Automotive Segment

<i>A</i>	Utility/city class: entry level small passenger car
<i>B</i>	Super mini class: small passenger car
<i>C</i>	Lower and medium class: medium-sized passenger car
<i>D</i>	Upper medium and executive class
<i>E</i>	Large and luxury class
<i>F</i>	Super luxury class
<i>MPV</i>	Multi-purpose vehicle: compact car with higher aspect ratio (height length)
<i>SUV</i>	Sport Utility Vehicles: car-like ride/handling/ fuel efficiency
<i>PUP</i>	Car derived pickup
<i>CDV</i>	Car Derived Van: small van model derived from B segment car
<i>LCV</i>	Light commercial vehicle
<i>MCV</i>	Medium commercial vehicle
<i>HCV</i>	Heavy Commercial vehicle
<i>Automotive Industry</i>	Vehicle, parts and accessories manufacturers
<i>Vehicles</i>	Vehicles manufacturers only (incl. trailers)
<i>Parts</i>	Parts and accessories manufacturers only

Foreword

The European Commission has the political mandate to negotiate new trade terms between the EU and both India and seven countries of the ASEAN. Discussions are underway and a number of trade terms scenarios can be envisaged. This report considers the trade value and volume impacts upon the European automotive industry arising from the application of a number of trade terms scenarios.

The report was produced substantially within the first and second quarters of 2009. It benefits greatly from underlying IHS Global Insight proprietary macro-economic and automotive intelligence, much of which was generated in the spring of 2009. IHS Global Insight monitors and forecasts the economy, and the automotive sector in particular, based upon at least 12 years of history and looking forward at least 11 years. We have used these “baseline” forecasts to compare the results of our scenario outputs in order to, as finely as possible, quantify the effects of changes in trade terms as reflected in the scenarios, upon the automotive trading positions of the EU and its relationship with India and with ASEAN.

IHS Global Insight would like to thank members of the automotive industry, including ACEA, CLEPA, ETRMA; expert witnesses; and members of the European Commission who have assisted in the production of this report.

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Executive Summary

Executive Summary

The automotive industry is one of the most important industries in the EU economy and, therefore, improving the competitiveness of the auto industry is one of the most important measures to attain the goals of the Lisbon Agenda. In 2005, the European Council worked with the European automobile industry associations to launch a new initiative to boost the competitiveness of the European automotive industry. The high level group, known as “CARS 21”, was formed with the objective of generating recommendations to improve the worldwide competitiveness and employment prospects of the European automotive industry. The overarching recommendation arising from CARS 21 was that the industry should strive to be the global leader in clean, safe and affordable vehicles and to live up to the climate change challenge. It also wanted to increase trade liberalisation, for expansion to overseas markets, on the basis of mutual benefit for the parties concerned. In this context the group recommended a focus on achieving a multilateral trade framework pursuing selected bilateral trade agreements, with India, ASEAN, Mercosur, and further with China.

Actions arising from these recommendations included considerations with regard to the improvement of the competitiveness of the European automotive industry; a new and concentrated focus upon major technology progress, innovation, research and development as a response to the challenge of producing the “green car” – commercially; and, the establishment of a political mandate for the European Commission to negotiate free trade agreements with, amongst others, India and ASEAN.

Our interest in this study was to evaluate the impact on the competitiveness of the European automotive industry of potential Free Trade Agreements with India and ASEAN. The Commission has the political mandate to negotiate with India and seven of the ASEAN states. Our methodology for measuring such an impact was a combination of qualitative through desk and field research and quantitative through the use of a panel data gravity model. The panel data gravity model required us to develop an econometric model from which we then quantified the effects of changes to / elimination of duties and non-tariff barriers upon trade flows.

Panel data gravity models have become increasingly popular for the measurement of future trade flows between countries, often at an aggregate level and based upon one or several variables. In our study we have investigated the detail of the automotive industry; made up of two sub groups “motor vehicles” and “parts and accessories”, and encapsulated all of the major relevant global trade partners. We have monitored export flows of motor vehicles and parts and accessories between 38 vehicle

producing countries (the intersection of countries included in IHS Global Insight's World Trade Service (WTS) and IHS Global Insight's automotive group production database). We have included an even broader country range of 54 importing countries, included in IHS Global Insight's WTS. With regard to ASEAN countries, Indonesia, Malaysia, Philippines and Thailand are included as both motor vehicle exporting and importing countries, while Singapore and Vietnam are included as motor vehicle importing countries. For both WTS and auto production and sales databases historical data is available since 1997 and IHS Global Insight forecasts, for the numbers of countries and product groups mentioned, the development of imports and exports until at least 2020.

Comparison of the trade relationships between the automotive industries of the EU, of India and of ASEAN will set an appropriate scene. EU general import duties vary from 10% to 22% for motor vehicles, from 3% to 4.5% for automotive parts; however, for India, Indonesia, Malaysia, Philippines, Thailand and Vietnam, the EU applies a General System of preferences (GSP) rate of 6.5% for motor vehicles and of 0% for automotive parts. India applies import duties of 60-100% for motor vehicles; 7,5-10% for parts; the ASEAN countries offer slightly better terms on vehicles (30-80% - 80% in Thailand) and typically worse terms on parts (0- 30% - 30% in Malaysia, Thailand and Philippines). In addition trade flows are inevitably coloured by the so called "non-tariff barriers" – NTBs – which are felt by many of the expert witnesses with whom we discussed to be an additional, but difficult to quantify, burden; there was general concern that, at least in certain cases, the NTBs were more than just a reflection of a different way of doing business, that they were a method of protecting local manufacturing.

Given the tariffs situation above it is no surprise to find that EU export of automotive vehicles and parts and accessories fall far short of expectations based upon either the general trading relationships between the EU and India, the EU and ASEAN or expectations based upon the competitiveness of each of the automotive industries.

Currently, the weight of India in EU automotive trade is very insignificant (around 0.2% of imports and 1.3% of exports in value in 2008); in reverse, the EU, as a trade block, is one of the main trading partners of India with 20% of its automotive exports (1st partner) and 30% of its imports (2nd partner after Japan). The EU vehicle trade balance with India is €235 million negative in 2008, with vehicle exports just €50 million, 60% from Germany. The parts trade balance deficit is less important than motor vehicles, at €64 million in 2008, with exports at €200 million still an insignificant amount compared to overall vehicles parts output of the EU (around €170 billion in 2008); Czech Republic and Italy, followed by Germany are the main exporters.

On a volume basis Indian vehicle production for the EU is higher than EU vehicle production for the Indian market (respectively 73,000 “Indian” vehicles against 1,600 “European” vehicles in 2008). The Indian vehicle market is almost entirely satisfied by locally based vehicle manufacturers (99%), with 75% of this volume being with national vehicle manufacturers. Segments A and B represent around 60% of local production in 2008. Of the EU production sold on the Indian market, most are larger vehicle segments (75% in 2008 are segments E and D) mainly coming from Germany. And, although the EU automotive industry invested €12.7 million in India 2008 (15% of total Auto FDI) this was still a relatively small amount.

The ASEAN is a minor partner for the EU automotive industry, less than 1% in value of exports and 2% of imports in 2008. However, the EU represents more than 15% of ASEAN exports and 8% of imports which places the EU at 3rd partner rank for exports (behind Australia and Japan) and at 5th rank for imports. The European trade balance with ASEAN was negative €128 million in 2008 with imports at €800 million almost entirely from Thailand. Germany is the main European country exporter to ASEAN and European vehicles mainly go to Singapore (41%) and Malaysia (29%). Note: Singapore does not impose punitive tariffs. The European automotive parts trade deficit was around €173 million in 2008; Czech Republic and Italy are the main EU exporters to ASEAN; these exports are destined for Singapore and Malaysia mainly.

EU produced vehicles represented less than 1% market share of ASEAN in 2008 at only 20,800 vehicles. As with the Indian market, the ASEAN market is mainly served by local production (87% in 2008). Around two third of EU produced vehicles sold in ASEAN are larger vehicles (segment D and E), half of which come from Germany (mainly Mercedes-Benz brand). ASEAN production penetration in the EU is very low at only 0.5% in 2008, 77,500 vehicles. Imports from ASEAN are mainly LCVs (typically PUPs) from Toyota, Mitsubishi and Ford, which come from Thailand. Once again European FDI in ASEAN is not large and is mainly concentrated upon the Philippines and Thailand.

Given the current situation, described above, we developed in our econometric model a number of scenarios chosen to describe the potential impact of a free trade agreement between the EU and India and bi-lateral trade agreements between the EU and the major markets of ASEAN extended to cover the ASEAN region. Individual scenarios were set up for both motor vehicles and parts and accessories for each of the two regions.

The key variables built into the scenario were:

- The start date of the reduction in tariffs
- The period and the amount by which tariffs were reduced / eliminated
- Changes, if any, in the non-tariff barriers (NTBs)
- Average Unit Values

The results were compared with the IHS Global Insight baseline forecasts in order to be able to identify the €M impact of each scenario upon import and export values, and net trade balance, per annum up to and including 2020; in addition we calculated (000s units) vehicle volumes.

There are, inevitably, a range of results arising from the scenarios chosen however the conclusions that can be drawn from the research are as follows.

First of all it is clear that the EU automotive industry offers products and services which, without doubt, would have a greater impact upon the automotive markets of India and ASEAN were there not barriers to entry in place. In order for the EU automotive industry to be able to fulfil the potential of these markets requires (further) direct investment and exports, which in turn requires lower tariffs across vehicles and parts and easier and more assured access to these markets.

Secondly both markets are definitely worthy of concerted action since they offer significant opportunity for growth as export markets, for local production and possibly for new thinking on technology and innovation.

Thirdly current automotive production volumes, both in India and ASEAN, benefit through protection based upon

- in-bound tariff rates – particularly on CBU vehicles but also upon CKD vehicles and parts and accessories
- a range of non tariff barriers, administrative, port entry, infrastructure etc.
- an unwillingness and/or tardiness to accept and implement global technical standards, UNECE 1958 and 1998, which would facilitate multi-market supply

- vehicle production driven by “closed” local demand, rather than a broader geographic offer, is itself a barrier to entry for EU suppliers with a global / multi-market offer
- relative difficulty and/or lack of attractiveness of investment because of terms and conditions

Whatever are the factors, and the mix of those contributory factors, the result for the EU automotive industry is that its performance in these markets is, at best, poor, and does not reflect the relative competitiveness of the EU automotive industry on a global level; rather it reflects the closed state of these markets to the EU automotive industry.

Fulfilling the potential for the EU automotive industry requires a mix of (further) investment and a substantial freeing up of trade access to India and the key markets of the ASEAN in order to see a significant increase in EU export of vehicles and parts. Specifically a number of objectives can be set, divided between India and ASEAN, but with some duplication given the similarities that exist in the trading situations.

For India the full elimination of vehicle tariffs would see significant increases in export volumes; in our model an additional 70,000 units exported from the EU to India, much of these within the large and luxury car segments, once tariffs eliminated; however, given the likely difficulty in achieving this full removal of tariffs we would recommend to focus tariff line negotiations with India where they might be most successful; medium, large and luxury cars. With regard to parts we would see the objective being the elimination of all tariffs on parts and accessories. In our model the scenario which eliminates tariffs produces a €300m shift turning an EU deficit of €50m into an EU surplus of €250m once tariffs are fully phased out. The other goal to be pursued would be seeking out non tariff barriers (and impending non tariff barriers) and getting them acknowledged as such and then phased out. Real concern was expressed at the possibility of “discovering” working methods which could become a NTB of the future with, for instance, an increase in volumes and or a larger number of smaller exporters. Typical examples quoted include delay for duty drawback claims; better IT in order to facilitate the logistics of physical and administrative movements; tyre labelling etc.

For ASEAN, and in the absence of negotiations with ASEAN, pursue bilateral trade agreements with the 7 countries for which the Commission has a political mandate to negotiate but concentrating on one or two countries, perhaps just one country, Thailand, using this as an exemplar case. Thailand has a big car market, ambitious objectives for its automotive industry, and no indigenous vehicles manufacturer. With regard to tariffs we would suggest a similar outcome objective as for India but

arriving there from a different direction. The idea of a 1st step approach which positions the EU alongside Japan for a very limited range of passenger cars (those with the biggest engines >2500c Diesel: >3000cc Petrol) seems to us to offer very limited results – possibly just several thousand vehicles per annum – so we believe the objective should be to ensure the broadest range of passenger vehicles (from luxury down) are included in the tariff reductions/eliminations. A key target, in addition, should be the elimination of parts and accessories tariffs. Key ASEAN countries for bi-lateral agreements here would be Thailand and Indonesia. . In our model the scenario which eliminates tariffs quantifies a €750m shift turning an EU deficit of €200m into an EU surplus of €550m once tariffs are fully phased out. As with India pursuing NTB removals is also important; typical examples quoted include transparency, clearance times and administrative burden, more specifically a lack of consistency with WTO rules with regard to customs valuations; complex import procedures; the lack of respect for intellectual property and/or patents; infrastructure etc.

For the EU automotive industry, used to working across many national borders technical harmonisation is crucial - both India and ASEAN should be strongly encouraged to adopt and/or implement automotive technical harmonisation through UNECE 1958 and UNECE 1998 and participate actively in the global harmonisation process.

Finally one must accept that the vehicle manufacturing countries in these developing markets will want to maintain a maximum local production content to satisfy home market demand and to export. European companies (who have been extremely successful in investing in BRIC and developing countries) should be encouraged and assisted to invest in these markets in order to take advantage of vehicles markets with real growth potential and where the volume car needs are different from those in Europe. There are huge, local demand based opportunities in the small car segments; for commercial vehicles; and for OE parts and accessories. All of these sectors are likely, because of their importance to the local economy, to be protected even if agreements are achieved in tariff reduction/tariff elimination. So realising a significant share of these markets will require a local presence something which is missing now.

Chapter 0

Competitiveness

0 Competitiveness

Globalization and the rapid growth of developing economies have increased international competition. Now, global economy faces new challenges to manage rising raw material and energy prices, a major international financial crisis and slowdown in the world's leading economies.

In open economies, competitiveness refers to the advantage through which an industry obtains success against their foreign competitors. Lower costs, trade liberalisation and technological change have widened international competition, which has become fiercer than ever before. In this context companies have no choice but to adapt their strategies to enlarge their market.

At a national/regional level, competitiveness can be measured by the level and growth of the nation's/regions standard of living, the level of aggregate productivity, the ability of the nation's firms to increase their penetration of global markets, and to increase their share of foreign direct investment (FDI). Clearly, no nation/region can sustain a trade surplus in every sector of the economy. Indeed, to achieve international success in some industries implies that other industries will be less successful in terms of their export performance (theory of competitive advantage of Ricardo¹). Nevertheless, a nation/region is not competitive if the export success of their industries is boosted through subsidies, or is dependent purely on low labour costs or a favorable exchange rate.

However, competitiveness is considered, at the highest level, it is important to draw the difference between price competitiveness and non-price competitiveness. Price competitiveness relies mainly upon production costs (labour cost) and productivity. Non-price competitiveness tends to be based upon innovation, business environment and brand awareness.

Another concern in considering competitiveness is where is the country in the competitiveness "cycle"? According to the World Economic Forum (WEF), three stage of competitive development are apparent²:

- The factor driven stage: low-cost conditions translate into low prices and unprocessed natural resources are the key to competition and exports. Firm's production is limited to simple,

¹ David Ricardo (1772-1823) has the first developed a theory referent to comparative advantage in free international trade. According to that theory, relative labour productivities determine trade patterns.

² The Global Competitiveness Report 2008-2009 – World Economic Forum.

labour-intensive manufacturing products, generally designed in other advanced countries. India and ASEAN countries can be considered as being part of this group, but also some new member states (NMS) of EU (Bulgaria, Poland, Romania).

- The efficiency-driven stage: the key driver is the production of more advanced products and services highly efficiently. Productivity is improved through investment in infrastructure, improving skills, and better access to investment capital. Technology is assimilated through imitation, foreign investment and joint venture (JV), but countries begin to develop and improve technology by themselves. Malaysia and some new member states of EU (Hungary, Czech Republic and Slovak Republic) correspond to this case.
- The innovation-driven stage: the dominant key of competitive advantage is the ability to produce innovate products and service. Institutions and incentives that enable innovation are well developed. Price competitiveness is less relevant even if innovation can reduce costs and so offset higher costs of factors, whilst, in addition products and services present a high level of differentiation. Singapore is the only country of the ASEAN within this group which would include major European automotive leader countries (e.g. the big 5, France, Germany, Italy, Spain and UK).

Below, we consider drivers of competitiveness; note that all drivers have not the same effect – some are more important than others and, in fact, a driver of competitiveness can have a different impact depending upon the unique situation of an industry or company in its cycle of competitive development. Accordingly labour costs are much more significant for an industry in the factor driven stage (e.g. the Indian automotive industry) than one in the innovation stage (e.g. the German automotive industry).

0.1 Key Drivers of Price Competitiveness

0.1.1 Labour Cost

Labour costs³ are one of the most important contributors to competitiveness in the short term. In automotive sector, differentials in the cost of the production process play a significant role in allowing

³ Labour costs are defined as the total hourly payroll cost to employers, including wages, social security contributions, taxes and subsidies.

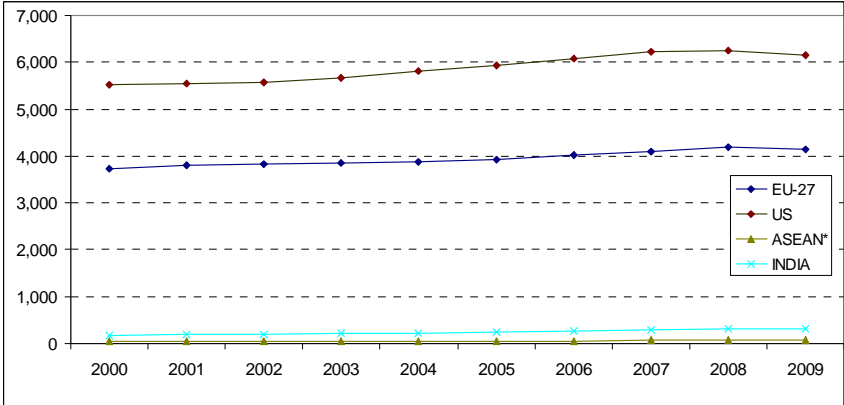
price flexibility and, in turn, gaining or defending market shares, thus, determining strategic investment planning in long term.

Nevertheless, in the long term competitiveness based exclusively on low wages will ultimately be self-limiting unless productivity is improved. Firms competing purely on price are found in lower-value-added production. On the contrary, empirical evidence shows that at least in developed countries, competitiveness is based more on the quality of labour, rather than its cost.

In fact, comparing only labour cost between EU and India or ASEAN region is really unrealistic since these countries are not placed in the same scale. Labour costs in India are among the lowest in the world. And according the International Labour Organisation (ILO), most of ASEAN workers have a low-productivity jobs that provide insufficient earnings to lift themselves and their families out of poverty, and are qualified as “working poor”⁴. Among ASEAN workers, more than an half (56.5%) lives with less than US\$2 per day and 10.8% with less than US\$1 per day.

As the graph below shows, there is a huge gap concerning labour not only in terms of cost level but also in term of growth. The annual labour compensation in developed economies is 10 to 20 higher than in India and the growth in earning is quiet stable (1% in average per year since 2000 for EU and US). Whilst labour compensation in Asian region is increasing (7% since 2000 for India and 5% for ASEAN), it is not forecast, even in the long term, to catch up with earnings in the EU or US.

Exhibit 1 Annual labour compensation comparison EU/US/ASEAN/India



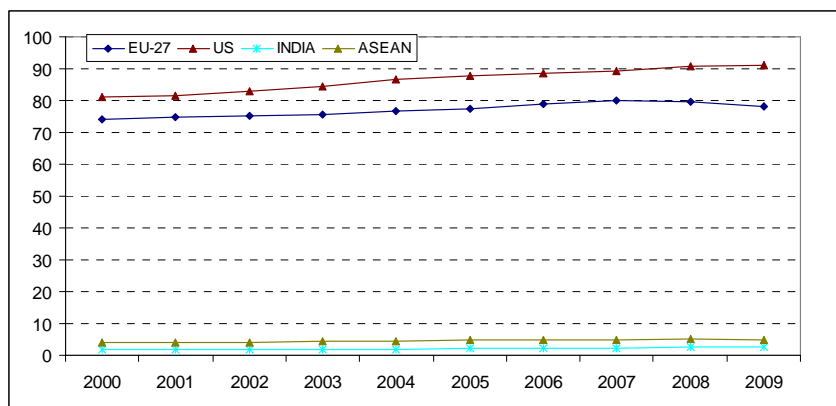
* Ave of labour compensation of Singapore, Philippine, Thailand, Indonesia, Malaysia
Source : IHS GLOBAL INSIGHT

⁴ “Working poor” refers to employed persons living in a household whose members are estimated to live below the poverty line – ILO, Key Indicators of the Labour Market, 2003

0.1.2 Productivity

Of course, there is a huge gap of productivity⁵ between most developed countries versus India and ASEAN region. In 2008, an American worker produced around \$90,000 and an European, \$80,000 while Indian reached only \$2,400 and ASEAN workers in total \$5,000.

Exhibit 2 Labour Productivity GDP-to-employment Labour Force (Real 2005 GDP, \$000's per person)



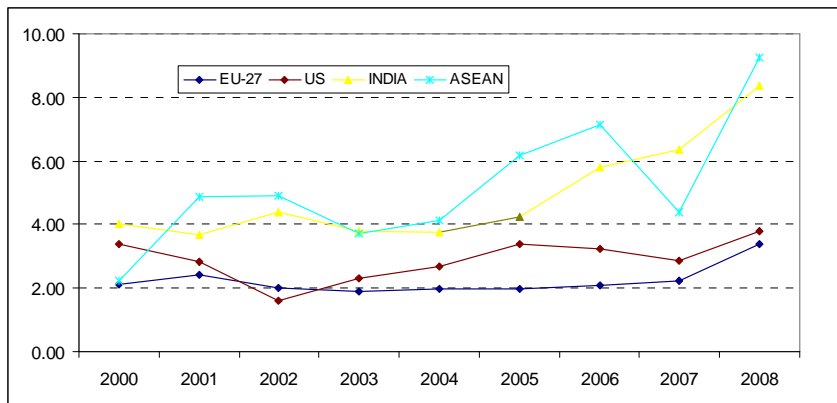
Source : IHS GLOBAL INSIGHT

0.1.3 Others Macroeconomic Price Competitiveness

High Inflation upsets a country's macroeconomic stability. High inflation is translated into loss of purchasing power, which in turn affects domestic demand. Low levels of inflation give credibility to the central bank and to the monetary policies of a country. The chart below shows Y/Y% change in the composite price index; India with ASEAN are opposed to the EU.

⁵ Productivity is defined as the change in output after taking account of changes in the quantity and quality of labour inputs, typically calculated as the ratio of total output per number of total worker.

Exhibit 3 Customer Consumer Price Index, Year-on-Year Percent Change

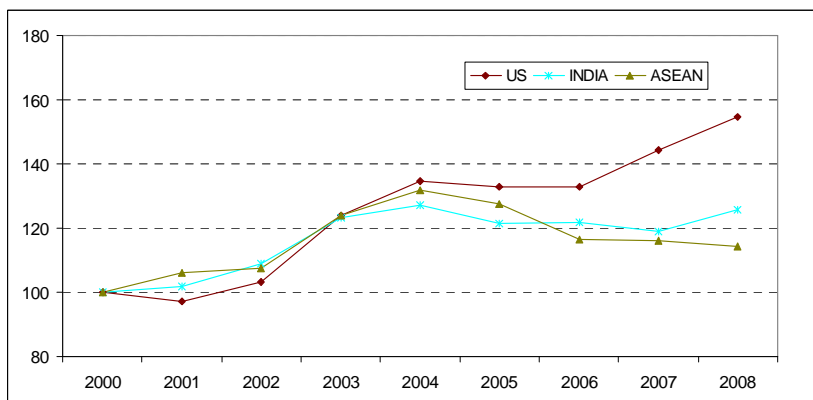


Source : IHS GLOBAL INSIGHT

Comparisons of price-competitiveness changes between countries depend not only on movements in price levels, but also upon exchange rates, which can have a severe impact upon the final price that goods and services are offered. The real effective exchange rate aims to assess a country’s (or currency area’s) price or cost competitiveness relative to its principal competitors in international markets.

Until 2005, Indian and ASEAN currencies had a higher correlation with US\$. But to compete against internal high inflation, Asian currencies used their US\$ reserves to support their tight monetary policies. And, the Eurozone continues to be strong, largely supported by higher interest rates.

Exhibit 4 Real Exchange Rate with Eurozone Trend (Eurozone prices per local prices, base 100 = 2000)



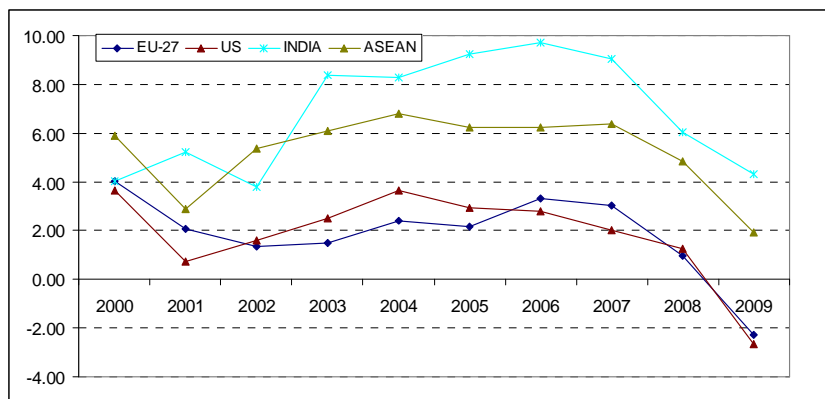
Source : IHS GLOBAL INSIGHT

0.2 Key Drivers of non-price Competitiveness

0.2.1 Macroeconomic Performance

The GDP growth rate is the main indicator of the size and health of a given country economy. Before the recent crisis, India and ASEAN countries as developing countries were benefiting for fast growth (over 6% per year, near 10% for India for 2005-2007 period) compared to mature markets such as EU and US, where real GDP growth rate fluctuated between 2-4% band. How countries/regions manage and overcome the crisis will determine new conditions for competitiveness.

Exhibit 5 Real GDP Growth Rate Trend (% , US\$-PPP)



Source : IHS GLOBAL INSIGHT

0.2.2 R&D and Innovation

With an annual spend of €20 billion in R&D (4% of turnover), the European automotive industry is a global leading investor in innovative R&D mainly driven by an environmental and safety legislation pressure. It is the equivalent of nearly 30% of the total EU industrial R&D investment and includes both collaborative programmes and technologies.

However, despite a downturn in R&D of larger OEMs, European automotive companies continue to lead in terms of R&D spend per revenue. On average, the automotive industry files 5,900 new patents every year in various fields (materials technology, recycling, ICT and telematics, energy and fuels, drive-train development, aerodynamics and ergonomics, etc...). This represents more than the half of

the overall patents filed in the automotive sector in 2007 (according to European Patent Office), the Japanese followed with 21%.

Exhibit 6 Top 3 R&D Industrial Investment of EU vs India and ASEAN Companies in 2007

Top 3 EU	R&D Investment €M	% R&D in Sales	Top 3 India / ASEAN	R&D Investment €M	% R&D in Sales
Volkswagen	4,923	5%	Tata Motors	207	3%
Daimler	4,888	4%	Mahindra & Mahindra	50	1%
Robert Bosch	3,560	8%	Proton Holdings	40	4%

Source: IHS Global Insight according 2007 EU Industrial R&D Investment Scoreboard

0.2.3 Business Environment

Government Instruments encompass a wide variety of methods which influence the business environment of an industry and of the companies within it. Typical examples include fiscal measures, in effect taxation; granting of all sorts to encourage science and technology developments; trade agreements; safety and environmental legislation; and investment incentives.

In recent years, the EU has encouraged special economic zones (for instance in France or in Germany) to compete with the FDI opportunity offered by developing countries, such as India and ASEAN, and the level of infrastructure in a country affects competitiveness and performance in a number of ways.

0.2.4 Brands and Competitiveness

Brand reputation is a necessary enabling condition of non-price competitive success, whether by innovation, product improvement or line extension. It is one of the main functions of advertising and promotion to build on the strength of pre-existing brand reputation- the early “critical mass” of demand that facilitates profitable volume and share growth.

European OEM's are in an advanced stage where brand differentiation based on, amongst other things, product differentiation, is used by them as an important strategy to defend differences in prices. Indian

and ASEAN OEMs currently have few equivalent brand credentials certainly outside of their home markets.

0.3 Conclusion

Competition based on low wages alone is rarely a winning long-term strategy, as this often occurs alongside poor working conditions. Adverse working conditions, in turn, are often related to low productivity employment, which erodes competitiveness. Non-cost factors such as institutional quality, macroeconomic environment, workforce education and skill levels, efficiency, and labour productivity are important and interrelated determinants of competitiveness.

On the reverse, increased productivity generates a virtuous circle, supporting higher wages which, in turn, supports an increased internal demand for goods and services.

The Global Competitiveness Report 2008-2009 summarises these interactions and how countries and companies tend to manage these drivers to increase their position in fierce worldwide competition.

In fact, EU continues to be among the most competitive regions in the world, with 9 European countries among the top 20 (Denmark, Sweden, Finland, Germany, the Netherlands, the UK, Austria, France, Belgium). In contrast, Bulgaria (ranked 76th), one of the newest and the lowest ranked EU members, can thank infrastructure inadequacies and institutional weaknesses, including corruption, for its low ranking.

The competitive performances of Asia-Pacific economies show various situation from highly competitive countries to the most challenged. Three ASEAN countries are worth describing along with India:

- Singapore (5th place) is well placed for the strength of its institutional environment, the efficiency of its markets (goods, labour and finance) and its ability to ensure the proper allocation of these factors. Singapore also has world-class infrastructure (quality of its port and air transport facilities). But Singapore is constrained by its domestic market size and mixed macroeconomic performance (interest rate spread, government debt).
- Malaysia (21st) benefits from the excellent functioning of its goods, labour and especially financial markets, the quality of the country's transport infrastructure and its strong business

sophistication and innovative potential. On the other hand, it is marked down because of education and the relatively poor health of the workforce.

- Thailand (34th) has recently declined in the rankings mainly due to its weakening government institutions, with increasing concerns about the transparency of policy-making and public-sector efficiency. The country strengths come from its market size, its efficient labour market and infrastructure.
- India (50th) derives substantial advantages not only from its market size (domestic and foreign), but also from its strong business sophistication and innovation. The country is endowed with strong business clusters and many local suppliers, and ranks an impressive third for the availability of scientists and engineers. However, India's weakness is its macroeconomic instability (highest deficits in the world, unsustainable levels of government debt, high inflation); and its poor health indicators and educational system.

Chapter 1

International Trade Policy

1 International Trade Policy

1.1 International Trade Regulation

1.1.1 Uruguay Round and General Agreement on Tariffs and Trade (GATT)

In 1946, right after the ending of the Second World War, adopting the idea of promoting international economic cooperation from the 1944 Bretton Woods conference, the United Nations Economic and Social Council proposed to establish an International Trade Organization (ITO) to regulate the international trade. Countries that were negotiating the ITO also at the same time negotiated the General Agreement on Tariffs and Trade (GATT). The plan was to let the ITO control the GATT. Unfortunately, a few signatory countries, including the United States, did not ratify the ITO charter and the organization never went into effect. The GATT became the international trade treaty for signatory countries and provided a platform for subsequent negotiation of new rules to govern the members' multilateral trade.

From 1947 to 1979, initially two dozens of countries and later over 100 countries entered several rounds of GATT negotiations. The negotiations mainly focused on tariff reduction, anti-dumping, and non-tariff barrier removal in the international trade in goods. In 1986, 123 countries gathered in Uruguay to initiate a new round of GATT negotiation. Besides pressing on further reduction of tariffs and non-tariff barriers in trade in goods, the Uruguay round expanded the negotiation to cover international trade in services and intellectual properties, reducing agricultural subsidies, giving market access to textiles and clothing from developing countries, etc. The Uruguay round was the most ambitiously pushing towards liberalizing the international trade in all areas. The negotiation lasted to 1994 when the consensus desire of establishing comprehensive rules to promote overall free trade led to the Marrakech Agreement, which established the World Trade Organization (WTO).

1.1.2 WTO Agreements

The WTO came into being in 1995. WTO is a constitution, which is different from GATT, which is not a constitution. GATT contains many sets of rules. The GATT members were only bounded to the set of rules they signed. Therefore, GATT was segmented by many sets of rules. In comparison, each member of the WTO is bounded to the same set of comprehensive agreements that governs the multilateral trade among all members. However, as inherited from GATT, The WTO Agreements contain special

provisions which give developing countries special rights and give developed countries the possibility to treat developing countries more favourably than other WTO Members.

In the WTO agreement, the core principle that governs multilateral trade among members is the non-discrimination principle. This principle is composed of the most favoured nation (MFN) treatment and the National Treatment. The MFN treatment requires that a WTO member apply the same treatment towards its trades with all other WTO members. For example, grant someone a special favour, such as a lower customs duty, and you have to do the same for all other WTO members. It is obvious that the MFN rule can create “free riders”. To limit the “free ride”, WTO allows countries that take part in the negotiation to gain more than free-riders in a reciprocal way, especially with regard to market access.

The National Treatment requires that a WTO member must treat imported goods the same as it treats the goods produced domestically – at least after the foreign goods have entered the market. This policy can help to eliminate non-tariff barriers to international trade. It needs to note that national treatment only applies once a product, service or item of intellectual property has entered the market. Therefore, charging customs duty on an import is not a violation of national treatment even if locally-produced products are not charged an equivalent tax.

Compared to GATT, the most important addition to international trade agreement in WTO is the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS). Generally, more intellectual properties are originated in developed countries than in developing countries. Therefore, generally, developed countries request stricter protection of intellectual property rights so that they can derive more financial benefits from their intellectual properties; whilst developing countries request looser protection so that they can obtain intellectual properties at lower cost. Pushed by the world’s major intellectual-property producers, including the United States, European Union, and Japan, the Uruguay Round of GATT negotiated TRIPS in 1994. When the Uruguay Round established WTO, ratifying TRIPS naturally became the requirement for WTO membership.

The TRIPS requires that WTO members automatically grant copyright to intellectual property related to the international trade, and that patents must be granted in all fields of technology. The MFN rule is also applied to TRIPS. That is, any advantage, favour, privilege or immunity granted by a WTO member to the nationals of any other country shall be accorded immediately and unconditionally to the nationals of all other WTO members. With regard to the National Treatment policy, TRIPS requires that each WTO member shall grant the nationals of other WTO members’ treatments no less favourable than the

treatment it grants to its own nationals. The TRIPS also allows some exceptions when applying the MFN and National Treatment.

Another important agreement that the WTO inherits from the Uruguay Round GATT negotiation is the Agreement on Technical Barriers to Trade (TBT). TBT recognizes that international standards and conformity assessment systems can improve the efficiency of production, can ensure the quality of exports, can protect human, animal or plant life or health, can protect the environment, can prevent deceptive practices, and can facilitate international trade. On the other hand, however, the technical regulations and standards and the procedures for assessment of conformity can create unnecessary obstacles to international trade, especially when they are used as means of discrimination and protectionism. To reduce unnecessary obstacles, TBT applies the MFN rule to WTO members' standard and assessment practice, promotes the development of international standards, and helps developing countries to meet international standards.

Besides TBT, the WTO agreements also prevent other types of non-tariff barriers in international trade. The Agreement on Import Licensing Procedures requires that the import licensing should be simple, transparent and predictable. The Preshipment Inspection Agreement requires preshipment inspections to be non-discriminatory, transparency, protecting confidential business information, avoiding unreasonable delay and interest conflict. The Rules of Origin Agreement requires WTO members to ensure that their rules of determining the origin of products are transparent; that they do not have restricting, distorting or disruptive effects on international trade; that they are administered in a consistent, uniform, impartial and reasonable manner; and that they are based on a positive standard. The Trade-Related Investment Measures (TRIMs) Agreement requires that, when making investment, no member shall apply any measure that could restrict and distort trade, or that could violate the National Treatment principle. The WTO agreements require that the members' valuation of goods at customs must be fair, uniform, neutral, and conforming to commercial realities.

The WTO agreements allow countries to take action against dumping. Typically anti-dumping action is to charge extra import duty on the particular product from the particular exporting country in order to bring its price closer to the normal value or to remove the injury to domestic industry in the importing country. Because charging extra import duty would break the principles of binding a tariff and not discriminating, the WTO agreements require that a member may not impose an anti-dumping measure on imports unless it has established evidence that the imports are priced below their normal value and have injured its domestic industry.

1.1.3 WTO and Developing Countries

In 1968, the UN Conference on Trade and Development (UNCTAD) passed the so-called Generalized System of Preferences (GSP) schemes. Under GSP, selected products originating in developing countries are granted reduced or zero tariff rates over the MFN rates. The least developed countries (LDCs) receive special and preferential treatment for a wider coverage of products and deeper tariff cuts. Currently there are 13 national GSP schemes notified to the UNCTAD secretariat. They are granted by these countries: Australia, Belarus, Bulgaria, Canada, Estonia, the European Union, Japan, New Zealand, Norway, the Russian Federation, Switzerland, Turkey and the United States of America.

The GSP schemes conflicted with the MFN principle of GATT as well as with today's WTO agreements. In 1971, the GATT contracting parties (equivalent of today's WTO members) approved a waiver to MFN for 10 years with regard to granting GSP to developing countries. In 1979, the GATT contracting parties approved the waiver to be permanent, and required that the granting of a GDP scheme must be generalized, non-discriminatory and non-reciprocal with respect to beneficiary countries. Countries may not set up GSP schemes to benefit only their friends and receive benefit in return.

Inherited from GATT, the WTO also waives the MFN principle with regard to granting GSP to developing countries. The WTO agreements contain special provisions which give developing countries special rights and which give developed countries the possibility to treat developing countries more favourably than other WTO Members. These provisions are referred to as "special and differential treatment" provisions. These special provisions include, for example, longer time periods for implementing WTO Agreements and commitments or measures to increase trading opportunities for developing countries.

1.1.4 Doha Development Agenda

To promote free trade in all areas globally, in November 2001, the WTO's Fourth Ministerial Conference in Doha, Qatar, declared the mandate for negotiations on a range of subjects. In the Ministerial declaration, the 21 mandated negotiation subjects include agriculture, services, market access for non-agricultural products, TRIPS, trade and technology transfer, relationship between trade and investment, interaction between trade and competition policy, etc; formed the Doha Development Agenda (DDA). The original agenda has been refined by subsequent Ministerial Conferences and negotiations at Cancún in 2003, Geneva in 2004, and Hong Kong in 2005.

Since 2001, there have been eight rounds of negotiations on the DDA. The latest round was carried out in Geneva in 2008. In the negotiation, developed countries and developing countries have major interest conflicts in agriculture, industrial tariffs and non-tariff barriers, and services. The negotiations constitute an unique commitment, which means if there is no agreement on all, there is no agreement at all.

Developed countries were led by the US, EU, and Japan. Developing countries were led by China, India, Brazil, and South Africa. For the 21 subjects in the DDA, agriculture is the most difficult one. Developing countries wanted developed countries to remove agriculture subsidies, while developed countries want developing countries to raise the price threshold in their agriculture safeguard mechanism. No side has been willing to make concessions so there is a tough time ahead before reaching accord.

1.2 European Trade Regulation

1.2.1 EU Lisbon Agenda

At the Lisbon summit in March 2000, EU leaders set out a new strategy for the development of the EU, known as the Lisbon Agenda. At that time, economic globalization and new-knowledge driven economies were great challenges to the prosperity of the European Union. The leaders perceived that the EU was lagging behind the US and other major economies in preparing for these challenges. Taking this challenge into consideration, the European Council outlined a strategy to transform the EU to a knowledge-based economy, to make it the most competitive and sustainable economy in the world while at the same time, preserving or even improving its social coherence.

The Lisbon Agenda set a time-period of ten years, attaining the goals by 2010. However, in the midterm evaluation, the European Council found that many goals set in the original agenda had not been reached. Then, the EC simplified the goals and re-launched the Lisbon Agenda in 2005. With regard to transforming the EU to a knowledge-based economy, only the goal of dedicating three percent of GDP to R&D stays. The strategy now more clearly focuses on economic growth and jobs. The EC explains that economy growth is a prerequisite for being able to maintain and increase Europe's prosperity and thus for preserving and enhancing the coherence of its society. The EC also considers that, in Europe, on the one hand, far too many people's lives are still blighted by unemployment; on the other hand, the increasingly old population needs more people to work to support. The goal is, by 2010, 70% of the population is employed. To attain the goals, EC wants to make Europe an attractive place to invest and to work.

CARS 21

Automobile manufacturing is one of the most important industries in the EU economy, and therefore, improving the competitiveness of the auto industry is one of the most important measures to attain the goals of the Lisbon Agenda. In 2005, the European Council worked with the European automobile Industry associations to launch a new initiative to boost the competitiveness of the European automotive industry. They set up a high level group called “Competitive Automotive Regulatory System for the 21st Century”, dubbed as “CARS 21”. The group’s objective is to generate recommendations to improve the worldwide competitiveness and employment of the European automotive industry. The group considered that the European automotive industry was facing these challenges: Labour productivity was 25% lower than in the US and 30% lower than in Japan; labour costs were comparable to those in the US but more than 10% above those in Japan and almost three times as high as in South Korea; and there was a requirement for major technology progress, most prominently, the fuel cell.

To realize the objectives, in the 2008 review, CARS21 recommended to position the European industry as a global leader in clean, safe and affordable vehicles and to live up to the climate change challenge. It also wanted to increase trade liberalization for expansion in overseas markets, provided that it can be achieved on the basis of mutual benefit for the parties concerned. The group recommended to focus on achieving a multilateral trade framework as well as pursuing selected bilateral trade agreements with India, ASEAN, Mercosur, and further with China. At the same time, it also stressed protecting intellectual property rights.

1.2.2 UNECE Regulation

From the beginning, CARS21 made clear that it would make life easier for the EU automotive industry to type approval in the EU through the increasing application of United Nations rules. The Uniform Technical Prescriptions for Vehicles lay the foundation of the rules. The United Nations Economic Commission for Europe (UNECE) regulates these uniform technical prescriptions through its subsidiary the World Forum for Harmonization of Vehicle Regulations.

The UNECE adopted the 1958 Agreement concerning the Adoption of Uniform Technical Prescriptions for Vehicles. Since 1958, the agreement has put in place 127 Regulations that are constantly updated according to the latest technological progress, new developments in scientific research, and government policy. In addressing environmental concerns, the UNECE Regulations focus on reducing pollutants,

including through fuel-cell and hybrid vehicles. Now they also endeavour to increase engine efficiency and to reduce CO₂ emissions and global warming. With regard to road safety, the UNECE Regulations focus on two main axes: accident prevention (active safety), including for instance Intelligent Vehicle Systems, Tire Pressure Monitoring Systems and Electronic Stability Control Systems; and measures that reduce the effects of crashes on the human body (passive safety), such as increasing the efficiency of frontal and lateral crash protection, improvements in child restraint systems as well as protection against roll-over on coaches.

The 1958 Agreement was initially created for the UNECE region. However, in 1995, due to the need to reduce and streamline a myriad of regulatory requirements for vehicle safety and environmental performance worldwide, the Agreement was opened to all countries and has been facilitating globally harmonized regulations of the automotive industry.

1.3 Existing trade agreements

1.3.1 Regional Trade Agreement

In recent years, more and more countries have signed into Regional Trade Agreements (RTAs) to establish some kinds of preferential trade treatments with selected partners. These countries do not necessarily belong to the same geographical region. By the end of 2008, about 421 RTAs have been notified to the GATT/WTO. Most of them are FTAs, some of them enable GSP, and less than 10% of them are custom unions.

The coverage and depth of preferential treatment vary from one RTA to another. Modern RTAs tend to go beyond tariff-cutting exercises. They provide for increasingly complex regulations governing intra-trade (e.g. with respect to standards, safeguard provisions, customs administration, etc.) and they often also provide for a preferential regulatory framework for mutual services trade. The most sophisticated RTAs go beyond traditional trade policy mechanisms, to include regional rules on investment, competition, environment and labour.

RTAs are discriminatory. They depart from the MFN principle, a cornerstone of the WTO agreements. Their effects on global trade liberalization and economic growth are not clear. Though RTAs are designed to the advantage of signatory countries, expected benefits may be undercut if they distort

resource allocation. Furthermore, because each RTA tends to develop its own mini-trade regime, the coexistence in a single country of differing trade rules applying to different RTA partners can hamper trade flows merely by the costs involved for traders in meeting multiple sets of trade rules. The overlapping RTAs in a country causes inconsistencies in the rules and procedures among the RTAs themselves, causes confusion and distortion of regional markets, and has implementation problems.

1.3.2 Main Free Trade Agreement

1.3.2.1 Main EU FTA

The EU has 24 free trade agreements with outside countries and territories. These countries include Switzerland and Norway in Europe, Israel and Jordan in the Middle East, Egypt and South Africa in Africa, and Mexico and Chile in the Americas. The earliest FTAs include the one with Overseas Countries and Territories (OCT) that came into force in 1971, and the three with Switzerland-Liechtenstein, Norway, and Iceland individually came into force in 1973. The latest FTAs include the one with Côte d'Ivoire that came into force in 2009, and those with Former Yugoslavia countries individually came into force in 2008. Most of the FTAs only cover goods. The three with Mexico, Chile, and Cariforum States EPA individually also cover services.

1.3.2.2 South Asian Free Trade Area

In January 2004, the 12th summit of the South Asian Association for Regional Cooperation (SAARC) held in Islamabad signed the South Asian Free Trade Area (SAFTA) Agreement. This agreement was implemented in January 2006.

The SAFTA member countries are Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. Until the late 1940s, most of these South Asian countries were part of one political entity – British India. The trade among them was sizeable. In 1947, when Pakistan (then included Bangladesh) and India became independent, more than half of Pakistan's imports came from India and nearly two-thirds of its exports went to India. Later, these two countries, the regions largest economies, engaged in bitter and prolong disputes over territory and water distribution. The trade between them sharply declined. Furthermore, all countries in the South Asian Association were adopting import substitution in their economic development strategy. They set up prohibitively high tariff to restrict imports. Tariffs for

agriculture products were higher than 100%. The economies in the region were at a low level of development and not very much complimentary to each other. Their small exports of traditional products rely on the market of developed countries, especially the US. As a result, in their national product, the proportion of trade with countries inside the region as well as with outside countries was low.

After lagging behind other countries in economic development for so long, the South Asian countries' leaders took serious look at the successful examples of regional economic cooperation such as the European Union and the Mercosur in Latin America. They recognized that, by opening their economies to trade, especially to trade with neighbouring countries, they can lay the groundwork for bringing peace and prosperity to the conflict-ridden and poor region. India and Pakistan's willingness to resolve the conflicts between them since 2003 paved the way for the South Asian countries to construct a free trade area. After implementing the SAFTA, lower tariff and less non-tariff barrier gave these South Asian countries many opportunities to gain more benefits from regional industrial cooperation. For example, cotton growing and textile production in India and Pakistan can cooperate with Bangladesh to manufacture clothing at lower cost for expanding exports to developed countries.

1.3.3 Existing Trade Relations between EU and India

The relations between India and the EU can be traced back to 1962 when India established diplomatic relations with the EU. Since then, India and the EU have developed increasingly closer relationships that cover many areas of mutual interests, including trade and investment, economic and development cooperation, etc. At their fifth summit in The Hague in 2004, EU and India designated their relationship as 'strategic partnership'.

The EU is not only India's top source of foreign investment, but is also India's largest trade partner. In recent years, about 25% of India's imports come from the EU, and about 23% of India's exports go to the EU. In India's imports from the EU, about 30% are engineering goods, and gems & jewellery also account for about 30%. In India's exports to the EU, about 30% are textiles & clothing, and engineering goods only account for 10%. There is still much room to uplift the India-EU trade in the modern industry sectors. For example, although the EU automotive industry is among the worlds largest and best, India's imports from the EU of automotive products represents less than 1% . Much cooperation is needed in areas like automotive industry for mutual benefit.

1.3.4 Existing Trade Relations between EU and ASEAN

The ASEAN has 10 member countries: Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Burma/Myanmar, Philippines, Singapore, Thailand and Vietnam. It commits to promote stability and development for its member countries. Unlike the South Asian countries which had adopted the import substitution strategy, ASEAN countries have adopted export-orienting strategy for many years. They have been actively attracting foreign investment to develop exporting industries, notably semiconductor and electronics manufacturing. In recent years, ASEAN trade with the world represented about 6% of the world trade. About 10% of ASEAN's imports are from the EU, and about 13% of ASEAN's exports go to the EU. The EU's main exports to ASEAN are chemical products, machinery and transport equipment, and EU's main imports from ASEAN are machinery and transport equipment, chemicals, and textiles and clothing. Automotive accounts for less than 3% of EU's exports to ASEAN.

Besides trade, ASEAN countries' economic strengths and great potential have been very attractive to the EU investors. By far the EU is the largest investor in ASEAN countries. In recent year, nearly 30% of foreign direct investment in ASEAN came from the EU, compared to the 15% from the United States.

Since 2000, trade and investment issues are discussed between the European Commission and ASEAN. In 2003, when meeting ASEAN Economic and Trade Ministers in Laos, the European Commissioner for Trade proposed plans for a trade arrangement with ASEAN. The proposal focused on ASEAN-EU trade and investment relations, and on enhancing ASEAN-EU economic cooperation. Leaders of both sides agreed that it was necessary to reinvigorate ASEAN-EU relations at the regional level. They agreed to work towards a regional framework that would significantly give new dynamics to the ASEAN-EU trade and investment relationship. This is the Trans-regional EU-ASEAN Trade Initiative (TREATI). The initiative is to deal with these issues:

- expansion of trade and investment flows;
- closer cooperation in trade facilitation, trade, investment and regulatory issues; and
- greater understanding of issues of mutual interest.

In 2004, ASEAN Ministers agreed to give priority to co-operation on sanitary and phytosanitary standards in agricultural and seafood products, on technical standards for electronics, and on wood-based industries, as well as cross-sectorial co-operation on trade facilitation and investment.

The key challenge to the TREATI is to promote region-to-region economic relations. In 2007, at its 40th anniversary Summit in Singapore, ASEAN established the legal framework for integrating it into a single market trading bloc by 2015, known as the ASEAN Economic Community (AEC). The AEC will be similar to the European Economic Community which would enable the free flow of goods, capital and services among its member countries. The establishment of the AEC would help to promote region-to-region economic relations between the EU and ASEAN.

1.4 Literature on FTA impacts

1.4.1 Traditional Trade Theory

The traditional international trade theory is based on the comparative advantage theory that David Ricardo advocated in the early 19th century. According to the Ricardian model, countries should specialize in producing what they can produce relatively efficiently. And then, through trade, they can have more products. This is to say that, even if Germany can produce both cars and jackets with less labour than India can, but, if the labour put into producing a car in India it can be used to produce more jackets than Germany can, then Germany should specialize in producing cars and India should specialize in producing jackets. With such specialization, together Germany and India can produce more cars and jackets. And then, by trading German cars with Indian jackets, both Germany and India will have more cars and jackets. The Ricardian model obviously assumes that in Germany every worker has the same skills to make cars, and in India every worker has the same skills to make jackets. It also ignores other important production factors such as capital.

Ricardo's comparative advantage theory was later further developed by others, most importantly, by Eli Hecksche and Bertil Ohlin in the early 20th century. Hecksche and Ohlin added capital to the model and emphasized the relative factor endowment. According to the Hecksche-Ohlin model, countries should specialize in producing products that intensively use the factor with which it is relatively well endowed. And then, through trade, they can have more products. Take the same example above, the Hecksche-Ohlin model suggests that, if car manufacturing is capital intensive and jacket manufacturing is labour intensive, and in Germany capital is relatively abundant while in India it is labour that is relatively abundant, then Germany should specialize in manufacturing cars and India should specialize in manufacturing jackets. And then, by trading German cars with Indian jackets, both Germany and India will have more cars and jackets.

1.4.2 New Trade Theory

Began noticeably from the 1970s, a growing number of economists started to question whether the traditional trade theory could really explain the world trade flows. The heart of the traditional trade theory is comparative advantage. According to it, the largest trade volumes should happen between countries with most different advantages. Nevertheless, in the real world, the largest trade volumes are those between countries with similar advantages. For example, the largest trade volumes appear between the United States, West European countries, Japan, etc, which are all relatively abundant with capital and have relatively similar industry technology. Furthermore, for many new industries, no country has obvious comparative advantage. They are trading similar goods. The US, West European countries, and Japan have been exporting and importing a large number of cars to and from each other for many years.

Some economists have been trying to explain the puzzles that the traditional trade theory cannot solve, and their explanation is known as New Trade theory. One explanation, associated in particular with Paul Krugman, the latest Nobel Economics Nobel Price winner, is economies of scale. It considers that traditional trade theory misses economies of scale. Trade will happen between countries in which production has achieved economies of scale. Furthermore, consumers have different tastes for similar products. That is why there are exports and imports of cars among the United States, West European countries, and Japan which have similar car manufacturing capabilities but consumers are expressing their variety of tastes.

Although the so-called New Trade Theory can explain some international trade phenomena that traditional trade theory cannot explain, it cannot overall deny the traditional theory. Much of the trade between developing countries and developed countries can still be explained by the theory of comparative advantage. The rapid growth of the trade between China and developed countries is a good example.

1.4.2.1 The Viner approach

Countries entering into a FTA experience altering trade flows owing to changed conditions of competition. According to Viner (1950) trade creation and trade diversion effects can occur. Trade creation effects arise if more competitive products from FTA partners replace domestic products.

The consequence is an increased consumption of cheaper substitutes, at the cost of local production. These effects are considered as positive, because increased foreign trade leads to a mutually beneficial

utilisation of specialisation advantages – and eventually of scale effects and dynamic competition effects. The result is an optimal factor allocation within the free trade area.

Trade diversion effects are changes of the direction of trade. Products formerly imported from the rest of the world are now imported from FTA partners because their production costs are lower than those of the rest of the world including customs duties. These effects are considered as welfare decreasing, since they encourage inefficient production. However, the negative effects of trade diversion are offset or overcome if the preferential removal of trade barriers between some countries is accompanied by a degree of liberalisation to all countries, whether undertaken unilaterally or through multilateral negotiations.

Thus, according to the approach of Viner, which is strongly anchored in traditional trade theory, a FTA is globally beneficial when the trade creation effects are greater than the trade diversion effects. The dominance of trade creation effects is more likely the more countries were trading with each other before entering into a FTA, because FTA partners replace inefficient domestic producers and will replace trade from the rest of the world only to a small extent. Furthermore, a substituting production structure should prevail, i.e. the two countries should stand in direct competition to each other. This implies that successful economic integration requires a similar level of industrial development, competitive industrial sectors and the potential for complementary development of industrial sectors (Meyn, 2004).

The latter point is picked by Venables (1999) by analysing the conditions that countries undertaking steps towards trade integration realise real income gains or losses and whether the integration will contribute to a convergence or divergence of per capita income. He shows within a new economic geography approach that the effects of trade integration depend on the comparative advantages of the member countries relative to each other and relative to the rest of the world. The country within a free trade area that has comparative advantages most different from the world average is most at risk from trade diversion. It is decisive, whether all members have comparative advantages of the same kind relative to the rest of the world or where the comparative advantages relative to the rest of the world are distributed on both sides of the world average. In the first case divergence of per capita income occurs, while in the second case convergence of per capita income occurs.

This argument should be clarified by the following example. Assume, two countries 1 and 2, both with a comparative disadvantage in the automotive industry compared to the rest of the world, conclude a FTA. At the same time country 1 has also a comparative disadvantage in the automotive industry relative to country 2. Before the FTA, both countries had a certain production of cars – protected by custom duties –

to supply domestic consumers. With a FTA, country 2 supplies country 1 with cars, while country 1 ceases its production of cars. The comparative advantages of country 2 move towards the world average while those of country 1 depart from it. The result is a divergence of per capita incomes with country 1 as the loser, because it experiences trade diversion effects of that kind that it no longer imports cars from the rest of the world, but is only supplied by country 2. Country 2 is the winner, because it supplies – sheltered from the rest of the world – country 1 with cars. However, if both countries have different comparative advantages compared to the rest of the world, trade creation effects dominate, because both countries could extend their comparative advantages.

However, approaches in a Vinerian tradition ignore that alongside with the static effects of trade integration, several dynamic effects can occur. For example, economies of scale occur due to the increased market size. Firms are able to expand their production and to use their capacities completely. Furthermore, the increased competition of the FTA leads to an efficient factor allocation and thereby, other things being equal, to price reductions. The effect is, again, an increase in demand for goods, which stimulates economic growth. Further effects of trade integration are learning and technology transfer effects, both resulting from close cooperation with other members of the FTA as well from investors from the rest of the world (Meyn, 2004). In turn, this is stimulated by an increased market and increased economies of scale (Hoeller et al., 2000; Krugman, 1991).

What follows from these arguments with regard to a FTA between catching-up countries – like India and the ASEAN countries – and industrialised countries? According to the approach of Venables (1999) both groups of countries might gain if their comparative advantages are distributed on both sides of the world average. However, one problem might be that the comparative advantages of EU countries are very heterogeneous – especially with regard to the automotive industry.

If different comparative advantages of the catching-up countries and the industrialised countries are based on different relative factor endowments, a FTA might enable the former to import cheap capital-intensive inputs and export labour-intensive manufactures, which would stimulate the division of labour. However, it can be argued that these effects might be not that large in the case of an EU-India and EU-ASEAN FTA, because the importance of proximity in trade is ignored.

Empirical evidence from the automotive industry, as well as from other sectors, shows that industrialised countries often use periphery markets for the outsourcing of production. In the case of the “old” EU member countries, central and eastern European countries offer cheap labour costs and lower transport costs. On the other hand, intra-industrial trade within the automotive sector already takes place between

the EU and India and the ASEAN countries, respectively, which might be further stimulated by a FTA, thus offering significant growth potential for the industry.⁶ Furthermore, trade integration with industrialised countries can help catching-up countries to develop their industrial capacities due to protected access to a larger market and strong cooperation (Kreinin/Plummer, 2002).

The view on the theoretical thinking about the effects of a FTA, with its conclusion that trade agreements may be beneficial or harmful depending on the particular countries involved and the extent of trade creation relative to trade diversion, implies that empirical work estimating these effects is particularly important. Because of data limitations, most studies do not try to measure the welfare effects of trade agreements, but instead take the first step down the path by estimating the impacts of the agreements on trade flows (Magee, 2008). Existing studies estimate changes in trade patterns due to trade agreements in two different ways. On the one hand, *ex post* studies examine trade flows after the trade agreement has been implemented and compare the actual trade levels with a prediction of trade without the trade agreement. On the other hand, *ex ante* studies use trade patterns and estimated elasticities or computable general equilibrium models prior to the agreement to calculate the predicted effects of eliminating trade barriers with partner countries. One common way of predicting trade flows, in the absence of a particular trade agreement, is by using a gravity model to predict bilateral trade flows based on the distance between countries, the size of their economies, and other variables such as whether the two countries speak the same language or have common borders. The effects of the agreement on trade are then measured by trade agreement dummy variables (Magee, 2008).

The number of studies concerning the impacts of FTA is now vast. Thus, we will focus on a few recent studies which use gravity models for panel data with fixed bilateral effects to capture the heterogeneity of bilateral trade relationships – the state of the art for this kind of models. All these models analyse the overall trade flows and do not undertake any sector differentiations. An analysis of the growing influence of emerging countries in the world car industry, by means of a panel data gravity model, can be found in Peridy/Abedini (2008). This study does not include the effects of trade agreements, but finds a highly significant negative impact of import tariffs applied to car imports in the receiving country on exports of cars. According to their estimates a one per cent increase of import tariffs implies a reduction of car exports to the corresponding country of between 0.085 and 0.336 per cent.

Carrère (2006) analyses the effects of regional trade agreements on trade flows and also takes possible trade diversion effects into account. She finds, for most regional trade agreements, positive intra-bloc trade effects, i.e. intra-EU trade is on average 104 % above trade of countries not belonging to a regional

⁶ See Meyn (2004) for a similar argument with regard to an EU-South African FTA.

trade agreement. At same time the EU is the only regional trade agreement stimulating both exports and imports from EU non-members (approximately 20 % above what is predicted by the panel gravity model).

Bhattacharya/Bhattacharyay (2007) investigated the potential effects of different types of preferential trading agreements and free trade agreements on Indian-Chinese trade flows. They find – depending on the type of agreement and the sectors considered – increases between 55.5 % and 155.59 % for Indian imports, while the effects for Chinese imports are smaller, namely between 16.8 % and 30 %.

Baier/Bergstrand (2007) find in their comprehensive study of the trade flows between 96 countries in a panel (for every five years) from 1960 to 2000, where they take 51 FTAs into account that, on average, a FTA approximately doubles two members' bilateral trade after 10 years.

De Santis/Vicarelli (2007) analyse the “deeper” and “wider” EU strategies of trade integration and evaluate, empirically, the effects of the EU Common Commercial Policy. They find that countries to the EU (the “deeper” strategy) imported on average 125 % more among themselves than they did from outsiders.

However, the EU PTAs policy (the “wider” strategy) towards third countries exerted an important impact on EU import flows (about 30 % on average). Magee (2008) investigated the time structure of the trade creation and trade diversion effects associated with trade agreements. He finds that there are clear anticipatory effects, with trade estimated to increase by 26 % on average in the years leading up to the start of a trade deal. Furthermore, his results provide evidence that trade continues to rise significantly over the first eleven years a trade agreement is in place, and the long-run impact is estimated to be an 89 % increase in trade flows.

1.4.3 Existing Study on FTA Impacts

There are numerous studies on FTA impacts. The EU webpage “Sustainability Impact Assessment” lists assessment reports of the impact of many FTAs between the EU and other countries and regions. Some are studies on FTAs in force, and others are on those still under negotiation; some are quantitative estimations, and others are qualitative analyses.

“Trade Sustainability Impact Assessment of the FTA between the EU and ASEAN” that ECORYS produced for the European Commission in 2009 concluded that, overall, the FTA is expected to have substantial positive impacts (GDP, income, trade and employment) for ASEAN, and small but positive effects for the European Union. In accordance with comparative advantage, in ASEAN the sector that would receive large positive impact would be the manufacturing sector, while for the EU it would be the services sector. The EU-ASEAN FTA would also affect third countries. For example, it would cause Pakistan’s exports to fall by 2.4 percent.

“A Qualitative Analysis of a Potential Free Trade Agreement between the European Union and South Korea” that CEPS produced for European Commission in 2007 states that their quantitative studies using CGE models indicate that there would be substantial gains from an EU-Korea FTA, but these gains would not be distributed evenly. Since Korea is more protectionist, it would receive the majority of the gains, about two-thirds, while the EU would receive about one-third. A significant part of the benefits to the EU would come from services liberalisation. This is because the EU has a comparative advantage in almost all service sub-sectors except utilities, gas and electricity. On the other hand, the main growth area in Korea’s economy and exports would be in motor vehicles.

Many FTA studies use theoretical models with some highly aggregate data. Between 2003 and 2004, Global Insight conducted FTA impact studies for the US Department of Labour. The studies used the models and detail data that Global Insight has been using in world trade forecasts, industry forecasts, and country economic forecasts. The studies focus on estimating the impact on employment of FTAs between the U.S. and Australia, the US and Central American countries, and the U.S. and Morocco. The estimation used world trade forecast models to estimate the FTA’s impact on the trade between the U.S. and these countries as well as on the world by detail commodity, then estimate the impact of the changes in trade on the US economies and these countries, by industry, using industry macroeconomic models of the countries, fed the changes back to the world trade forecast model and performed one more round of simulation, and, at the end, obtained the impact on employment by industry. That would be the most realistic quantitative estimation for predicting the FTA impact on the future.

1.5 New generation of FTA

1.5.1 Non Agricultural Market Access Doha Negotiations

Following the Doha Agenda, which includes an initiative to further liberalize trade on non-agricultural goods, in 2002 the Non-Agriculture Market Access Negotiating Group (NAMA) was created. NAMA

launched tariff-cutting negotiations on all non-agricultural products. The aim is to reduce, or as appropriate eliminate tariffs, including the reduction or elimination of tariff peaks, high tariffs, and tariff escalation, as well as non-tariff barriers. The negotiations particularly take into account the special needs and interests of developing and least-developed countries, and recognize that these countries do not need to match or reciprocate in full tariff reduction commitments by other participants.

The NAMA participants needed to reach agreement on the modalities of the tariff cut. Originally, negotiators decided that the modalities should be agreed by 31 May 2003. When that date was missed, members set the new target date to December 2005. On 6 December 2008, NAMA circulated a new revision of the draft of the modalities. The new revision provides further details and wider options for participants to negotiate a balanced final package for the full modalities.

Tariff reductions would be made by using separate coefficients for developed and developing country members by the application of a “simple” Swiss formula. Whereas the coefficient for developed members would be the same for all, there will be a menu of options for developing members that they will be able to apply according to the scale of the flexibilities they choose to use. The lower the coefficient the higher the flexibilities and vice versa. A Swiss formula produces deeper cuts on higher tariffs. (A higher coefficient, as envisaged for developing members, means lower reductions in tariffs).

- The maximum tariff in developed countries would be less than 8%. This would mean that developed countries would have tariffs at an average of below 3% with tariff peaks below 8% even on their most sensitive products.
- The majority of tariff lines for developing country members, applying the formula, would be less than 12-14%, depending on the coefficient and the flexibilities used. In the developing countries applying the formula, tariffs would be at an average of between 11-12% with only a limited number of tariff lines with levels above 15%.

The tariff reductions will be implemented gradually over a period of five years for developed members and ten years for developing members, starting 1 January of the year following the entry into force of the Doha results and would affect, amongst others, the automotive industry.

Otherwise, the automotive industry is also involved in a “sectoral initiative” with other 13 other sectors. Tariffs would be reduced or even brought down to zero under a voluntary agreement between members. But there is still no consensus on how and when to define the commitment of members to participate in these sectoral initiatives.

1.5.2 New EU GSP

The EU's GSP is a trade arrangement through which the EU provides preferential access to the EU market to 176 developing countries and territories, in the form of reduced tariffs for their goods when entering the EU market. There is no expectation or requirement that this access be reciprocated. It is implemented by a Council Regulation applicable for a period of three years at a time.

The EU is applying a new GSP scheme for the period from 1 January 2009 to 31 December 2011. The new GSP follows the guiding principles for the GSP during the 10-year period of 2005 to 2015, and makes it more predictable and transparent to users.

The new GSP renews three separate arrangements:

- the standard GSP, which provides autonomous preferences to 176 developing countries and territories on over 6300 tariff lines;
- the Special Incentive Arrangement for Sustainable Development and Good Governance (known as the GSP+), which offers additional preferences to support vulnerable developing countries in their ratification and implementation of relevant international conventions in these fields; and
- the Everything But Arms (EBA) arrangement, which provides Duty-Free, Quota-Free access for the 50 Least-Developed Countries (LDCs).

The most important change of the new GSP is that it will apply the graduation/de-graduation mechanism to either suspend or re-establish preferences whenever an individual country's performance on the EU market over three years is significantly different than the threshold set. This mechanism does not affect LDC access under EBA arrangement.

1.5.3 EU – South Korea FTA example

The EU and South Korea are currently engaged in negotiations for a Free Trade Agreement. South Korea is the EU's eighth largest trade partner and the EU has become South Korea's second largest export destination. The EU has been the single largest foreign investor in South Korea since 1962 and accounted for almost 45% of all FDI inflows into Korea in 2006. Nevertheless, EU companies have significant problems accessing and operating in the South Korean market due to stringent standards and testing requirements for products and services often creating barriers to trade. The EU is seeking to improve this situation.

The current status of trade relations between the EU and Korea are governed by their respective WTO commitments and also the Trade and Cooperation Agreement between the EU and Korea signed in 2001. However, this framework agreement does not seem to have made the necessary improvements. The EU is seeking a 'deep' FTA with Korea that successfully eliminates not only the tariff barriers but also the non-tariff barriers, as well as securing investment and services liberalization. The EU considers that the most important elements in the EU-Korea FTA for the EU should include:

- Elimination of non-tariff barriers (e.g. automotive sector),
- Liberalization in the services sector,
- Removal of barriers to investment (especially in the service sector) and
- Transparency in the regulatory environment.

In May 2007, the EU-Korea FTA negotiations were launched in Seoul. Both sides believed that it would be possible to complete the negotiations in 2008. However, until the last round of negotiation in March 2009, the sides only reached provisional agreements. They have yet to find ways to narrow their gaps in issues such as duty drawback in order to conclude the negotiation.

Chapter 2

Automotive Industry Size and Importance in National Markets

2 Automotive Industry Size and Importance in National Markets

This chapter looks at the role that the automotive industry plays in Europe, India and ASEAN region. It examines the economic importance of the industry for respective national market in terms of employment, value and volume.

The automotive industry can be split into three main categories: light vehicles, which comprises passenger cars and light commercial vehicles (LCVs), heavy commercial vehicles (HCVs), and automotive parts and components.

For India and ASEAN region, this chapter includes also the two wheeler vehicle market, which could be viewed as a substitute market to the four wheeler vehicle market.

2.1 EU Automotive Industry

2.1.1 Economic Importance

The EU enjoyed a leading position in global vehicle production up to 2008; but, with the crisis, Asia is now the first production region, thanks to very high growth, especially in China, the ongoing force of the Japanese manufacturers, and a fall in production in Europe to 18,4 million. At 18,4 million units the EU represented 35% of global vehicle output.

2.1.1.1 Employment

In 2007, 2,2 million people were directly involved in the production of motor vehicles and components in the 27 EU member states. This corresponds to almost 6.5% of all manufacturing employment in the EU-27, or 1% of total employment in the EU. Taking into account indirect employment, the automotive industry accounted for 12,1 million jobs.

Exhibit 7 Automotive Sector: Direct and Indirect* Employment in 2007 (in M persons)

<i>Sector</i>	<i>Jobs Involved</i>	<i>Total jobs</i>
Automotive Industry (Manufacturing)	2.2	12.1
<ul style="list-style-type: none"> • Automobile manufacturing • Equipment and accessories • Bodywork, trailer, caravans 		
Other Manufacturing Activities		
<ul style="list-style-type: none"> • Manufacture, retreading & rebuilding of rubber tyres & tubes • Manufacture of bearings, gears, gearing & driving elements • Manufacture of cooling & ventilation equipment • Manufacture of electric motors, generators & transformers • Manufacture of electrical equipment for engines & vehicles (not elsewhere reported) 		
Automobile Use	9.8	
<ul style="list-style-type: none"> • Sale and distribution of motor vehicles • Maintenance & repair of motor vehicles • Sale of motor vehicle parts & accessories • Vehicle testing • Sale of motor fuels • Automotive recycling activities 		
Transport		
<ul style="list-style-type: none"> • Road transport (passengers & freight, outsourced & in-house) • Construction of highways, roads, airfields & sport facilities 		

Source: EUROSTAT

* Indirect employment data do not report employment in raw material sector (e.g. steel, aluminium, glass, etc), textile, driving schools, licensing activities, renting of automobiles, vehicle testing, vehicle insurance and financing, etc

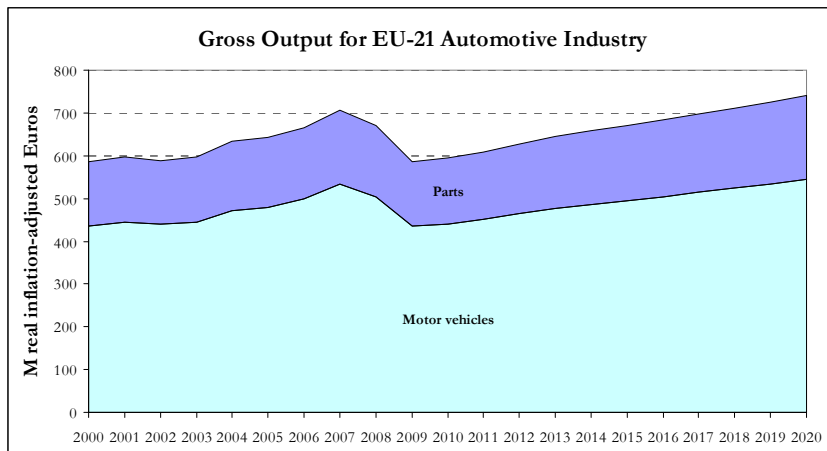
2.1.1.2 Economic Contribution

EU Automotive contribution to GDP

The inevitable consequence of the worldwide decline in demand will be, at automotive industry level, a reduction in employment levels, production shut-downs and strong budget restraints. According to ACEA, production facilities could close and billions of Euros in revenue are threatened by the economic slowdown.

EU automotive gross output reached €669 Bn in 2008, 5.4% of GDP and is forecast to fall to 4% of GDP by 2020.

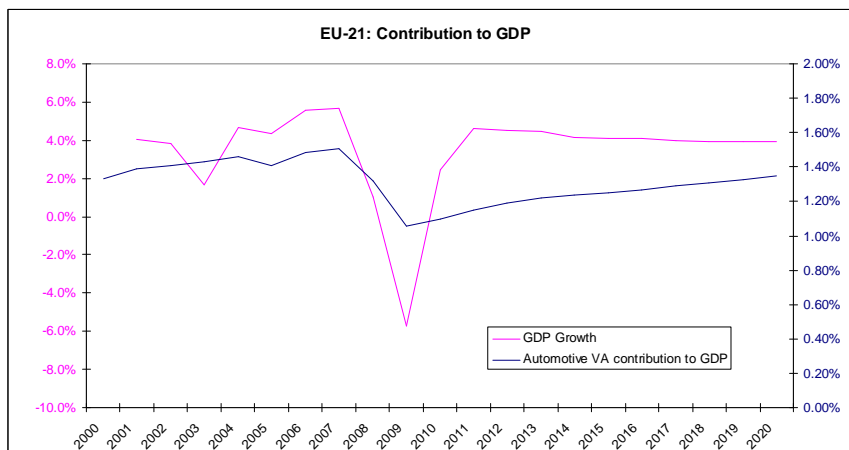
Exhibit 8



Source IHS GLOBAL INSIGHT

So, the 2008 crisis, which has had a deep impact upon the European automotive industry will have a long term detrimental effect upon the economic contribution of the industry to European GDP. IHS Global Insight foresees a fall of automotive VA as a % of global GDP to less than 1.4% by 2020.

Exhibit 9



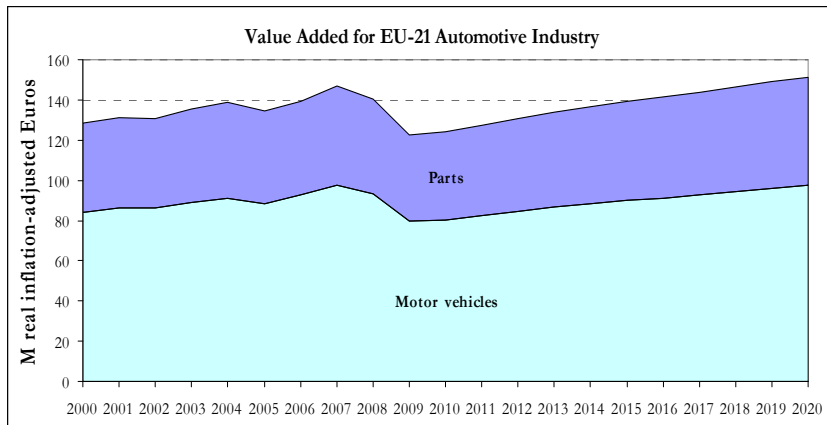
Source IHS GLOBAL INSIGHT

EU Automotive Value Added

Value added of automotive production accounts for 7.8% of EU-27 manufacturing value added, with only 6.5% total EU-27 manufacturing employees in 2008. The Big 5 European countries accounted for 79% of European automotive value added. The motor vehicle sector contributes to more than two third

of the automotive value added. This compared with 2007 levels of €147 million which are unlikely to be realised again before 2018.

Exhibit 10

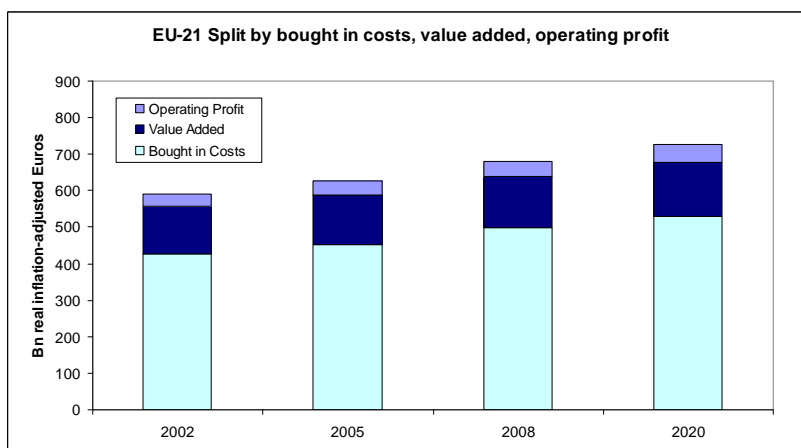


Source IHS GLOBAL INSIGHT

EU Automotive Operating Surplus

As a characteristic of a mature market, the profitability of the European automotive industry is still relatively stable in the long term, varying on average around 5% to 6% of automotive gross output; this reflects the anticipated capabilities of European automotive manufacturers and components suppliers to overcome economic fluctuations (downturn and higher material prices) by a strong competitiveness (constant productivity improvements, price pressure on suppliers, innovations...).

Exhibit 11

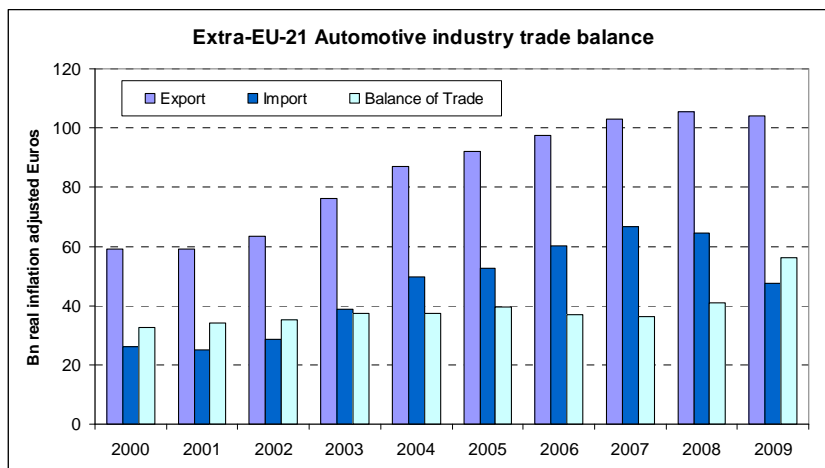


Source IHS GLOBAL INSIGHT; 3 years in moving average

2.1.1.3 Trade

The automotive industry is of prime importance to EU trade, generating a positive surplus which is expected to increase from €41 million in 2008 to €5 million in 2009 (mainly due to a decrease of import as a direct consequence of lower internal demand).

Exhibit 12



Source IHS GLOBAL INSIGHT

Germany (55% of EU-21 export) is the main extra EU-21 exporter, followed by the UK (11%), France (7%) and Italy (5%) in 2008. European automotive exports are mainly destined to the US market (29%), Russia (11%), Turkey (8%) and China (7%).

Japan dominates the European automotive imports, with over one third (33%) in 2008. The US and South-Korea are the next most important markets with respectively 20% and 16% of the extra-EU-21 imports. Around one quarter of these overall imports arrived in Germany in 2008.

2.1.2 Automotive Industry Overview

European vehicle and component manufacturers not only dominate the domestic market, but also control significant shares of other established and emerging global markets. European vehicles are renowned worldwide for their design, technology, performance, and efficiency. These competitive advantages have enabled European manufacturers to maintain domestic share while gaining ground in foreign markets.

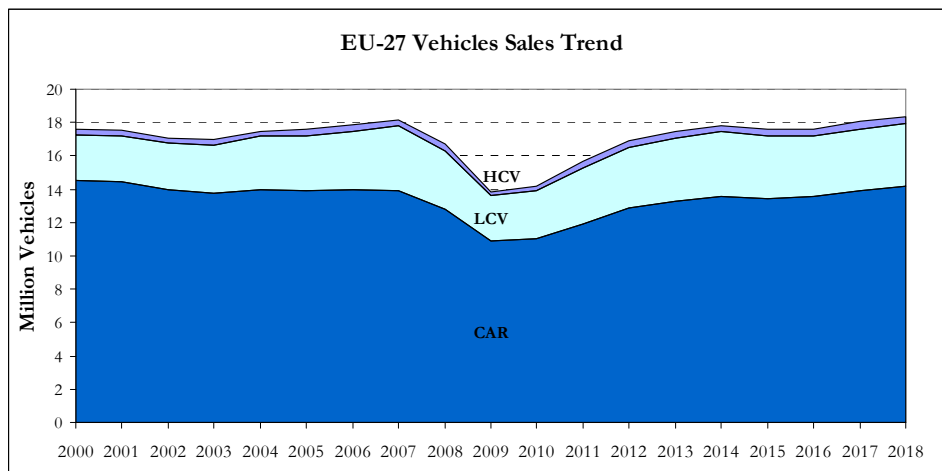
2.1.2.1 Vehicles Market

All markets - light and heavy vehicles, production and sales - suffered in 2008. Light vehicles production fell to 18,4 million units and sales of 16,7 million units in 2008 and heavy vehicles recovered production of 566,000 units, sales of 395,000 units.

Despite the fact that the heavy commercial vehicle segment is much smaller in the overall volume, Europe's HCV industry is a global leader and a key industrial asset in which almost every EU Member State has a stake. Because an HCV's unit value is so much greater than a car's unit value and because of the technology leadership of the European manufacturers, HCVs represent a highly significant market segment in Europe with the EU traditionally a production hub for heavy-duty exports around the world.

The LCV and the HCV market have recorded strong growth in the past (respectively 5% and 2% in average per year since 2000). But the passenger car market, before the crisis, reached the limit of 14 million of sales per year, consequence of a saturated market. For the overall market, the recovery in sales will take many years to recover to 2007 level.

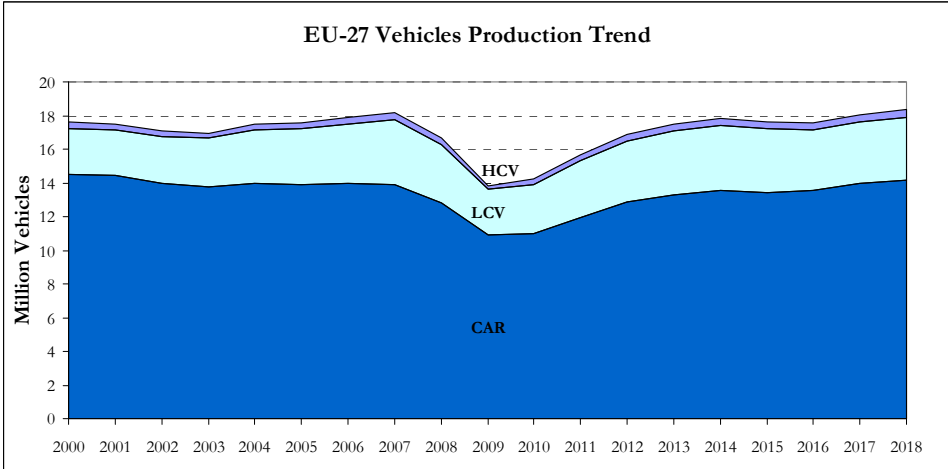
Exhibit 13



Source: IHS GLOBAL INSIGHT

European production is focused in the Big 5 markets of Germany, France, Spain, the UK, and Italy. Together, these five markets supplied 75% of total automotive EU production in 2008. Germany leads all European countries, representing over 33% of total EU vehicle production. Europe's largest manufacturer, Volkswagen, locates over 50% of its production in its home market of Germany.

Exhibit 14



Source IHS GLOBAL INSIGHT

2.1.2.2 Original Equipment Suppliers

Suppliers are a critical element of the automotive value chain, contributing, typically, 75% of a vehicle's original equipment (OE) components and technology. European automotive suppliers are global players renowned for their technology and innovation (particularly in electronics, powertrain, and driveline components) but just like their vehicle-producing clients, European suppliers are challenged by market pressures and must restructure their operations to remain competitive.

According to CLEPA, the European Association of automotive suppliers, the sector includes 3,000 member companies, of which 2,500 are SME. With over 3 million employees, automotive suppliers are active in all EU states. Due to their domestic vehicle production industries, Germany and France constitute the largest supplier countries. It is worth noting that suppliers supply not just the original equipment market but also the aftermarket for replacement parts.

2.2 India Automotive Industry

2.2.1 Economic Importance

In 2008, India was the 2nd largest market in the world for two wheelers, the 5th for commercial vehicles, and the 8th for passenger cars. It is expected that by 2030, the Indian car market will be the 3rd largest car market across the globe. India is already the 7th global vehicle producer in terms of units.

2.2.1.1 Employment

The automobile sector in India employs more than 10 million people. The Indian Automotive Mission plan projects that by 2016, 62 % of the automotive employees will be skilled workers.

On a conservative basis, they estimate that 5.3, 13.3, 0.5 and 3.9 units of direct and indirect employment are generated per unit of car, CV, 2-wheeler and 3-wheeler produced respectively. This translates into an additional employment generation of 25 million by the automobile industry by 2016.

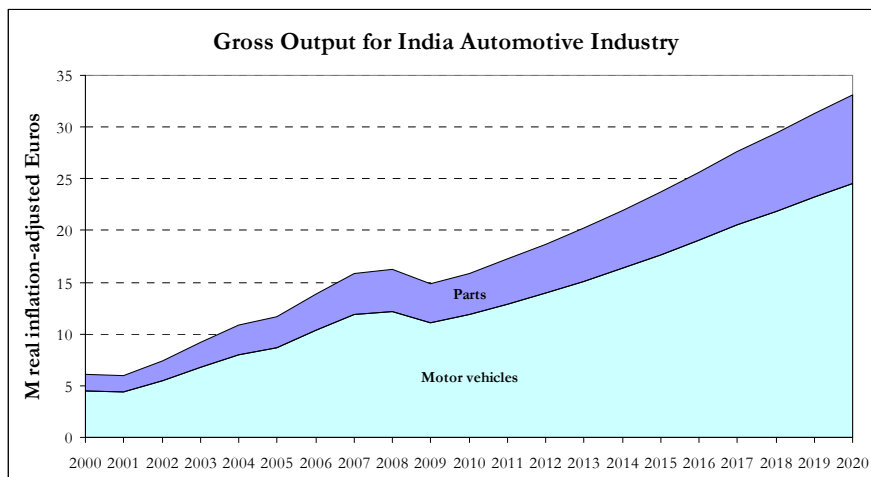
2.2.1.2 Economic Contribution

Indian Automotive contribution to GDP

According to the Indian automotive mission plan, the automotive contribution to Indian GDP was 5 % in 2006 and is expected to reach 10 % in 2016.

In 2008, automotive gross output (motor vehicles and parts) reached €16,3 billion and will grow to €33,1 billion in 2020, almost double that of 2008. But even if India still enjoys one of the most favourable growth rates, the effect of the crisis is having a negative effect on the demand for new vehicle in the short term. Automotive gross output totalised 1.9% of the total GDP in 2008.

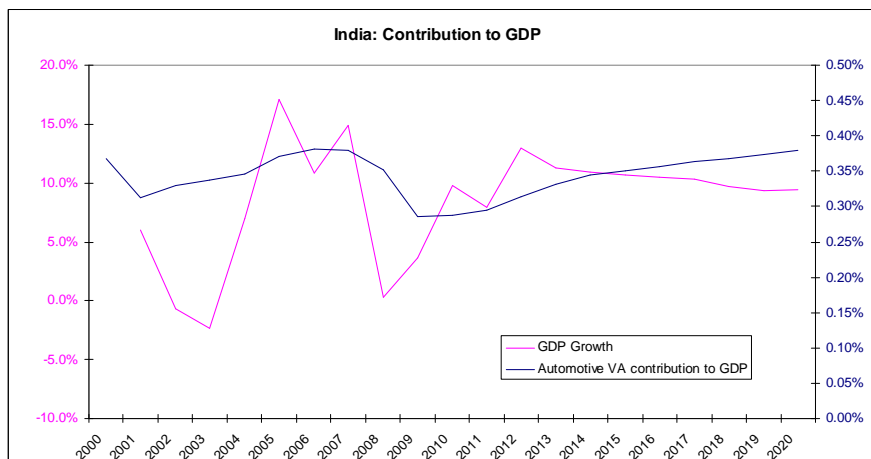
Exhibit 15



Source : IHS GLOBAL INSIGHT

The share of automotive value added in GDP will grow slowly from 0.29% in 2009 to 0.38% in 2020.

Exhibit 16

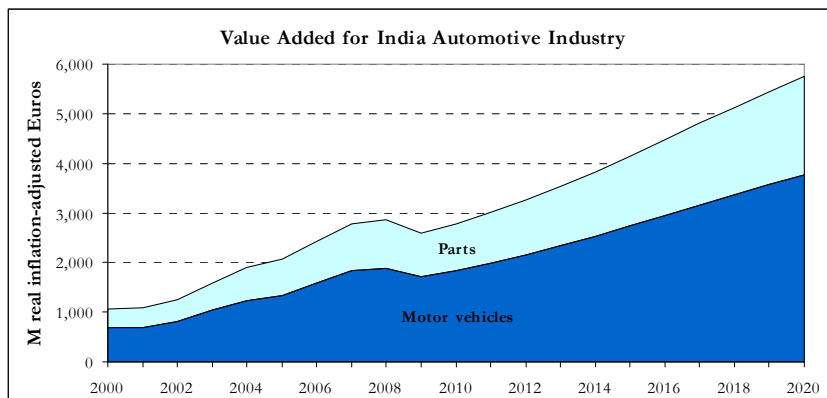


Source : IHS GLOBAL INSIGHT

Automotive Value Added

The value added of the Indian automotive industry has experienced a strong annual average growth rate of 9% since 2000. In 2008, the value added of motor vehicles and parts reached €2,8 billion which represented 2.3% of the overall value added in manufacturing activities in India. Motor vehicles accounted for 66% of 2008 auto value added.

Exhibit 17

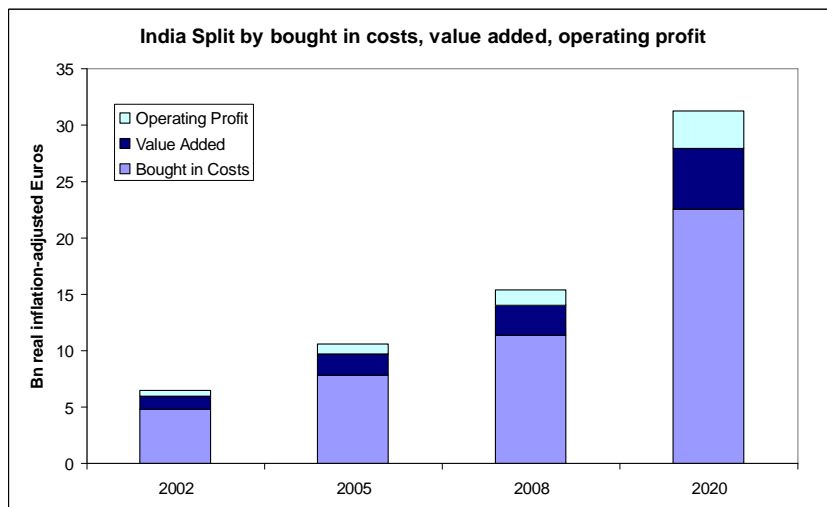


Source : IHS GLOBAL INSIGHT

Indian Automotive Gross Operating Surplus

Gross operating surplus of the Indian automotive industry is forecast to grow in the long term faster than gross output as its share in gross output will increase from 7.5% in 2002 to 10.5% in 2020.

Exhibit 18

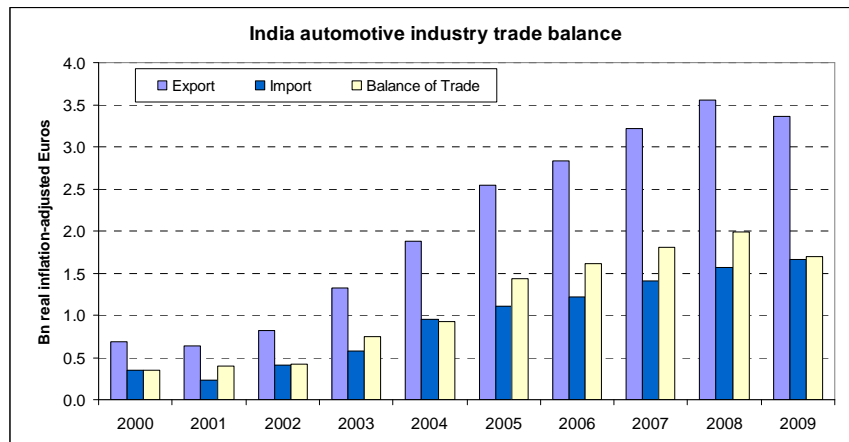


Source : IHS GLOBAL INSIGHT

2.2.1.3 Trade

Although the value of automotive industry trade has multiplied almost 5 times since 2000 and presents a global surplus of €1,5 to €2 billion per annum for each of the last four years, this is still relatively small compared to the value of the India automotive industry; which reached €31,2 billion in 2008.

Import penetration is growing very slowly due to high import tariffs and non tariffs barriers to trade.

Exhibit 19

Source IHS GLOBAL INSIGHT, WTS

South Korea is the main partners of India for imports (44% of value in 2008) followed by Japan (19%), due to the strong penetration in the Indian market of Hyundai and Toyota.

Indian exports are very fragmented key market, being the US (15%), South Africa (13%) and Italy (7%, reflecting the cooperation between Fiat Group and Tata).

2.2.2 Automotive Industry Overview

Following the strong growth in 2006, when sales exceeded 1 million units for the first time, India overtook South Korea to become the third largest car market in Asia, behind Japan and China. But passenger cars per 1,000 population (9.4 in 2008, 23.7 expected in 2018) is still very low compared to global or even regional norms.

Historically, the Indian market has been dominated by several national manufacturers (Tata Motors, Maruti Udyog (Suzuki), Ashok Leyland, Mahindra & Mahindra) but several international players (Hyundai, Toyota, GM and Honda) have entered progressively the market.

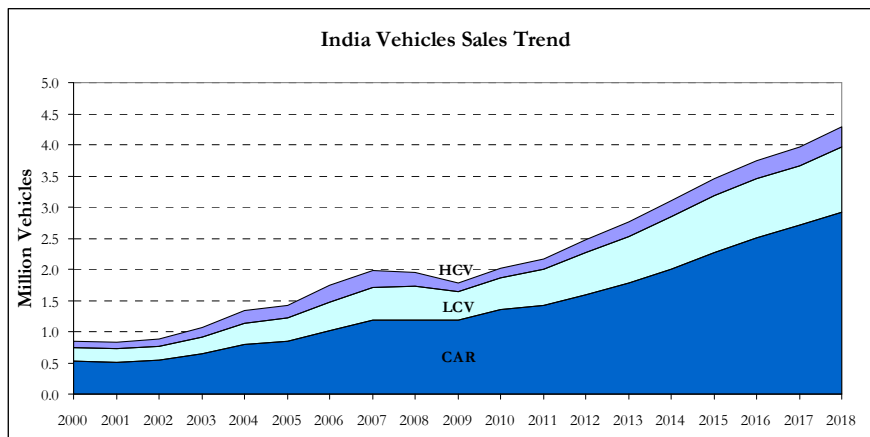
Now the increased popularity of compact vehicles in the country has lifted India's prospects of becoming a global base for the export of small cars. In recent years major overseas players have established significant manufacturing operations in the country, prompting local manufacturers such as Tata and Maruti to build even larger facilities.

2.2.2.1 Vehicles Market

The light vehicles market totalled 1,7 million units in 2008, 89% of the Indian vehicles market. Car sales in India have doubled in the last five years and stood at 1,2 million units in 2008. The impact of the crisis has been counterbalanced by the strong opportunity growth in the long term. On the other hand, the commercial vehicle market (LCV and HCV) will be particularly adversely affected in 2009 with negative growth of respectively -14% and -42% forecast, and will only recover to 2007 levels in 2010 for LCV and 2015, for HCV.

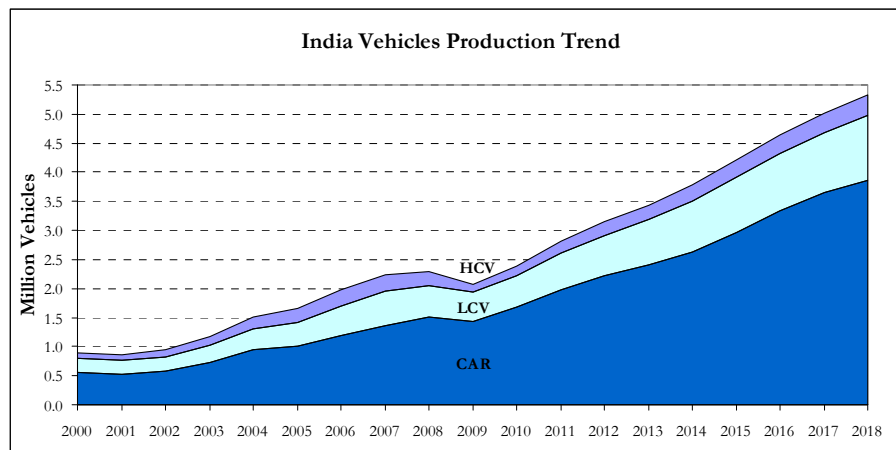
Investment in capacity expansion and new product launches is expected to be maintained (or at least postponed), and this will further improve consumer choice and intensify competition. There is also further scope for cuts in the taxation burden on vehicle purchase. We expect total vehicle demand to grow to around 4,3 million units by 2018.

Exhibit 20



Source : IHS GLOBAL INSIGHT

2009, will be a decreasing production phase for all the vehicle market but the recovery will be very strong, specially for the light vehicle market. And India with more than 2 million vehicles produced in 2007 and 4 million forecast in 2013 is a major challenger in Asia.

Exhibit 21

Source : IHS GLOBAL INSIGHT

2.2.2.2 Motorcycle Vehicles

Two wheelers are still in 2008 the major personal transport in India (qualified as a intrinsic characteristic of the country) with more than 76% of domestic market volume, against 16% for passenger cars and 4% for commercial vehicles.

Two wheeler production is mainly destined to the local market. The majority of Indians, especially the young and the middle class prefer motorbikes to cars. Frost and Sullivan expect that the two wheeler market in India will reach 10 million units in 2010.

But demand for low-cost, no-frills passenger cars continues to grow both in smaller towns and in rural areas. Tata's Nano will facilitate the movement from two-wheelers to passenger cars.

Exhibit 22 Two Wheelers Market size

<i>Trends (Number of Vehicles)</i>							
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Production	5,076,221	5,622,741	6,529,829	7,608,697	8,466,666	8,026,681	8,418,626
Domestic sales	4,812,126	5,364,249	6,209,765	7,052,391	7,872,334	7,249,278	7,437,670

Source SIAM

2.2.2.3 Original Equipment Suppliers

According to ACMA, there is a total of 500 component suppliers in the organised sector which totalised a global turnover to US\$18,000 millions in 2008, but few with sales exceeding US\$250 million sales.

India's automotive supplier sector has evolved rapidly over recent years and this has not escaped the attention of carmakers and global Tier-1 suppliers. The success of the supplier industry here to date has established India as a serious contender. Due to improvements in technological performance and quality control, Indian suppliers are now in a position to take advantage of the move to outsource components. As vehicle manufacturers, such as Cummins, Daimler, GM and Suzuki have relocated to India and established International Purchasing Offices (IPOs), international component suppliers (e.g. ArvinMeritor, Bosch, Delphi and Visteon) have followed, providing an excellent opportunity for Indian suppliers to expand their business. Other organisations poised to take financial advantage of this outsourcing trend are BMW, Borg Warner, Honeywell Turbochargers, and Pratt and Whitney, which are all establishing a presence in India.

2.3 ASEAN Automotive Industry

2.3.1 Economic Importance

Formed in 1967, the Association of South East Asian Nations (ASEAN) is one of the most important regions in Asia. With a real GDP of over €854 billion (more than India), the region includes many of the fastest growing economies such as Malaysia, Indonesia and Thailand. Other member countries include Cambodia, Myanmar, the Philippines and Vietnam, which are slowly but steadily catching up.

As a group, the ASEAN region has been one of the automotive hubs of Asia over the last three decades with a total production of more than 3 million of vehicles. Countries like Thailand, Indonesia and Malaysia have been able to attract investment from global vehicle manufacturers, particularly those based in Japan.

- Thailand is one of the biggest automotive production and assembly bases in the ASEAN with a presence of almost all global vehicle manufacturers. The country is also the world's second largest pick-up (PUP) vehicle market after US.

- The Indonesian automotive industry is dominated by assemblers; especially in completely knocked down (CKD) versions. Three major assemblers in the domestic market – the Astra group, the Indomobile Group and Karma Yuda Tiga Berlian – together assemble 17 out of 22 brands in Indonesia.
- Malaysia is the challenger in the ASEAN countries despite its level of protection (for national manufacturers Proton and Peruda), the country represents an attractive growth opportunity both in terms of positive macroeconomic indicators and vehicle market sales.

2.3.1.1 Employment

According to the latest figures of OICA, the three main automotive market in ASEAN employed directly around 300,000 workers of which more than half were in Thailand..

Exhibit 23 Direct employment in the automotive industry of main ASEAN countries

	<i>2004 or latest available figures</i>
Indonesia	64,000
Malaysia	47,000
Thailand	182,000

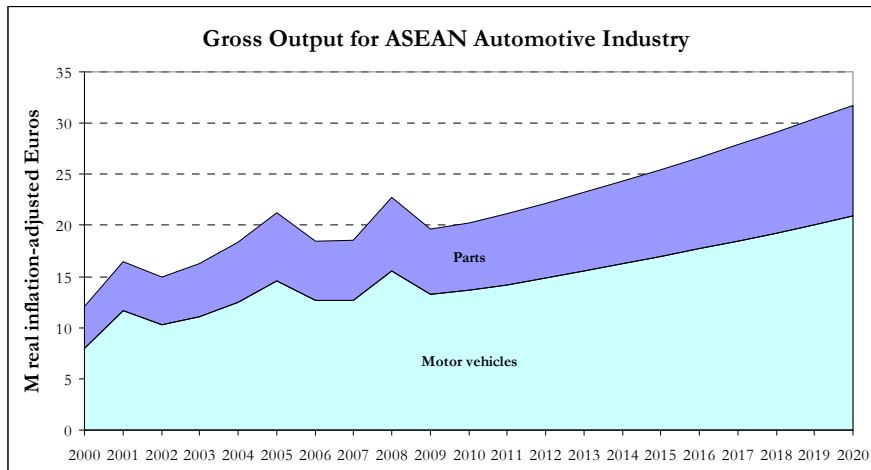
Source OICA

2.3.1.2 Economic Contribution

ASEAN Automotive contribution to GDP

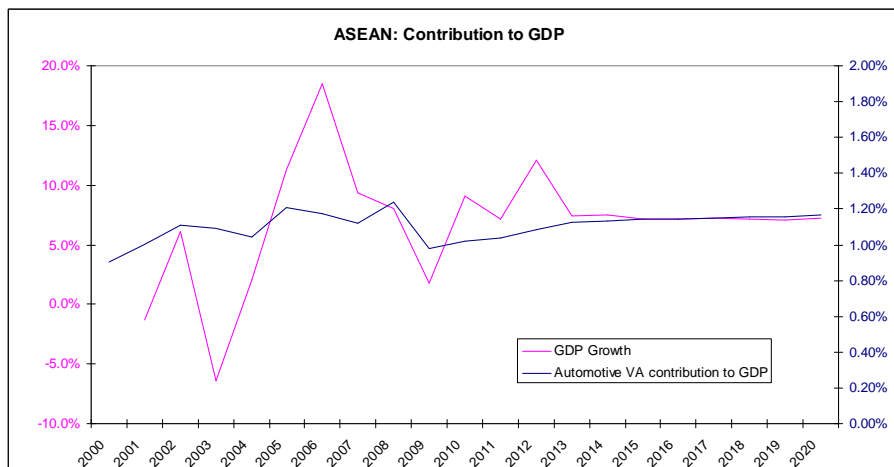
The automotive gross output of the ASEAN reached more than €22,7 billion in 2008 which represented 2,3% of the overall GDP. Value added of the automotive sector contributed to around 1% to 1.2% of the total GDP despite the fact that many of the economies were strongly affected by the international crisis.

Exhibit 24



Source : IHS GLOBAL INSIGHT

Exhibit 25

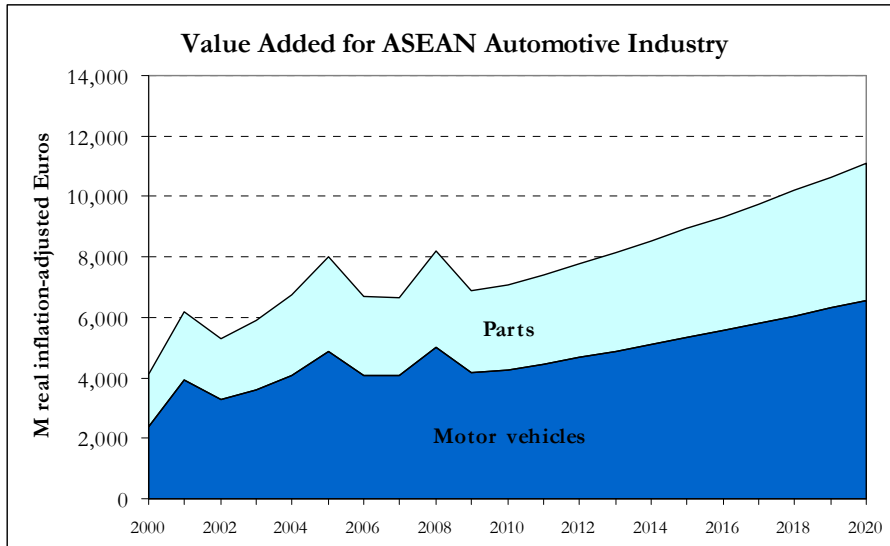


Source : IHS GLOBAL INSIGHT

ASEAN Automotive Value Added

For five years, the automotive value added of the region oscillates between €6 to €8 billion. The ASEAN automotive industry’s weight in the manufacturing sector was 3.6% in 2008, with the motor vehicle sector, like the EU and India, representing the dominant share (60% of the total).

Exhibit 26

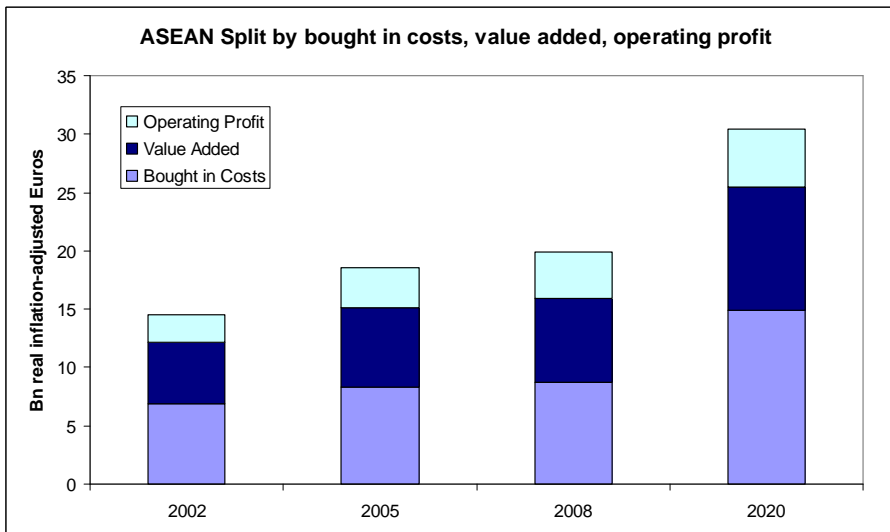


Source : IHS GLOBAL INSIGHT

ASEAN Automotive Operating Surplus

The region is expected to offer huge opportunities in the long term: a strong growth of the automotive output, which is forecast to double in value to reach more than €30 billion in 2020, and an extremely high profit share (20% in 2008). Although such high profit margins are unlikely to be available if and when the ASEAN markets cease to be “protected”.

Exhibit 27

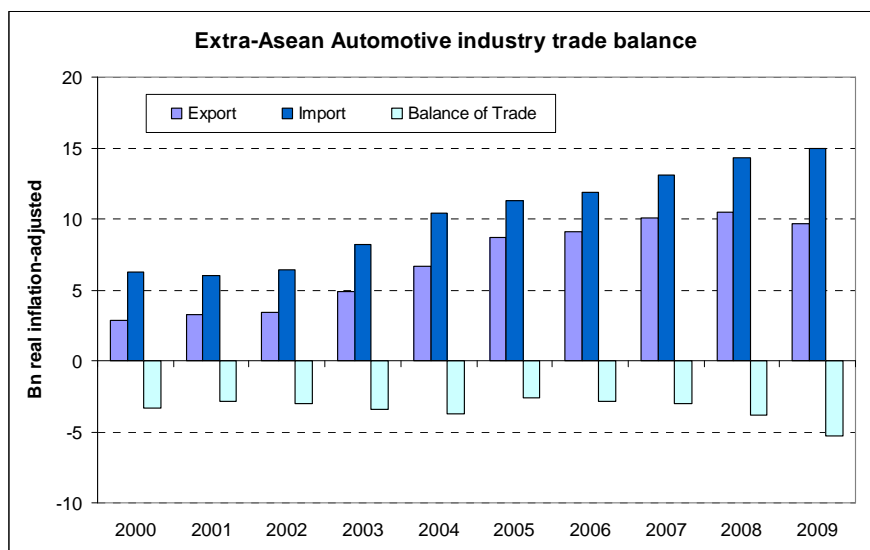


Source : IHS GLOBAL INSIGHT

2.3.1.3 Trade

Like the EU, trade within the Asean region in the automotive sector is really important, representing 75% for exports and 80% for imports. However, net trade balance outside of the Asean region highlights a structural deficit in the automotive sector at around €3 billion rising to more than €5 billion in 2009. But the region represents an example as it progressively opens economies to external trade, with both exports and imports registering growth of more than 10% on average each year on the last few years.

Exhibit 28



Source : IHS GLOBAL INSIGHT

Japan is the main partner of the ASEAN with a share of 55% of its imports and 15% of its exports. The other major trading partners are also within the Asian-Pacific region, particularly Australia (20% of ASEAN exports; Australia has a FTA with Thailand) and South Korea and China (respectively 14% and 10% of ASEAN imports).

2.3.2 Automotive Industry Overview

With 2 million vehicles sales and 2,6 million vehicles produced, the automotive weight of the ASEAN in the world is quite small, less than 5% of global output. But within Asia, the ASEAN countries are the 4th vehicle producer.

Since ASEAN countries started adopting the timetable for reducing tariffs under the ASEAN Free Trade Area (AFTA) agreements, several OEMs have been rationalising their production operations in the region, and imports from other Association of South East Asian Nations (ASEAN) countries (mainly Thailand) have been displacing domestically assembled vehicles.

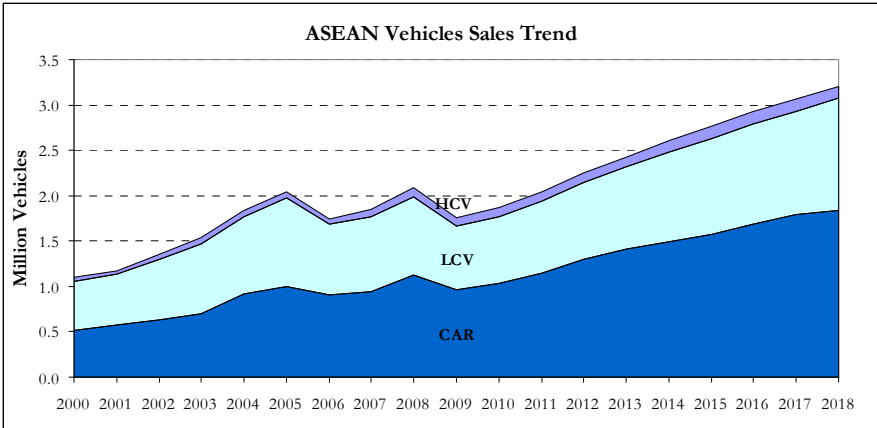
2.3.2.1 Vehicles Market

In comparison to the EU and India, the LCV market is of particular importance, reaching 95% in terms of vehicle sales and 93% in term of vehicle production, due to the strength of the LCV market in Thailand and Indonesia. In these countries, there is a preferential excise tax structure which favours vehicles classified LCV (for example, pick-up vehicles in Thailand).

The implementation of the Eco-Car project in Thailand will result in a migration from pick-up trucks to small cars and provide a boost to car sales in a near future.

Thailand, Indonesia and Malaysia shared the vehicles sales market relatively equally and totalled around 95% of ASEAN vehicles sales in 2008. Malaysia is the ASEAN country which has the highest number of cars per 1,000 habitant with 265.6 in 2008; others follow far behind with 39.6 for Thailand, 9.7 for Philippines and 5.5 for Indonesia. The region will quickly bounce back from the international crisis. Further improvements in the national economies (credit environment and taxation system) will support additional healthy growth in the medium term for LCV. But also, high activity in the construction, plantation, and mining sectors will boost HCV market.

Exhibit 29



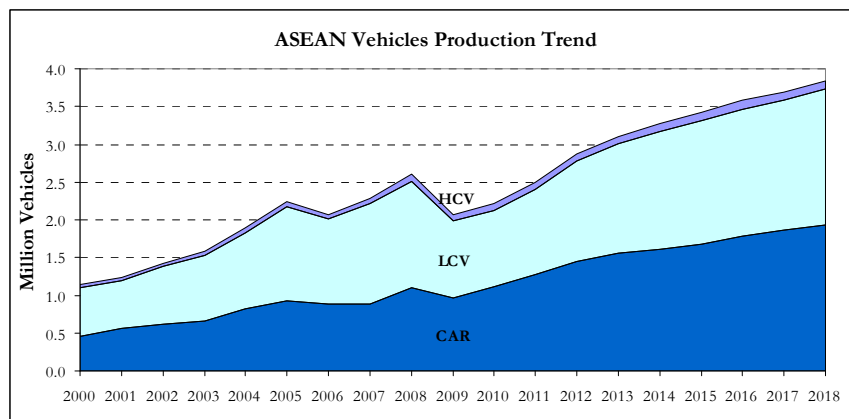
Source : IHS GLOBAL INSIGHT

Thailand remains the most important local producer with 1,4 million of vehicles, more than half the ASEAN production. Thailand's Master Plan for the Automotive Industry is in its phase two (covering 2007–10) with an ambitious production target of two million units in 2010: one million units for the domestic market plus one million units for export.

The industry development plan also includes the establishment of an automotive industry information centre, the introduction of an information authentication system, the start of cluster development, the establishment of R&D and test centres, and the promotion of parts for export.

In general, the improving outlook for the development of national domestic demand together with higher levels of exports will support healthy increases of production in the region.

Exhibit 30



Source : IHS GLOBAL INSIGHT

2.3.2.2 Motorcycle Vehicles

According to latest sources, motorcycles accounted for the largest share of number of registered road vehicles (61% in Thailand, 49% in Malaysia, 48% in Philippines, more than 80% in Indonesia).

Motorcycles sales reached 671,588 units in 2007 in Philippines and still continue to register a strong growth (7% on average per year during the last 3 years).

Exhibit 31 Two Wheelers Market size in Thailand

<i>Trends (000's Vehicles)</i>							
	2002	2003	2004	2005	2006	2007	2008
Production	1,962	2,378	2,867	2,359	2,079	1,653	1,924
Sales	1,327	1,767	2,026	2,112	2,054	1,599	1,703

Source : The Thai Automotive Industry Association

2.3.2.3 Original Equipment Suppliers

Over the past decade, the components industry has gone through a complete remodelling leading to the emergence of a highly competitive global industry. Multinational vehicle manufacturers have not only become a prominent part of the Asian components industry supply chain but have also started using the local Asian suppliers for their regional and global component needs.

The world's leading auto parts suppliers such as Magna, Mahle and Sumitomo Rubber have all invested in Thailand. Magna International set up a new office in Bangkok (Thailand) to serve the growing local market and to realise the export potential from the region. Sumitomo Rubber decided to build its second tyre manufacturing plant in Thailand through investing ¥23bn (US\$205.1m). In 2005, Mahle increased its share in Izumi Piston Manufacturing Co. (Thailand) Ltd from 34% to 52% and strengthened its position in the Thai automotive market. The company now operates as Mahle Engine Components Thailand Ltd and supplies 1.8 million pistons annually to the Thai market. The industry has also attracted investment from regional companies of Taiwan, Korea and Japan who are looking for an efficient low cost manufacturing base in ASEAN.

How ASEAN will continue to attract investment is an important question, especially in an era of globalisation when market potential is playing an increasingly significant role. The low cost of production is also important, particularly for outsourcing and export purposes, but where investment decisions are to be made, market potential is often the driver. Other factors such as availability of better infrastructure and skilled labour force also play a significant role.

Chapter 3

Trade in Vehicles and Automotive Components between EU and India / ASEAN

3 Trade in Vehicles and Automotive Components between EU and India / ASEAN

3.1 Classification and Nomenclature Differences between Eurostat and UN

The search for greater comparability of international merchandise trade statistics has been going on for a very long time. In 1950, the United Nations Secretariat drew up the United Nations Standard International Trade Classification (referred to as SITC). By 1960, many countries were compiling international merchandise trade data according to the original SITC or national classifications correlated to it and major international organizations had adopted SITC as a basis for the reporting of international trade statistics. Some countries also used the original SITC as the basis of their customs nomenclatures.

At the same time, in many European countries and in a number of countries outside Europe, customs tariff nomenclature was based on the 1955 Tariff Nomenclature (BTN) of the Customs Cooperation Council. BTN was an internationally agreed nomenclature by which products were grouped according to the nature of the material of which they were made, as had been traditional in customs nomenclatures. Consequently, data based on BTN had to be regrouped in order to provide economic statistics, since for economic analysis it is necessary that aggregates be available for classes of goods such as food, raw materials, chemicals, machinery and transport equipment and also for groupings of commodities by stage of fabrication and by industrial origin.

The regrouping of BTN data into the form of the original SITC involved numerous subdivisions of BTN items. Considerable statistical resources were therefore required to regroup, giving rise to serious inconveniences for the developed countries and almost insuperable obstacles for the countries whose statistical resources were limited, when they attempted to use both the original SITC and BTN.

Both the EU legislation and national practices are for the most part in line with the recent recommendations of the United Nations (1998). But there are some differences. Community rules differ as between intra-EU trade and extra-EU trade. The following sections describe the main features of the largely harmonised statistics on trade in goods as published by Eurostat. It should be noted,

however, that data published by individual Member States of their own trade do not always follow the concepts and definitions applicable for data transmitted to Eurostat.

3.1.1 General Trade and Special Trade

There are broadly two approaches, closely linked with customs procedures, used for the measurement of international trade in goods.

- The general trade system is the wider concept and under it the recorded aggregates include all goods entering or leaving the economic territory of a country with the exception of simple transit trade. In particular, all goods which are received into customs warehouses are recorded as imports at that stage whether or not they subsequently go into free circulation in the Member State of receipt. Similarly, outgoing goods from customs warehouses are included in the general trade aggregates at the time they leave the Member State.
- The special trade system, on the other hand, is a narrower concept. Goods from a foreign country which are received into customs warehouses are not recorded in the special trade aggregates unless they subsequently go into free circulation in the country of receipt (or are placed under the customs procedures for inward processing or processing under customs control). Similarly, outgoing goods from customs warehouses are not recorded as exports.

Statistics of Eurostat on extra-EU trade are compiled on a special trade basis. But extra-EU trade statistics do not, therefore, record exchanges involving goods in transit, placed in a customs warehouse (purely for storage) or given temporary admission (for trade fairs, temporary exhibitions, tests,...). Also, some member states use the general system for their national figures while providing data on a special trade for Eurostat.

Goods in transit (either in simple transit or transit involving transshipment) across the EU area are not included in trade statistics. However, goods which enter the EU are released into free circulation and are then transferred from the Member State of entry to another Member State or, conversely, originate in one Member State but leave the European Union area through another where customs procedures are carried out, must be included in statistics.

3.1.2 Differences between Eurostat figures and other international sources

There are differences between data published by Eurostat and those published by other international organisations (UN, OECD, IMF).

Typically goods in transit treatment explain the differences between the various sources, but there are also two further practical reasons for the differences:

- The first is the issue of revisions: national practices in revising data to correct past estimates are complex and vary between countries and also international organisations. It is clear that against this background it is likely that the data published by different organisations and related to different generations of data may differ.
- With a less important effect, the currency conversion method onto a common currency may produce different results (annual vs monthly basis).

For this study, we have decided to use the IHS Global Insight database, World Trade Services (WTS), because data is adjusted and harmonized at international level and so, can support better international comparison between EU, as a block, and India or ASEAN and can also identify main EU country partners analysis.

WTS for non-US data uses the UN, OECD International Trade by Commodity Statistics and also some Eurostat Data for major European countries (trade with major individual partners at the highest commodity level). Because there are often discrepancies in the international trade records collected by different countries, WTS use IMF Direction of Trade Data to adjust historical data. The data is then adjusted to be in the same units and in US\$.

This report uses a concordance code SITC rev4 -ISIC in order to make the distinction between motor vehicles and parts.

Exhibit 32 Motor and Parts Vehicles Classifications for International Trade

<i>WTS Description</i>	<i>SICT Code (4 digits)</i>	<i>Description</i>	<i>HS Code (6 Digits)</i>
Motor Vehicles	7811	Vehicles specially design for travelling snow; golf cars and similar	8703.10
	7812	Motor vehicles for the transport of persons	8703.21-90
	7821	Motor vehicles for the transport of goods	8704.10-90
	7822	Special-purpose motor vehicles,	8705.10-90
	7831	Motor vehicles for the transport of ten or more persons, including the driver	8702.10-90
	7832	Road tractors for semi-trailers	8701.20
	7841	Chassis fitted with engines, for the motor vehicles of groups 781, 782 and 783	8706.00
Vehicles parts and accessories	7132	Internal combustion piston engines for vehicles	8407.31-34
			8408.20
	7138	Internal combustion piston engines	8407.90
			8408.90
	7139	Parts, n.e.s, for the internal combustion piston engines of Subgroups	8409.91-99
7842	Bodies for the motor vehicles of groups 781, 782 and 783	8707.10-90	
7843	Other parts and accessories of the motor vehicles of groups 781, 782 and 783	8708.10-99	

Source: IHS GLOBAL INSIGHT

3.2 Tariff Analysis

The EU, as customs union, applies the same import duty rates in all member states. The tariff applicable to imports from most of developed countries is MFN (Most-Favoured-Nation) tariff, which means the duty applied under WTO conditions prohibiting any discrimination against trading partners except for tariff preferences granted under free trade agreements (FTAs) or special, lower tariff regimes such as the GSP.

Concerning the automotive industry, EU general import duties vary from 10% to 22% for motor vehicles, from 3% to 4.5% for main automotive parts. But, concerning India, Indonesia, Malaysia, Philippines, Thailand and Vietnam, the EU applies a GSP rate of 6.5% for motor vehicles and of 0% for automotive parts.

Exhibit 33 Major Import Duties in Automotive Industry between EU and India / ASEAN

Country/Region	Motor Vehicles		Parts	
	Min Rate	Max Rate	Min Rate	Max Rate
EU (MFN)	10%	22%	3%	4.50%
EU (GSP)	0%	6.5%	-	0%
India	10%	60%-100%	7.50%	10%
Indonesia	5%	40-55%	0%	15%
Malaysia	10%	30%	5%	30%
Thailand	5%	40-80%	10%	30%
Philippines	3%	30%	3%	30%

Source: IHS GLOBAL INSIGHT according TARIC, DG Trade Market Access Database

Even if some Asian countries have cut their import tariffs under pressure of international trade negotiations, they remain relatively high and continue protecting national vehicle or component manufacturers. Thereby, India and major ASEAN countries apply different tariff rates on completely knocked-down (CKD) and completely built-up (CBU) vehicles imported. For example, Malaysia continue to impose high import duties for non ASEAN countries even for CKD and CBU vehicles because of strong presence of national vehicles manufacturers (Proton and Pedorua) but also because of a relatively high level of local content of component industry.

Exhibit 34 Malaysian Import Duties Rates for Passenger cars

Cars	ASEAN		NON-ASEAN	
	CKD	CBU	CKD	CBU
	0%	5%	10%	30%

Source: Malaysian Ministry of Finance

Another restraint on vehicle trade development and vehicle imports (mainly to favour the 2-wheeler market) is that vehicles, specifically cars, are taxed and/or considered as luxury goods.

- High import tariffs and draconian controls on imports have characterised India's vehicle markets for decades. Restrictions are gradually being lifted but this process is occurring very slowly, and import duties and other surcharges remain some of the highest in the world. CBU imports have started to trickle into India since quantitative restrictions were removed in 2001 but, not surprisingly, high import surcharges mean that these are restricted to luxury and niche vehicles and so they remain very low.
- In Indonesia, the Luxury Car Tax is imposed on all cars based on engine displacement. It ranges from 10-75% and discriminates against imported vehicles with larger engine sizes. This tax is applied in addition to a 10% VAT on all vehicles. As the Luxury Car Tax is applied on top of the already high import tax paid on a vehicle by an importer (cascading tax), the impact is increased.
- In Malaysia, importers are hindered by quotas and shareholding of Bumiputeras. The "national automobile policy" explicitly privileges local producers. The country applies excise taxes based on engine size. The rate for passenger cars, MPVs and 4WDs is 125% and a new excise tax of 10% on commercial vehicles, including pick-ups, is applied.
- In Philippines, high excise tax rates, in addition to the import duty of 30%, can add up to 100% for imported vehicles - depending on the engine size. This discriminates against imported vehicles particularly those with larger engines. Moreover, a 10% VAT is imposed on all vehicles and auto components.

3.3 Non Tariff Barriers Analysis

3.3.1 Non Tariff Barriers in India

According to a recent survey on its members, the CLEPA has listed a number of non tariff barriers (NTBs) in India which tend to impose delay, administrative burden and additional cost for importing goods:

- Delay to clear customs: the average time taken to clear customs at Indian ports is 3-4 days, versus 1-2 days in other modern ports.
- IT System and Electronic Data Inter-exchange (EDI) need to be improve
- Advance licence or the EPCG (Export Promotion Capital Goods) scheme should be paperless and more efficient (access, fulfilment...)

- Long delay for duty drawback claim (90-120 days)
- Allow self-sealing of containers without further checks, based on credibility and credentials of exporting company.

But also for ETRMA, of considerable concern for European vehicle and component manufacturers is the respect of UNECE Regulations standard. For example, in July 2006, the Indian Government notified the WTO TBT Committee concerning radial tyres. The standards (currently voluntary but to be made mandatory) requested by India are similar, but not identical, to the internationally recognized technical requirements of the UNECE. So, once made mandatory, all radial tyres to be imported to India would require an additional certification of conformity assessment that is one purely for India despite confirming the UNECE standard.

3.3.2 Non Tariff Barriers in ASEAN

3.3.2.1 Customs

In most ASEAN countries, improvements are needed regarding transparency, clearance time and bureaucratic burden which could result in significant transaction costs for automotive product manufacturers.

Also, the customs valuation in some countries is not consistent with WTO rules (in Malaysia for example, CBU customs valuation inflate the price of the vehicle to maximize tariff revenue). Although Thailand's customs valuations methods have improved during the last few years, there are still concerns with their WTO compatibility.

Concerning customs regulations and formalities, in Thailand, there can be subjective judgement by customs port officers which vary from one port terminal to another. Electronic customs systems are being implemented to enhance transparency, however, the linkage to other authorities are still problematic, and the incremental paperwork and delay leads to frustration.

3.3.2.2 Import Licenses Procedures:

Import procedures in each of the main countries are still complex, with strict controls and country unique which are time consuming:

- In Indonesia, importing vehicles requires licenses from different government departments (Ministry of Finance, Board of Investment, Ministry of Trade, Ministry of Transportation, Finance and Investment)

- In Malaysia, the permit system (quota restricted to 10% of prior import sales) is still in place: only 70% owned Bumiputra companies are able to import CBU vehicles into the country. Additional permits are required for exporters. The permit system will be phased out by end of 2010.
- In Thailand, an import license is needed for CBUs and some safety parts (seat belts and safety glass).

3.3.2.3 Existing technical barriers:

ASEAN countries which have not done so yet have plans in mind to accede to the UN/ECE 1958 and 1998 agreements and participate actively in the WP29 process. Thailand and Malaysia, which have signed the UN/ECE 1958 agreement, have not implemented any regulations.

Indonesia has a certification requirement process that begins with a temporary certificate of registration stating the type/make of a vehicle (temporary TPT) which needs to be obtained from the Ministry of Industry & Trade (MOIT) in order to import one unit of that type/make of vehicle for homologation purposes. The homologation certificate must then be obtained from the Ministry of Land and Transport as a requirement to obtain a permanent certificate of registration for that type/make of vehicle (permanent TPT). The permanent TPT is then issued by MOIT with certain quota on units for the period of one year.

Thailand doesn't accept the ECE and EU homologation certificates. This leads to double testing and additional cost burden. And despite ECE regulations recognition (in principle), there is a slow process in amending the current unique regulations towards ECE e.g. safety belts and safety glass.

3.3.2.4 Trade in Services and Investment

In Indonesia, foreign equity participation requirements are limited for automotive financial services (current maximum is 85%). And the retail business in the automotive sector can only be run by locals. No possibility of foreign investors to enter the retail business directly.

Another example of restricted activity for foreigner, in Malaysia, where new models are only allowed when locally assembled using existing capacity, and where these models do not compete directly with local national cars. New assembly plants restricted until existing industry over-capacity is utilized.

3.3.2.5 Intellectual Property Right

There is, in general, a lack of proper legislation for design rights that allows copying especially of accessories designs. Enforcement and border controls are still to be improved, especially with regard to the control of export goods (except Singapore).

In Thailand, there is no protection under the Patent Act for foreign patents: Thailand is not a signatory to the Paris Convention for the Protection of Industrial Property nor a signatory of any other international convention for reciprocal protection of patents.

3.3.2.6 Competition policy

In Thailand, there is a Competition Act relating to market dominant business operators. The criterion for the business operator dominating the market are complex and, in practice, the Ministry of Commerce has to consider case by case based on dealership condition, commitment of the contract, and overall information and evidence.

3.3.2.7 Infrastructure

Most ASEAN ports facilities have very limited capacities, parking area, etc, that create additional cost, burdening exporters.

3.4 Import and Export Analysis

3.4.1 Automotive Trade Value Analysis

3.4.2 EU and India Trade

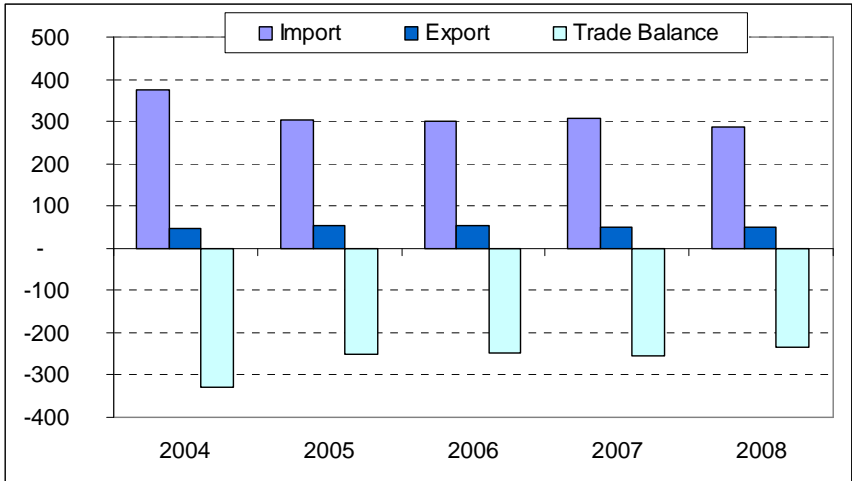
Currently, the weight of India in EU automotive trade is very insignificant (around 0.2% of import and 1.3% of export in value in 2008).

But in reverse, the EU, as a trade block, is one of the main trading partners of India with 20% of its automotive exports (1st partner) and 30% of its imports (2nd partner after Japan).

Motor Vehicles Trade Analysis

The EU trade balance with India is still negative at about €235 million in 2008, and that trend has been stable since 2005. The low level of vehicle exports (about €50 million) reflects the high import duties for imported cars in India. Most exported vehicles come from Germany (60%). Italy and Germany are the largest importers (44%) of motor vehicles from India.

Exhibit 35 EU Motor Vehicles Trade with India (M €)



Source IHS GLOBAL INSIGHT, WTS

Exhibit 36 EU Motor Vehicles Import from India by Main EU Countries Destinations (% total)

<i>Main destinations</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>
Germany	9.7%	12.7%	13.0%	13.3%	12.9%
Italy	26.1%	29.0%	29.0%	28.9%	28.3%
Netherlands	11.3%	9.3%	8.9%	8.6%	9.3%
Spain	9.3%	10.8%	11.0%	11.1%	9.6%
United Kingdom	22.8%	15.7%	15.4%	15.1%	16.0%
Others	20.8%	22.5%	22.7%	22.9%	23.9%
TOTAL	100%	100%	100%	100%	100%

Source IHS GLOBAL INSIGHT, WTS

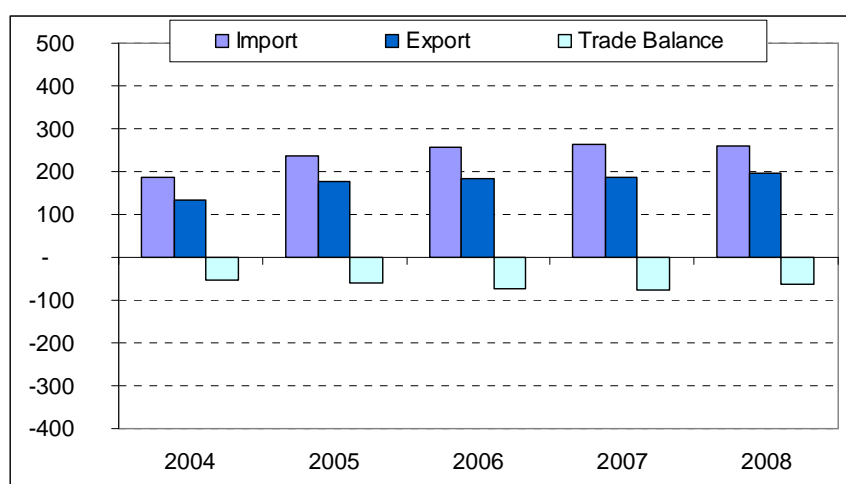
Exhibit 37 EU Motor Vehicles Export to India by Main EU Countries Exporters (% total)

<i>Main exporters</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>
Czech Republic	29%	13%	13%	13%	13%
Germany	40%	61%	61%	61%	61%
Slovak Republic	10%	1%	1%	1%	1%
United Kingdom	9%	12%	12%	11%	11%
Others	11.3%	12.8%	13.4%	13.4%	13.4%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%

Source IHS GLOBAL INSIGHT, WTS

Vehicles Parts Trade Analysis

The trade balance deficit of vehicles parts is less important than motor vehicles, at €64 million in 2008. The exchange of parts is dynamic (9% growth on average per year for imports since 2004 and 10% for export) but it is an insignificant amount compared to overall vehicles parts output of the EU (around €170 billion in 2008). UK, Italy and Germany are main destinations for Indian importation of parts; while Czech Republic and Italy, followed by Germany are the main exporters.

Exhibit 38 EU Vehicles Parts Trade with India (M €)

Source IHS GLOBAL INSIGHT, WTS

Exhibit 39 EU Vehicles Parts Import from India by Main EU Countries Destinations (% total)

Main destinations	2004	2005	2006	2007	2008
Germany	16.8%	15.3%	15.1%	15.2%	16.5%
Italy	18.7%	25.1%	25.9%	25.9%	24.3%
United Kingdom	32.9%	27.5%	27.1%	26.8%	26.0%
Others	31.6%	32.1%	32.0%	32.2%	33.2%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%

Source IHS GLOBAL INSIGHT, WTS

Exhibit 40 EU Vehicles Parts Export to India by Main EU Countries Exporters (% total)

Main exporters	2004	2005	2006	2007	2008
Czech Republic	29%	28%	28%	28%	28%
Germany	16%	16%	16%	16%	16%
Italy	20%	20%	21%	21%	21%
Sweden	9%	10%	10%	10%	10%
United Kingdom	10%	7%	7%	7%	7%
Others	16.5%	18.3%	18.2%	18.0%	18.0%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%

Source IHS GLOBAL INSIGHT, WTS

3.4.3 EU and ASEAN Trade

The ASEAN is a minor partner for the EU automotive industry with less than 1% in value for exports and 2% for imports in 2008. However, the EU represents more than 15% of ASEAN exports and 8% of imports which place the EU at 3rd partner rank for exports (behind Australia and Japan) and at 5th rank for imports.

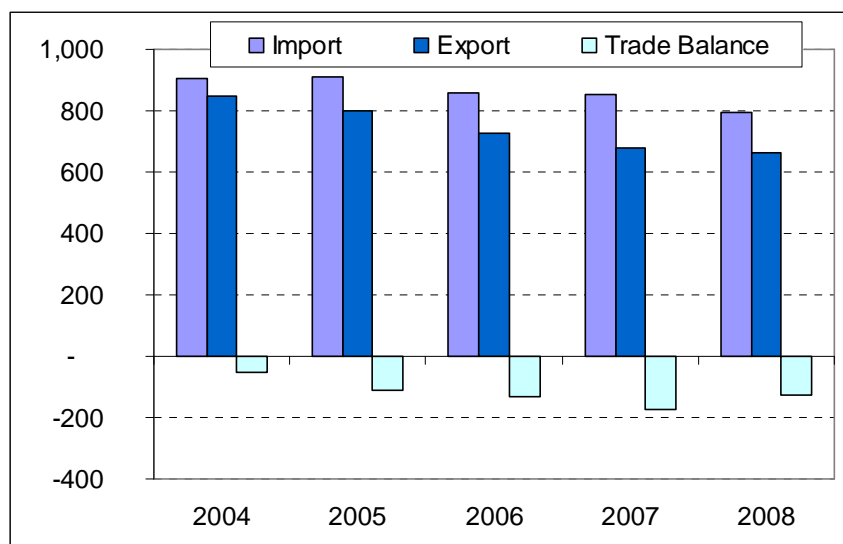
Motor Vehicles Trade Analysis

The European trade balance with ASEAN was negative €128 million in 2008. The exchange with these countries tended to be less dynamic and the imports and exports have reduced respectively 3% and 6% on average during the last four years.

Imports stabilised at €800 million in 2008. Most of the imports from ASEAN enter the EU through the UK (34%) and come almost entirely from Thailand.

Germany is the main European country exporter to ASEAN and European vehicles mainly go to Singapore (41%) and Malaysia (29%).

Exhibit 41 EU Motor Vehicles Trade with ASEAN (M €)



Source IHS GLOBAL INSIGHT, WTS

Exhibit 42 EU Motor Vehicles Import from ASEAN by Main EU Countries Destinations (% total)

<i>Main destinations</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>
Belgium	8%	9%	9%	9%	10%
Greece	9%	15%	15%	15%	15%
Spain	9%	11%	11%	11%	9%
United Kingdom	36%	35%	35%	34%	34%
Others	37.8%	30.8%	30.9%	31.2%	31.0%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%

Source IHS GLOBAL INSIGHT, WTS

Exhibit 43 EU Motor Vehicles Import from ASEAN by Main ASEAN Countries Exporters (% total)

<i>from</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>
Malaysia	2.5%	3.8%	4.1%	3.7%	3.6%
Thailand	95.5%	93.7%	93.4%	93.8%	94.1%
Others	2.0%	2.5%	2.6%	2.5%	2.3%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%

Source IHS GLOBAL INSIGHT, WTS

Exhibit 44 EU Motor Vehicles Export to ASEAN by Main EU Countries Exporters (% total)

<i>Main exporter</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>
France	11.9%	8.4%	8.1%	8.0%	7.8%
Germany	47.0%	47.9%	48.4%	48.6%	48.6%
United Kingdom	17.6%	18.5%	17.7%	17.0%	17.1%
Others	23.5%	25.2%	25.8%	26.4%	26.5%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%

Source IHS GLOBAL INSIGHT, WTS

Exhibit 45 EU Motor Vehicles Export to ASEAN by Main ASEAN Countries Destinations (% total)

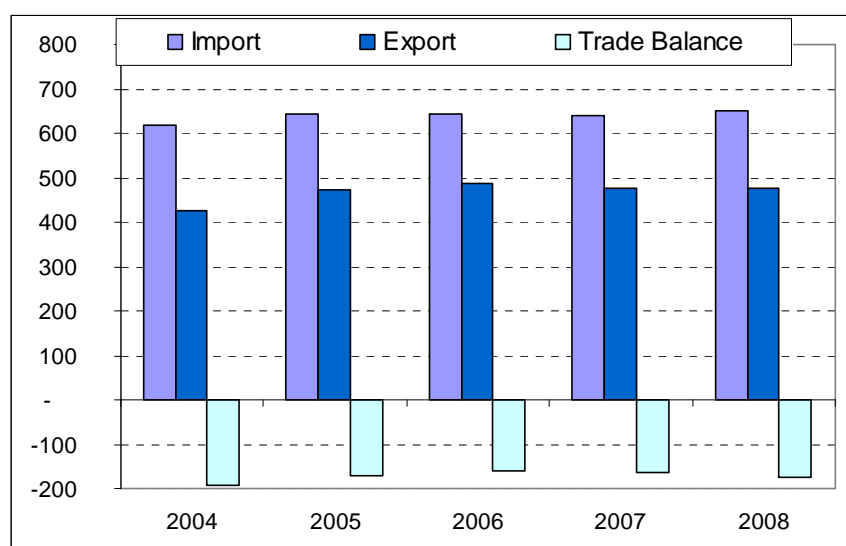
for	2004	2005	2006	2007	2008
Indonesia	10.8%	12.0%	11.2%	11.1%	11.3%
Malaysia	30.2%	27.6%	26.9%	27.6%	28.8%
Singapore	39.6%	44.4%	44.4%	43.3%	41.0%
Thailand	10.3%	10.3%	10.8%	10.3%	9.9%
Others	9.1%	5.7%	6.6%	7.6%	8.9%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%

Source IHS GLOBAL INSIGHT, WTS

Parts Trade Analysis

The European automotive parts trade deficit was around €173 million in 2008. EU export to ASEAN has grown quicker than imports since 2004 (3% on average per year against 1%). The Czech Republic and Italy are the main EU exporters to ASEAN; these exports are destined for Singapore and Malaysia mainly.

Automotive parts are imported mainly from Philippines and arrive in EU through Italy and UK.

Exhibit 46 EU Parts Trade with ASEAN (M €)

Source IHS GLOBAL INSIGHT, WTS

Exhibit 47 EU Parts Import from ASEAN by Main EU Countries Destinations (% total)

<i>Main destinations</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>
Germany	16.8%	15.3%	15.1%	15.2%	16.5%
Italy	18.7%	25.1%	25.9%	25.9%	24.3%
United Kingdom	32.9%	27.5%	27.1%	26.8%	26.0%
Others	31.6%	32.1%	32.0%	32.2%	33.2%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%

Source IHS GLOBAL INSIGHT, WTS

Exhibit 48 EU Parts Import from ASEAN by Main ASEAN Countries Exporters (% total)

<i>from</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>
Indonesia	12.0%	11.8%	12.1%	11.9%	10.9%
Philippines	64.1%	63.9%	62.9%	62.5%	64.6%
Thailand	18.0%	15.7%	16.1%	16.7%	16.1%
Others	5.9%	8.6%	8.9%	9.0%	8.4%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%

Source IHS GLOBAL INSIGHT, WTS

Exhibit 49 EU Parts Export to ASEAN by Main EU Countries Exporters (% total)

<i>Main Exporters</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>
Czech Republic	29%	28%	28%	28%	28%
Germany	16%	16%	16%	16%	16%
Italy	20%	20%	21%	21%	21%
Sweden	9%	10%	10%	10%	10%
United Kingdom	10%	7%	7%	7%	7%
Others	16.5%	18.3%	18.2%	18.0%	18.0%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%

Source IHS GLOBAL INSIGHT, WTS

Exhibit 50 EU Parts Export to ASEAN by Main ASEAN Countries Destinations (% total)

<i>for</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>
Indonesia	8.2%	10.9%	10.9%	10.9%	11.2%
Malaysia	19.9%	22.9%	22.7%	22.4%	22.0%
Singapore	43.5%	37.4%	37.2%	37.2%	36.4%
Thailand	23.1%	16.8%	17.0%	17.0%	17.2%
Others	5.4%	12.0%	12.2%	12.4%	13.1%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%

Source IHS GLOBAL INSIGHT, WTS

3.4.4 Automotive Trade Volume Analysis

3.4.4.1 EU and India Trade in Volume

If we compare only the import volume by country source, Indian production for the EU is higher than EU production for the Indian market (respectively 73,000 “Indian” vehicles against 1,600 “European” vehicles in 2008). But this trade relation needs to be considered and put in context:

- The India vehicle market is almost entirely satisfied by locally based vehicle manufacturers (99%), with 75% of this volume being with national vehicles manufacturers. Segments A and B represented around 60% of local production in 2008.
- Concerning EU production sold on the Indian market, most are larger vehicle segments (75% in 2008 are segments E and D) mainly coming from Germany.
- The “European” production reached 84% of EU sales in 2008, with a slow declining rates since 2000 (87%). The Asia region is the other production source but India has an insignificant weight (0,3% in 2008) compared to Japan (47%) and South-Korea (42%).
- The “Indian” production share in the EU vehicle sales is even lower, if we consider that Hyundai is the main importer from India (more than 70%). And it’s mainly small passenger cars (segment A).

Exhibit 51 Vehicles Trade between EU and India by Country Source

	2004	2005	2006	2007	2008	GAGR 04-08
Total INDIA Sales	1,339,063	1,430,820	1,747,332	1,981,398	1,946,514	9,8%
EU Prod Source	609	976	1,217	1,747	1,653	28.4%
Market share			<i>Not significant</i>			
Total EU Sales	17,499,315	17,575,503	17,874,140	18,183,405	16,687,710	-1.2%
Indian Prod Source	53,979	50,362	51,385	49,415	72,905	7.8%
Market share			<i>Not significant</i>			

Source IHS GLOBAL INSIGHT

3.4.4.2 EU and ASEAN Trade in Volume

EU produced vehicles represented less than 1% market share in 2008 at only 20,800 vehicles. As with the Indian market, the ASEAN market is mainly served by local production (87% in 2008). Around two third of EU produced vehicles sold in ASEAN are larger vehicles (segment D and E), half of which come from Germany (mainly Mercedes-Benz brand).

The ASEAN production penetration in the EU market is very low at only 0.5% in 2008, to around 77,500 vehicles. Imports from ASEAN are mainly specific LCVs (typically PUPs) from Toyota, Mitsubishi and Ford, which come from Thailand.

Exhibit 52 Vehicles Trade between EU and ASEAN by Country Source

	2004	2005	2006	2007	2008	GAGR 04-08
Total ASEAN Sales	1,840,229	2,047,959	1,747,175	1,848,787	2,086,832	3,2%
EU Prod Source	24,734	27,227	21,678	23,512	20,828	-4,2%
Market share	1,3%	1,3%	1,2%	1,3%	1,0%	1,3%
Total EU Sales	17,499,315	17,575,503	17,874,140	18,183,405	16,687,710	-1,2%
ASEAN Prod Source	73,331	70,471	10,2710	10,6247	77,456	1,4%
Market share			<i>Not significant</i>			

Source IHS GLOBAL INSIGHT

3.5 Automotive FDI

3.5.1 FDI in India

The Automotive Mission Plan 2006-2016 goals need a substantial increase in investment from both the industry and the government of €35-40 billion by 2016. Several special economic zones (SEZs) are targeted to the automotive industry. But despite the financial incentives offered, these zones have been less successful in attracting foreign and domestic investments than other zones like those operating in China (lack of sufficient size to reach economies of scale, restrictive labour laws, lack of efficient infrastructure to communication and shipment of goods)

The Indian Automotive industry attracted €115 million of FDI in 2008, which represented 4% of total inflow (main attracting sectors are financial and non-financials services and telecommunications).

The EU, mainly represented by the Netherlands, UK, Germany and France, totaled 15% of total FDI in India with around €12.7 million in 2008.

Exhibit 53 FDI inflow in India

M €	2004	2005	2006	2007	2008
Automotive industry (code 34 ISIC)	115.10	219.75	492.82	787.51	115.10

Source IHS GLOBAL INSIGHT ; Indian Ministry of Commerce and Industry

3.5.2 FDI in ASEAN

Around 89 projects in the automotive industry (ISIC 34 code) with a value of €1,830 million are approved in 2007 in ASEAN region (only 5% of FDI in the manufacturing sectors). The EU represented 22% of global FDI in ASEAN in 2007 which reached a record level of €46,2 bn according to ASEAN Investment Reports 2008. The EU is the main source of FDI inflow, just ahead of Japan.

The main important markets for the automotive FDI inflow in ASEAN countries are in Philippines and Thailand which are the 2nd largest foreign investment market after manufacturing of radio, television

and communication equipments, with respectively €33 bn (10.8% of the total FDI in Philippines in 2007) and €1.2 bn (17.3% of the total in 2007 for Thailand).

The FDI in the automotive sector in Indonesia is quite small (less than 1% of the overall FDI in 2007), very far behind the chemical sector which totalised more than 50% of €18,6 bn FDI.

Exhibit 54 FDI inflow in ASEAN

<i>M</i> €	2004	2005	2006	2007	2008
Automotive industry (code 34 ISIC)	776	722	1,976	615	1,714

Source IHS GLOBAL INSIGHT ; SEAN FDI Database ; ASEAN Secretariat

Chapter 4

Methodology for the Assessment of the Impact of FTA EU/India and EU/ASEAN

4 Methodology for the Assessment of the Impact of FTA EU/India and EU/ASEAN

There is much empirical literature with regard to the use of gravity models in order to quantify the impact of trade agreements on foreign trade: we have acknowledged this history and have set up a gravity model as the centrepiece of our quantitative research. Gravity models of international trade, originally based on cross section data and which take geographical distance as an important explanatory variable into account, have become increasingly popular since the analysis of Linnemann (1966).

Furthermore, the specification of these models, which first had a more or less ad hoc character, was discharged afterwards with fundamental theoretical findings (Bergstrand, 1985; Deardorff, 1998; Evenett/Keller, 1998; Feenstra/Markusen/Rose, 1998). The basic gravity model includes as explanatory variables the GDPs of the exporting country and the importing country as well as the geographical distance which should approximate distance and trade costs. A positive impact is thereby expected for the income variables while the distance variable should have a negative impact on bilateral trade. The implication of the latter variable is obviously that neighbouring, comparatively not very distant countries have a relative high bilateral trade volume. The GDP of the importing country can be interpreted as a demand variable and the GDP of the supplying country as a proxy for the exploitation of exports promoting economies of scale, as well as (if the size of population is given) a reflex of the role of the per capita income; with increasing incomes more varieties of products will be produced and exported.

We estimate panel data gravity models for the export flows of motor vehicles as well as parts of motor vehicles between all relevant trade partners. The exporting countries considered are 38 car producing countries (the intersection of countries included in the World Trade Service (WTS) and the Automotive Division production database of IHS Global Insight). The importing countries are the 54 countries included in IHS Global Insight's WTS. With regard to the group of ASEAN countries, Indonesia, Malaysia, Philippines and Thailand are included as both motor vehicles exporting and importing countries, while Singapore and Vietnam are included as just motor vehicles importing countries.

Using panel data – starting in 1997 – instead of purely cross-section data allows us to capture all observable as well as unobservable time invariant country-pair effects (including distance, cultural

differences etc.) by interaction dummy variables. This proceeding is well suited to deal with the heterogeneity of bilateral trade and FDI flows (Cheng/Wall, 2004, and Eggert/Pfaffermayr, 2003). Furthermore, the models fixed time effects, which capture influences affecting all in certain periods (e.g. common business cycles). Altogether, our dataset comprises 22154 observations.

IHS Global Insight's WTS is particularly well suited to analyze country-by-country trade flows. It is based on the United Nations Commodity Trade Statistics Database (UN Comtrade), which contains detailed imports and exports statistics reported by statistical authorities of close to 200 countries or areas. The statistics published by individual countries are derived from the information filed by each importer and exporter with each customs agency, identifying several defining characteristics of each trade transaction. For maritime cargoes, these include origin and destination, the location of shipping, location of consignment, valuation, commodity classification, volume and/or mass and ports of handling. Whenever trade data are received from the national statistical authorities, the data are standardized by the Statistics Division. The UN International Trade Statistics is considered the most comprehensive trade database available with more than 1 billion records. A typical record includes exports and imports of a commodity by Country of Origin and Country of Destination in terms of value (US dollars), weight and supplementary quantity (number of cars). Global Insight also calculates real trade values in US dollars.

It has to be mentioned that the values of the reported detailed commodity data do not necessarily sum up to the total trade value for a given country dataset. Due to confidentiality, countries may not report some of its detailed trade. This trade will - however - be included at the higher commodity level and in the total trade value. For instance, trade data not reported for a specific 6-digit HS code will be included in the total trade and may be included in the 2-digit HS chapter. Similar situations could occur for other commodity classifications. This problem is not relevant at the level chosen for our quantitative analysis because we will differentiate between the broad classes "motor vehicles" and "parts of motor vehicles". Here data is available for all countries considered.

The two other limitations of the UN Comtrade database – but also of any other internationally comparable trade data base – are:

- Countries (or areas) do not necessarily report their trade statistics for each and every year. This means that aggregations of data into groups of countries may involve countries with no reported data for a specific year. UN Comtrade does not contain estimates for missing data. Therefore, trade of a country group could be understated due to unavailability of some country data.

- Exports reported by one country do not coincide with imports reported by its trading partner. Differences are due to various factors including valuation (imports CIF, exports FOB), differences in inclusions/ exclusions of particular commodities, timing etc. Therefore it is sensible for the empirical analysis to look only at the exports between country pairs – as it is planned for the gravity models.

IHS Global Insight extracts data from this database for, on the one hand, 54 countries and 17 regions, and, on the other hand, 77 product groups up to the historical edge, which is either 2006 or 2007. For those countries, where only historical data up to 2006 is available, Global Insight try to incorporate year to date actual growth rates for the latest historical year (2007) for the major trading countries. Based on this historical database, IHS Global Insight forecasts for the numbers of countries and product groups mentioned, the development of imports and exports until 2028.

It has to be mentioned that the method used to collect historical data differs fundamentally between the UN Comtrade and the Eurostat method of trade reporting. The Eurostat method considers the port-of-entry of the merchandise, not the final destination, so if merchandise enters through Rotterdam, Eurostat does not track if the goods are actually ultimately going to Germany, or Belgium. The UN uses the national concept for trade attempting to identify the actual country of destination (and origin) for imports. So Eurostat would show an import from China into the Netherlands cargo whose true final destination for consumption is in Germany. The UN would show this as a German import. From a European-outer-border perspective, it does not matter what the final European country-of-destination is or how that dimension to trade is allocated among cargo handled through the ports. The impact of this on the reported data is found, for example, by looking at the Eurostat statistics for Netherlands and Belgium where the level of trade is much greater than that reported by the UN. Trade partners for where this is the case include European imports from China or Malaysia. This is true for European - India trade as well.

Besides the GDPs and population of the exporting and importing countries we include as further general economic variables, on the one hand, a similarity index of the two trading partners' GDP as a measure of relative country size. On the other hand, we approximate absolute differences in relative factor endowments between country-pairs by the absolute differences in per capita incomes. From a Heckscher-Ohlin trade view it could be expected that larger differences in relative factor endowments stimulate trade, while from a new trade theory view – emphasizing the importance of intra-industry trade – a negative impact would be expected.

As a variable specific to the car industry, we include the car production capacity of each export country. It is measured as the number of units produced. In order to prevent collinearity problems with the GDPs of the exporting countries, the production variable has been calculated as a percentage of the exporting countries' GDPs.

The effects of FTAs with data of entry into force after 1997 are first of all captured by dummy variables, while the effects of those FTAs with data of entry into force before 1998 are already captured by the fixed country pair effects. The trade effects of the EU membership of new members entering the EU in 2004 and 2007 are captured by two dummy variables. One grasps the trade generating effects with regard to the old EU members, while the other captures the trade effects to third countries. The latter could be in a Vinerian tradition either trade creation or trade diversion effects. A second group of dummy variables takes into account the FTAs between the EU and third countries. These FTAs are EU – South Africa (starting on 1 January 2000), EU – Israel (1 June 2000), EU – Mexico (1 March 2001), EU – Chile (1 February 2003) and EU – Egypt (1 June 2004). We also allow for interaction of the FTA dummy variables with the sum of GDPs of both trading partners (the mass variable) and the vehicle production of the exporting country.

Furthermore, there are also several FTAs between EU members before their membership with third countries, namely Hungary with Turkey and Israel (both starting 1998), Romania with Turkey (1998), and Poland with Israel (1998) and Turkey (2000). If statistically significant, we also include interaction variables between FTAs and the mass variable as well as car production.

Finally, there are five FTAs between third countries with date of entry into force after 1997: Israel – Turkey (1998), Mexico – Chile (1999) as well as Mexico – Israel (2000), Egypt – Kenya (2000) as part of the Common Market for Eastern and Southern Africa, and the ASEAN (1998) with Indonesia, Philippines, Singapore and Thailand. Again, if statistically significant, we also include interaction variables between FTAs and the mass variable as well as car production.

The impact of FTAs of the EU with India and the ASEAN countries are captured mainly by two quantitative variables. On the one hand, tariff rates – differentiated for motor vehicles and parts of vehicles – are included in the econometric models. For this purpose we built a comprehensive database for the 54 importing countries which takes into account the variation of tariff rates between the trading partners and over time. On the other hand, non-tariff trade barriers (NTB) are captured by an index – varying between 0 – very high NTB – and 10 – total absence of NTB – from the annual reports

“Economic Freedom of the World”. This index is based on the Global Competitiveness Report’s survey question: “In your country, tariff and non-tariff barriers significantly reduce the ability of imported goods to compete in the domestic market”. For the simulation of the various scenarios regarding the impact of FTAs between the EU and India or ASEAN countries from 2011 onwards we adjusted the values of both variables according to the range of expectations of the experts.

As far as the data situation allows it, further variables should be included in the model. These are, on the one hand, tariff rates and indicators for non-tariff barriers, and, on the other hand, indicators for the innovative capabilities and knowledge diffusion. Since tariff rates do not vary over time, on the one hand, and, on the other hand, many countries have similar tariff rates, the estimation of their effects amounts to a grouping of countries with low, medium and high tariff rates.

Once the gravity models are estimated, they are transformed into systems of bilateral trade equations, which can be used to simulate alternative scenarios for FTAs between the EU and India as well as the EU and ASEAN countries. Besides a baseline solution, the alternative scenarios can be more or less ambitious in terms of tariff reductions, elimination of non-tariff barriers and investment. One important variable to capture the trade creation effects is the dummy variable capturing the effects of already existing FTAs between the EU and third countries with date of entry into force after 1997, but also other variables can be changed to simulate a certain scenario.

Chapter 5

Application of Methodology to a FTA EU/India

5 Application of Methodology to a FTA EU/India

5.1 Motor Vehicles

5.1.1 Detailed Assessment

Exhibit 55 and 56 identify the scenarios chosen to describe the potential impact of an FTA between the EU and India concerning Motor Vehicles. In effect the key variables are

- The start date of the reduction in tariffs
- The period over which tariffs are reduced to NIL
- Changes, if any, in the non-tariff barriers (NTBs)

Exhibits 57, 58, and 59 highlight the potential impact in €s for exports, imports and net trade balance.

Exhibits 60 and 61 use an average motor vehicle unit value to convert € values into units

NB: Our analysis finishes in 2020 although the incremental affects of the scenarios continues beyond this date for both 10Y-2011 and 10Y-2016.

Exhibit 55 India Trade Hypothesis

Scenario Name	Start Date	Comments
7Y-2011	2011	<ul style="list-style-type: none"> • Linear elimination of tariffs over 7 years period • Improving NTB indicator
10Y-2011	2011	<ul style="list-style-type: none"> • Linear elimination of tariffs over 10 years period • No change of NTB indicator
10Y-2016	2016	<ul style="list-style-type: none"> • Linear elimination of tariffs over 10 years period • Improving NTB indicator

Source IHS GLOBAL INSIGHT

Exhibit 56 EU Trade Hypothesis

Scenario Name	Start Date	Comments
7Y-2011	2011	<ul style="list-style-type: none"> • Linear elimination of tariff rate over 7 years period

Source IHS GLOBAL INSIGHT

5.1.2 Impact upon Trade

5.1.2.1 Impact upon Trade Value

The combination of the low level of existing EU exports to India and the high tariffs ensure that any reduction in tariffs drives a significant increase in volume. This is seen most clearly in the 7Y-2011 scenario in which tariff rates are eliminated in the shortest period and are accompanied by an improvement in NTBs. The improvement, in this case, compared to baseline, is a massive 14 times increase by 2020: note, however, all scenarios show a big increase in EU vehicle export values

Exhibit 57 EU Motor Vehicles Export to India Impacts (M €)

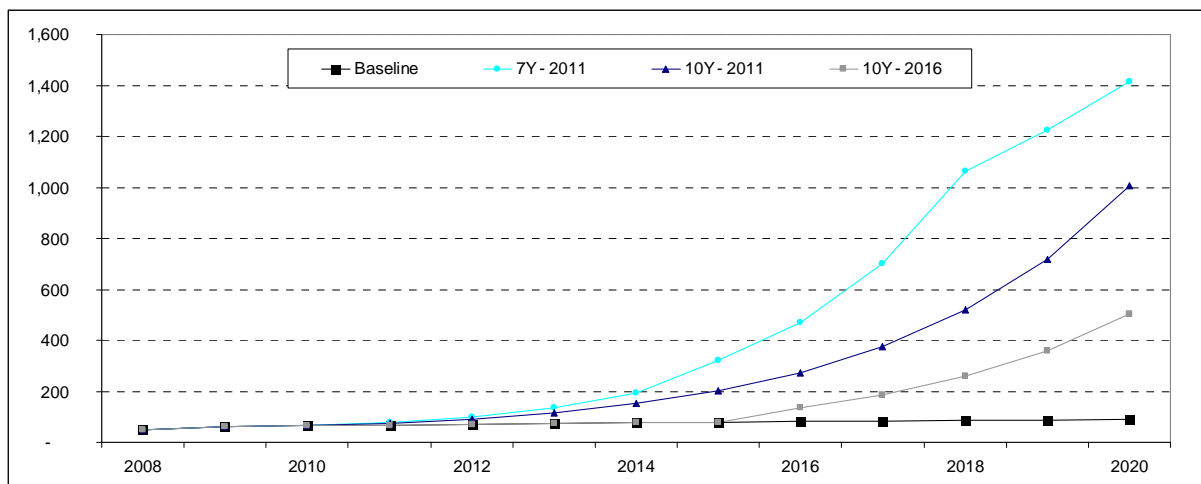
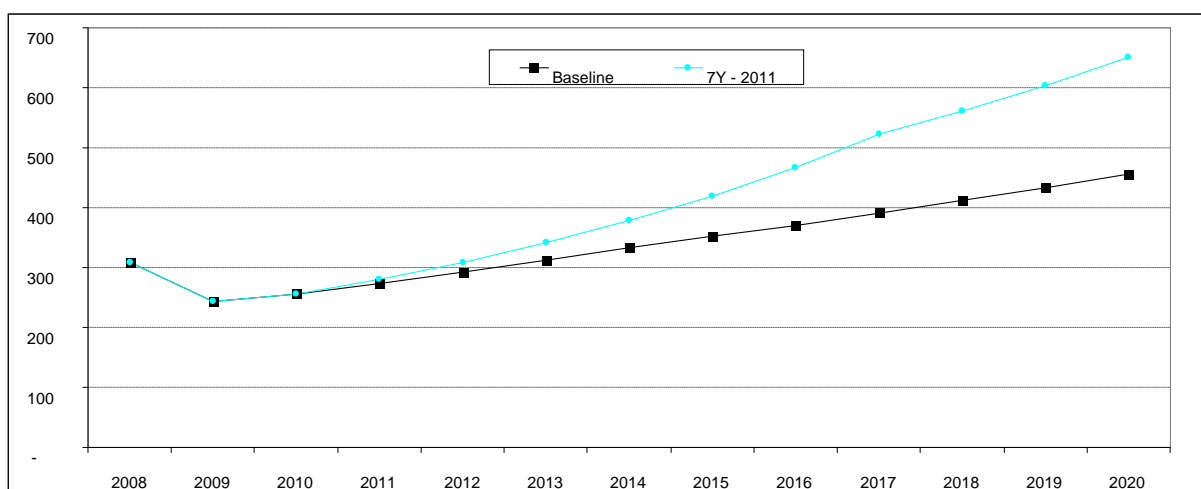
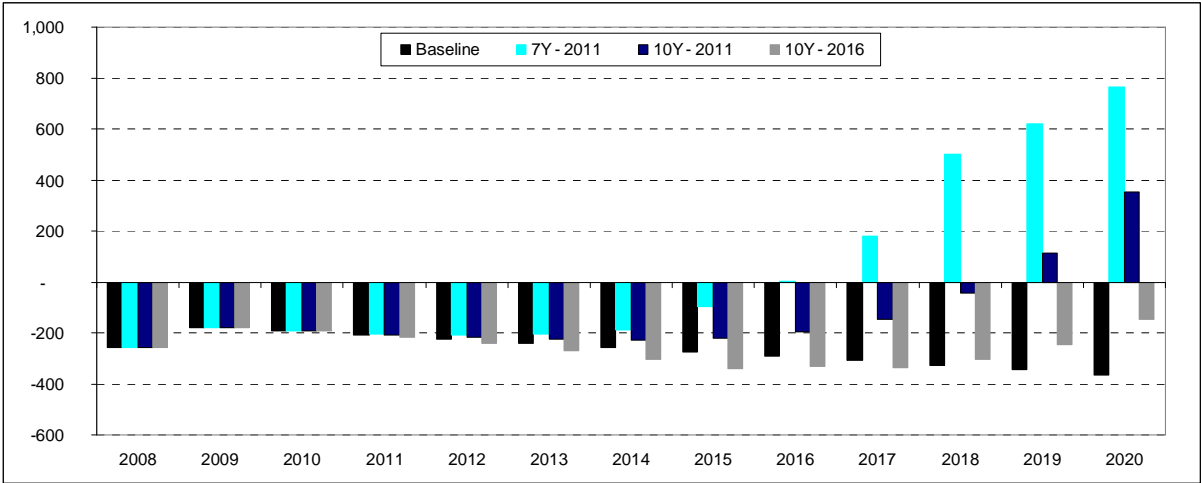


Exhibit 58 EU Motor Vehicles Import from India Impacts (M €)



Source IHS GLOBAL INSIGHT

Exhibit 59 EU Motor Vehicle Trade Balance with India Impacts (M €)



Source IHS GLOBAL INSIGHT

The baseline forecast suggests continuing worsening trade balances with India through the study scope period. All of the scenarios improve this trade position forecast although under the 10Y-2016 scenario the EU continues to be in deficit at the end of our forecast period.

5.1.2.2 Impact upon Trade Volume

Exhibit 60 EU Motor Vehicles Export to India Impacts (000's vehicles)

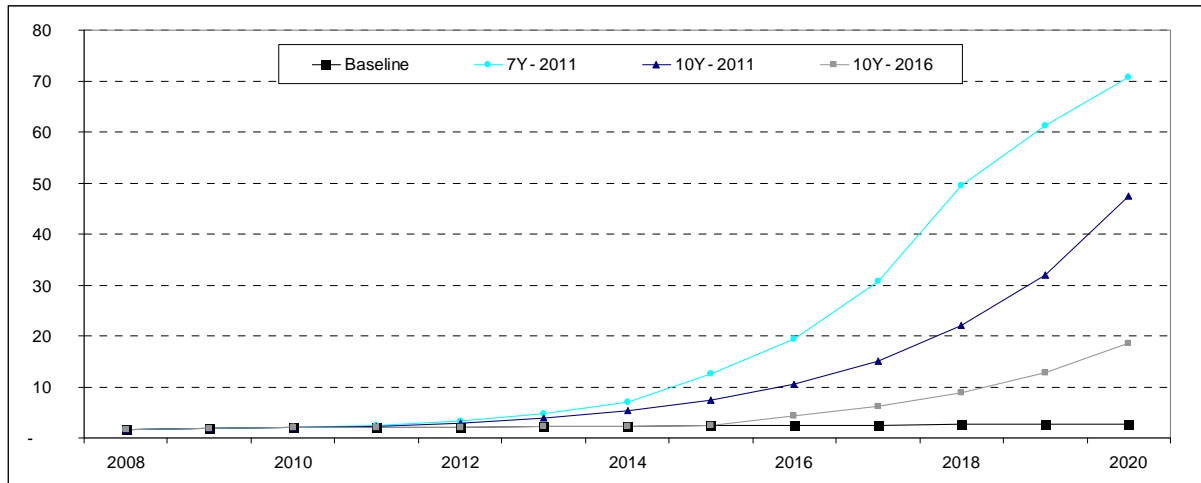
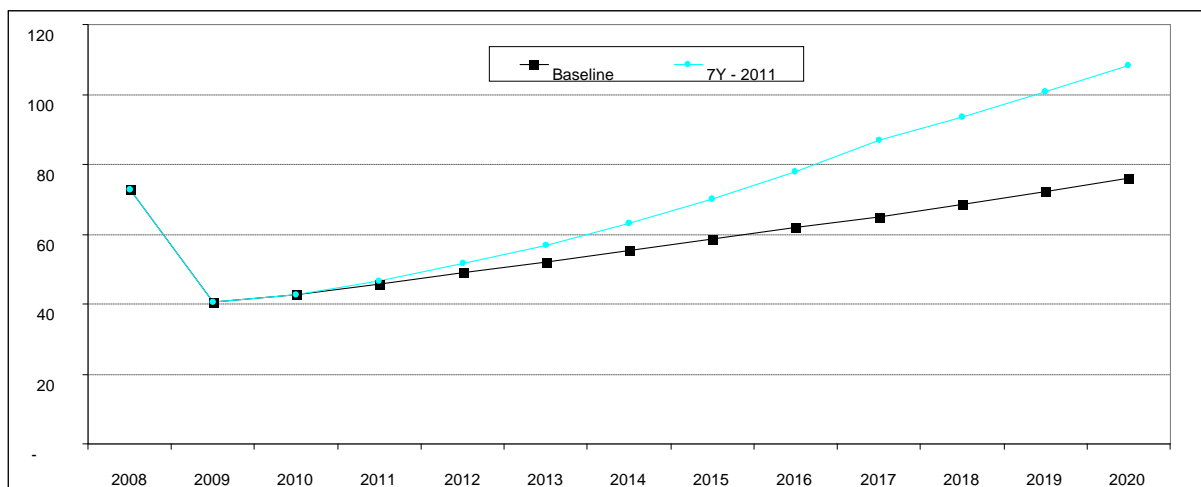


Exhibit 61 EU Motor Vehicles Import from India Impacts (000's vehicles)



Source IHS GLOBAL INSIGHT

Applying an average € unit value to € trade values allows us to convert the trade values into 000s vehicles. Note we have assumed, in the case of EU exports to India, that average values will fall quickly as less expensive (but still luxury) cars become more attractive in India. The 70,000+ units in 2020 compares with 1,653 units in 2008 (of which 1,410 are Segment E and F cars). The methodology applies does not allow us to distinguish by tariff line but one can assume that, now and in the study scope period, the majority of vehicles exported will be tariff lines cars, 1,5 litres and above.

5.2 Vehicle Parts

5.2.1 Detailed Assessment

Exhibit 62 identifies the scenarios chosen to describe the potential impact of an FTA between the EU and India concerning Parts. In effect the key variables are

- The start date of the reduction in tariffs
- The period over which tariffs are reduced to NIL
- Changes, if any, in the non-tariff barriers (NTBs)

Exhibits 63 and 64 highlight the potential impact in €s for exports and the net trade balance.

NB: There is no scenario for Parts tariff rate changes between India and the EU since existing tariffs are negligible so we will use our baseline case to establish imports from India. Note also that our analysis finishes in 2020 although the incremental affects of the scenarios continues beyond this date for both 10Y-2011 and 10Y-2016.

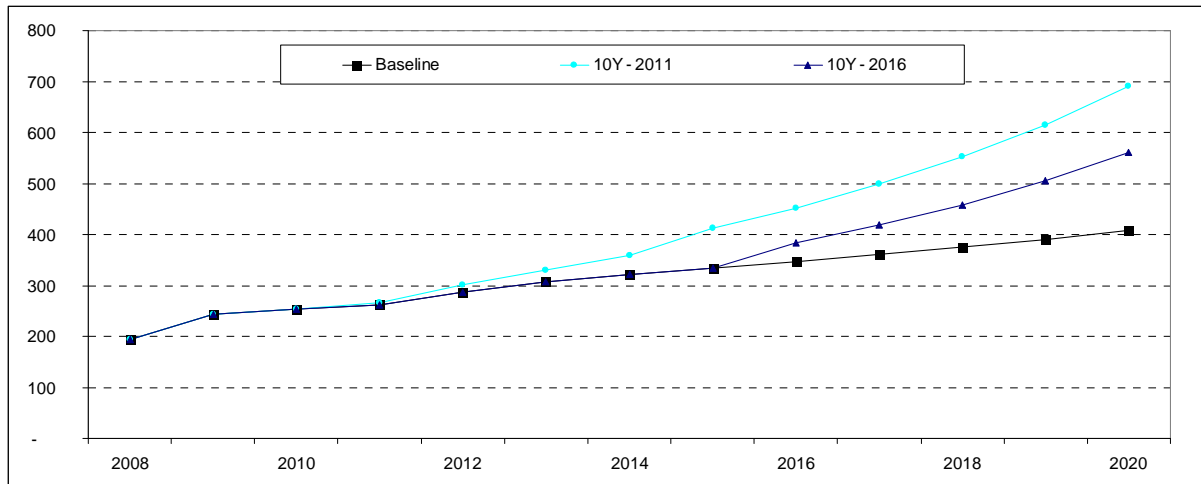
Exhibit 62 India Trade Hypothesis

Scenario Name	Start Date	Comments
10Y-2011	2011	<ul style="list-style-type: none"> • Linear elimination of tariffs over 10 years period • Improving NTB indicator
10Y-2016	2016	<ul style="list-style-type: none"> • Linear elimination of tariffs over 10 years period • Improving NTB indicator

Source IHS GLOBAL INSIGHT

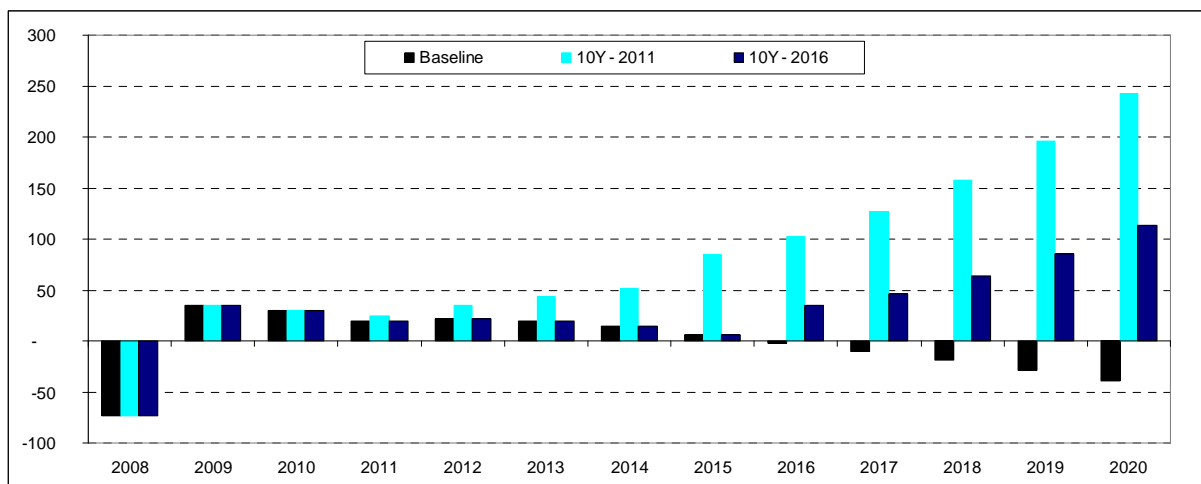
5.2.2 Impact upon Trade

Exhibit 63 EU Vehicle Parts Export to India Impacts (M €)



Compared to motor vehicles parts volumes and tariff rates are “reasonable” although any tariff, however small, is important in this highly competitive market. The model forecasts an up to 60% improvement in parts sales in the scope period with further improvements realised beyond 2020.

Exhibit 64 EU Vehicle Parts Trade Balance with India Impacts (M €)



Source IHS GLOBAL INSIGHT

Both the scenarios, by 2020, counteract the baseline position of a trade deficit in automotive parts in 2020. However the values involved, both in absolute terms and in variation baseline/scenarios, are nowhere near as significant as in the case of Motor Vehicles.

5.3 Automotive Industry Impacts

5.3.1 Detailed Assessment

Exhibit 65 India Trade Combined Hypothesis

Scenario Name	Motor Vehicle	Vehicle Part
Scenario 1	7Y-2011	10Y-2011
Scenario 2	10Y-2011	10Y-2011
Scenario 3	10Y-2016	10Y-2016

Source IHS GLOBAL INSIGHT

Exhibit 66 EU Trade Hypothesis

Scenario Name	Start Date	Comments
7Y-2011	2011	<ul style="list-style-type: none"> Linear elimination of tariff rate over 7 years period

Source IHS GLOBAL INSIGHT

5.3.2 Overall Impact

Exhibit 67 EU Automotive Industry Export to India Impacts (M €)

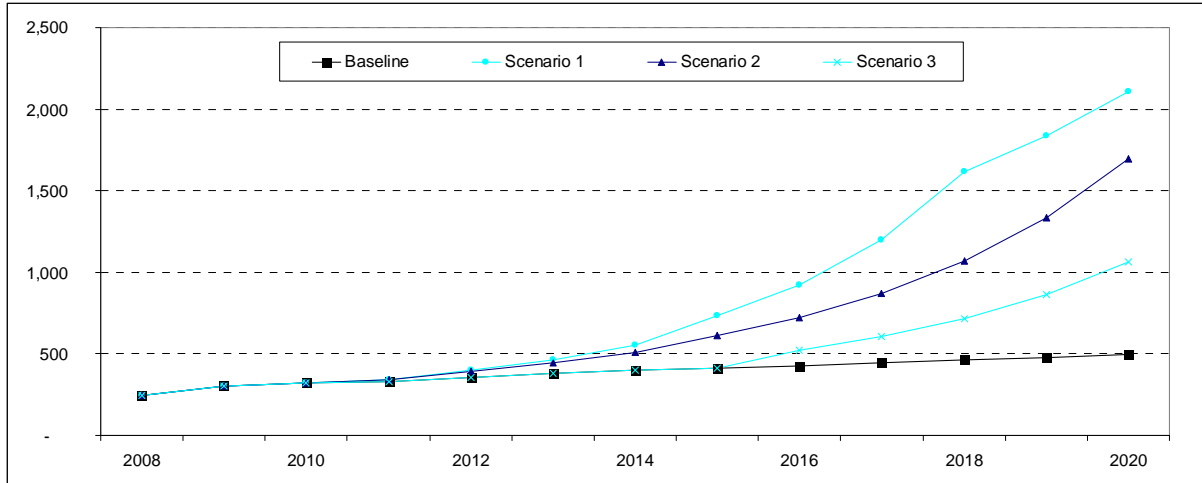
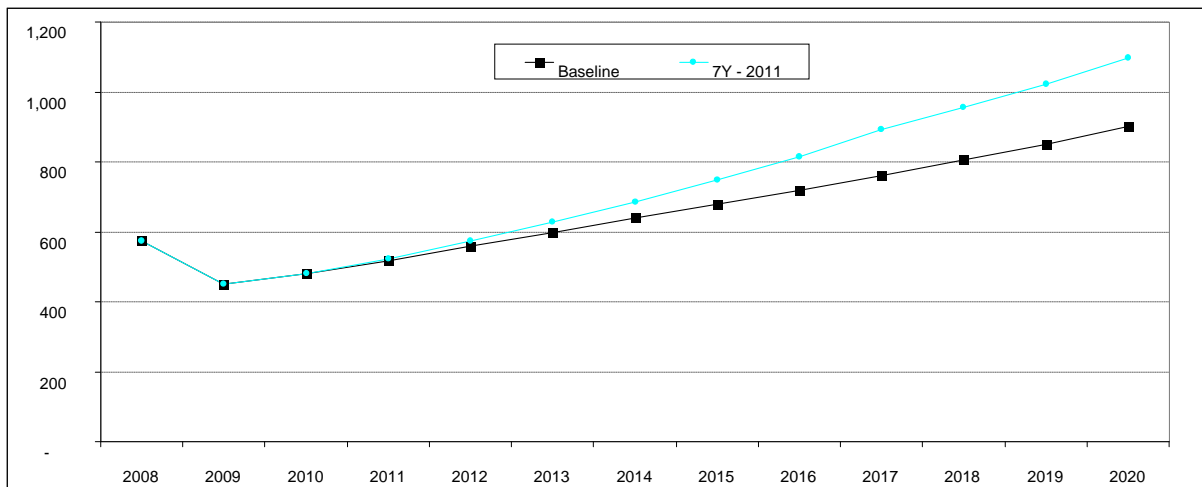
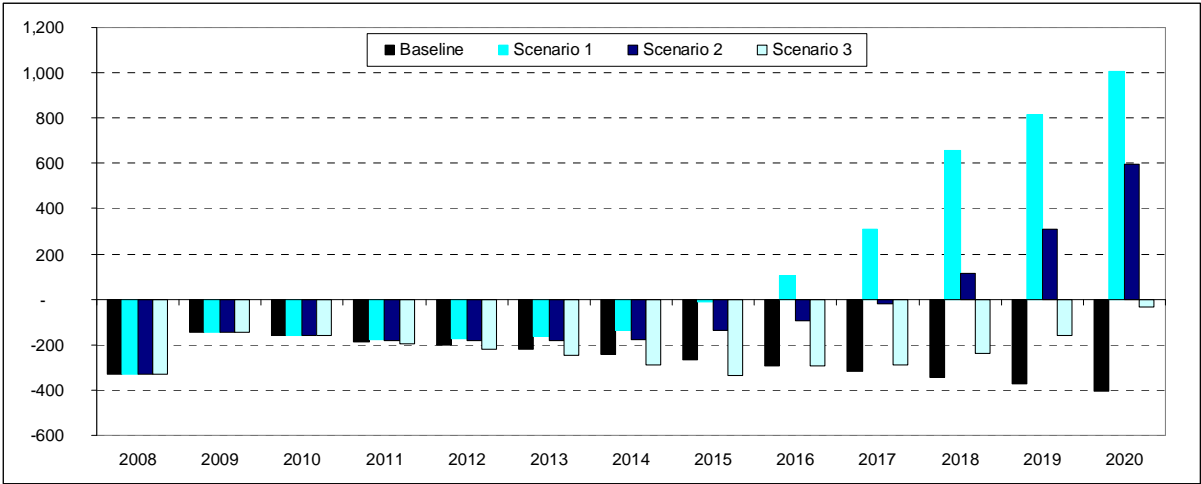


Exhibit 68 EU Automotive Industry Import from India Impacts (M €)



Source IHS GLOBAL INSIGHT

Exhibit 69 EU Automotive Industry Trade Balance with India Impacts (M €)



Source IHS GLOBAL INSIGHT

Under Scenario 3 (basically a 10 year elimination of tariffs, back loaded to commence in 2016) by 2020 what would otherwise be a large trade deficit is cut to almost nothing; under Scenario 1, on the other hand, where the full impact of the FTA will have fed through to a new “norm” in 2020, the EU will have a trade surplus with India of 1€bn p/a: this would probably be a “reasonable” objective for the EU given the relative positions of the automotive industries in the EU and India and how they might evolve through to 2020.

5.3.3 Distributed Effects between EU Countries

Exhibit 70 Main EU Motor Vehicle Exporters Market Share with India Impacts (%)

	2008	2020
Czech Republic		
Baseline	12.6%	12.6%
7Y-2011	12.6%	36.3%
10Y-2011	12.6%	35.6%
10Y-2016	12.6%	33.3%
Germany		
Baseline	62.0%	62.6%
7Y-2011	62.0%	35.2%
10Y-2011	62.0%	35.9%
10Y-2016	62.0%	38.6%
UK		
Baseline	11.0%	10.6%
7Y-2011	11.0%	14.6%
10Y-2011	11.0%	14.5%
10Y-2016	11.0%	14.1%

Source IHS GLOBAL INSIGHT

Exhibit 71 Main EU Vehicle Part Exporters Market Share with India Impacts (%)

	2008	2020
Czech Republic		
Baseline	28.1%	28.9%
10Y-2011	28.1%	33.0%
10Y-2016	28.1%	31.6%
Germany		
Baseline	16.7%	17.5%
10Y-2011	16.7%	14.9%
10Y-2016	16.7%	15.8%
Italy		
Baseline	20.7%	21.1%
10Y-2011	20.7%	19.7%
10Y-2016	20.7%	20.2%
UK		
Baseline	7.2%	6.7%
10Y-2011	7.2%	9.6%
10Y-2016	7.2%	8.7%

Source IHS GLOBAL INSIGHT

Exhibit 72 Main EU Automotive Industry Exporters Market Share with India Impacts
(%)

	<i>2008</i>	<i>2020</i>
Czech Republic		
Baseline	24.9%	25.9%
Scenario 1	24.9%	35.2%
Scenario 2	24.9%	34.5%
Scenario 3	24.9%	32.4%
Germany		
Baseline	26.2%	25.7%
Scenario 1	26.2%	28.5%
Scenario 2	26.2%	27.4%
Scenario 3	26.2%	26.6%
Italy		
Baseline	17.0%	17.8%
Scenario 1	17.0%	8.6%
Scenario 2	17.0%	9.9%
Scenario 3	17.0%	12.1%
UK		
Baseline	8.0%	7.4%
Scenario 1	8.0%	12.9%
Scenario 2	8.0%	12.5%
Scenario 3	8.0%	11.2%

Source IHS GLOBAL INSIGHT

Interestingly, looking at how individual EU countries will be affected by the three scenarios, and being mindful of the model's dependence upon historic times series, it is clear that all of the above countries already trading with India (motor vehicles or parts or both) will be the individual winners with the Czech Republic taking the Number 1 EU exporter position from Germany.

Chapter 6

Application of Methodology to a FTA EU/ASEAN

6 Application of Methodology to a FTA EU/ASEAN

6.1 Motor Vehicles

6.1.1 Detailed Assessment

Exhibit 73 and 74 identify the scenarios chosen to describe the potential impact of bi-lateral trade agreements between the EU and the major markets of ASEAN extended to cover the ASEAN region and concerning Motor Vehicles. In effect the key variables are

- The start date of the reduction in tariffs
- The period and the amount by which tariffs are reduced
- Changes, if any, in the non-tariff barriers (NTBs)

Exhibits 75, 76, and 77 highlight the potential impact in €s for exports, imports and net trade balance.

Exhibits 78 and 79 use an average motor vehicle unit value to convert € values into units

NB: Our analysis finishes in 2020 although the incremental affects of the scenarios continues beyond this date for both 2011-2021 and 2011 1st step

Exhibit 73 ASEAN Trade Hypothesis

Scenario Name	Start Date	Comments
2011-2021	2011	<ul style="list-style-type: none"> • Global period of tariff rate elimination • Linear elimination of tariffs over 5,7 or 10 year period according to country • Improving NTB indicator varying according to country
2011 1 st step	2011	<ul style="list-style-type: none"> • Reduction of tariff rates purely on the higher tariff lines (petrol>3000cc; diesel>2500cc) at entry into force of FTA, then tariffs maintained pending further negotiations • No change of NTB indicator for any country

Source IHS GLOBAL INSIGHT

Exhibit 74 EU Trade Hypothesis

Scenario Name	Start Date	Comments
6Y-2011	2011	<ul style="list-style-type: none">• Linear elimination of tariff rate over 6 years period

Source IHS GLOBAL INSIGHT

6.1.2 Impact upon Trade

6.1.2.1 Impact upon Trade Value

Clearly there is a huge variation between the two scenarios – even if scenario 2011 1st step will improve the volume of luxury European built cars exported to the ASEAN, quantities will be small.

Exhibit 75 EU Motor Vehicles Export to ASEAN Impacts (M €)

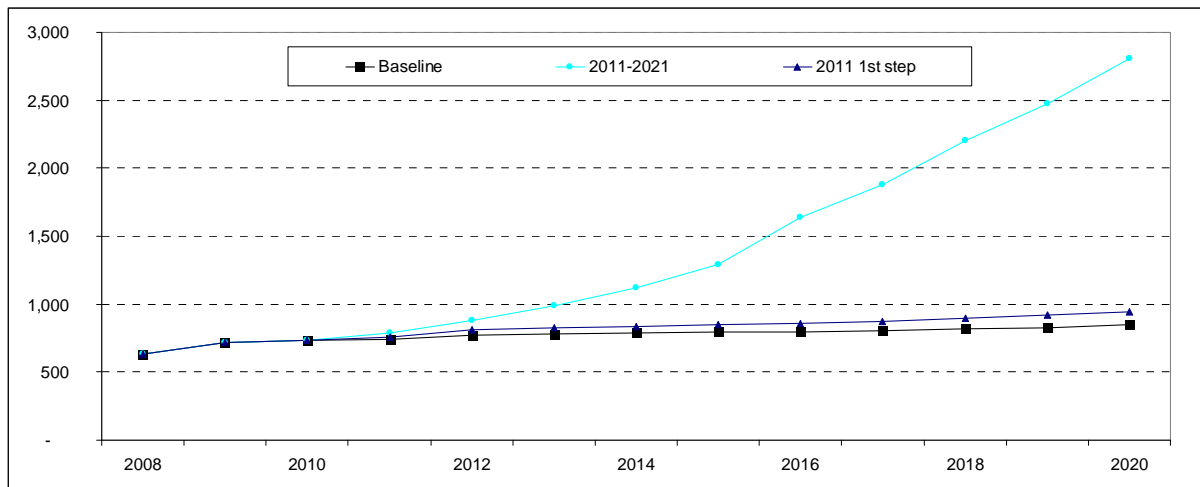
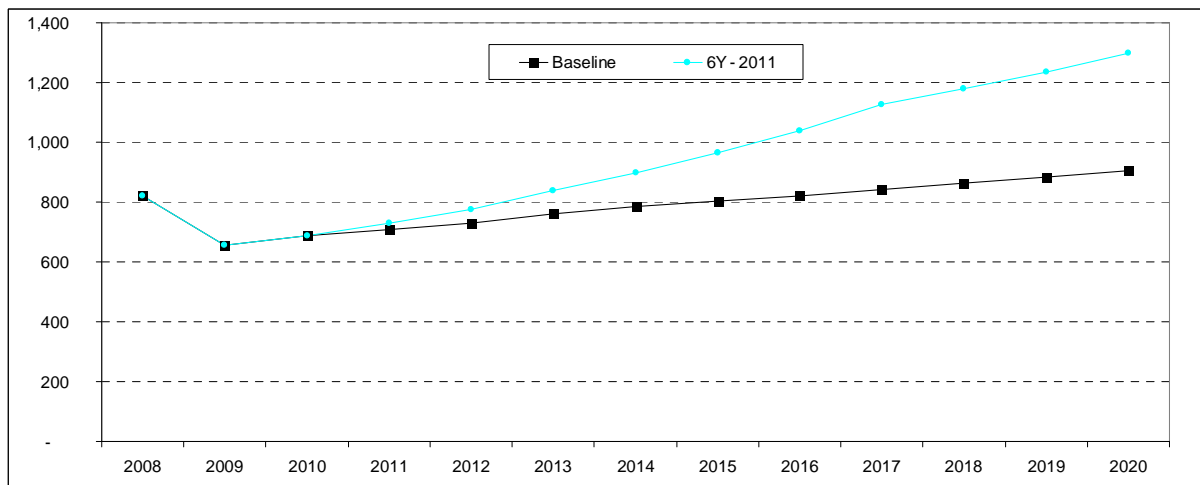
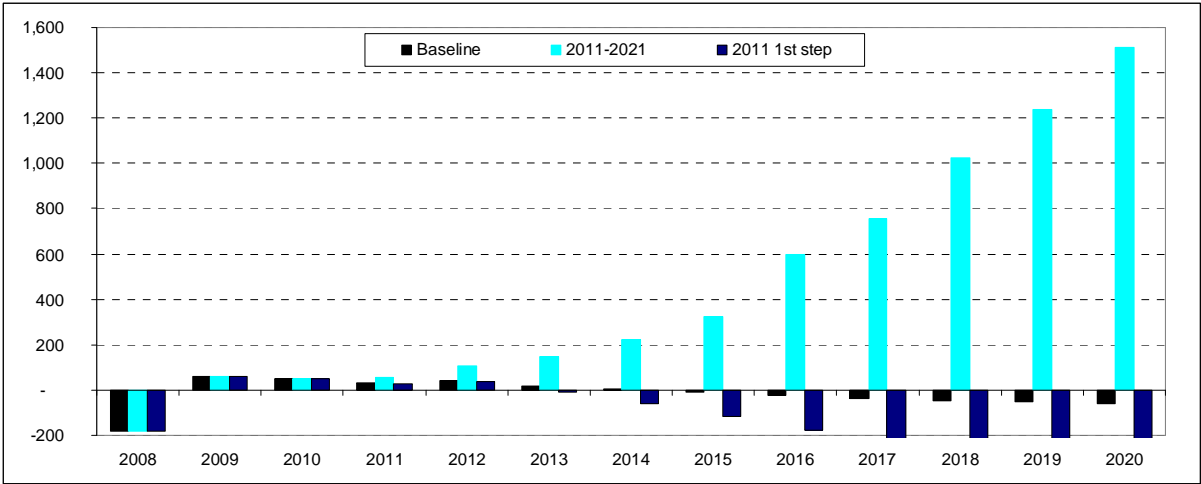


Exhibit 76 EU Motor Vehicles Import from ASEAN Impacts (M €)



Source IHS GLOBAL INSIGHT

Exhibit 77 EU Motor Vehicle Trade Balance with ASEAN Impacts (M €)



Source IHS GLOBAL INSIGHT

Our baseline forecast suggests that, without any further trade agreements with ASEAN countries, the trade balance will become negative by 2015; scenario 1st step actually brings forward this “tipping” point to 2013 and sees the deficit increasing, albeit slowly, through to the end of the study period. Scenario 2011-2021 however would generate annual trade surpluses of over €1bn p/a by 2018.

6.1.2.2 Impact upon Trade Volume

Exhibit 78 EU Motor Vehicles Export to ASEAN Impacts (000's vehicles)

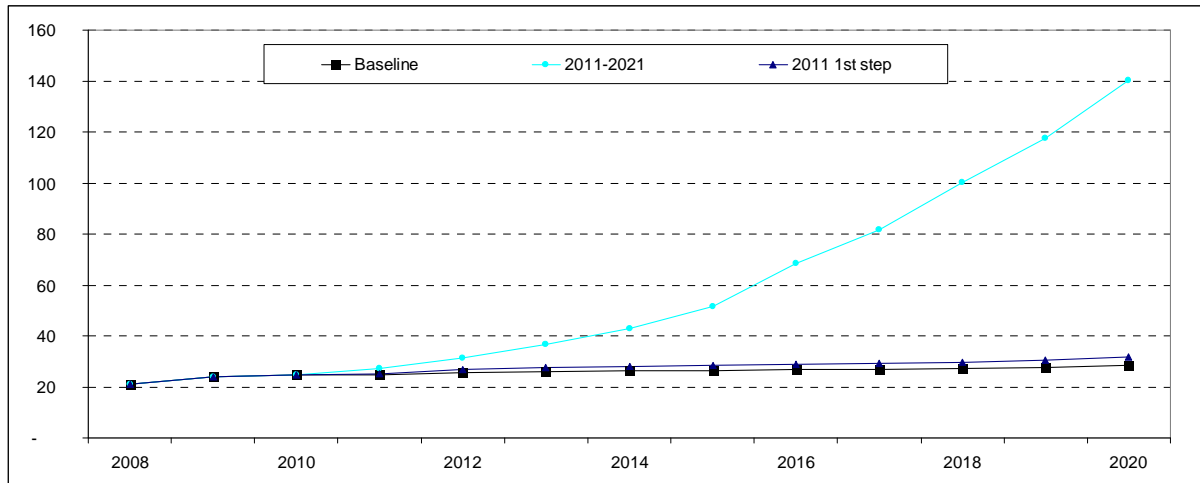
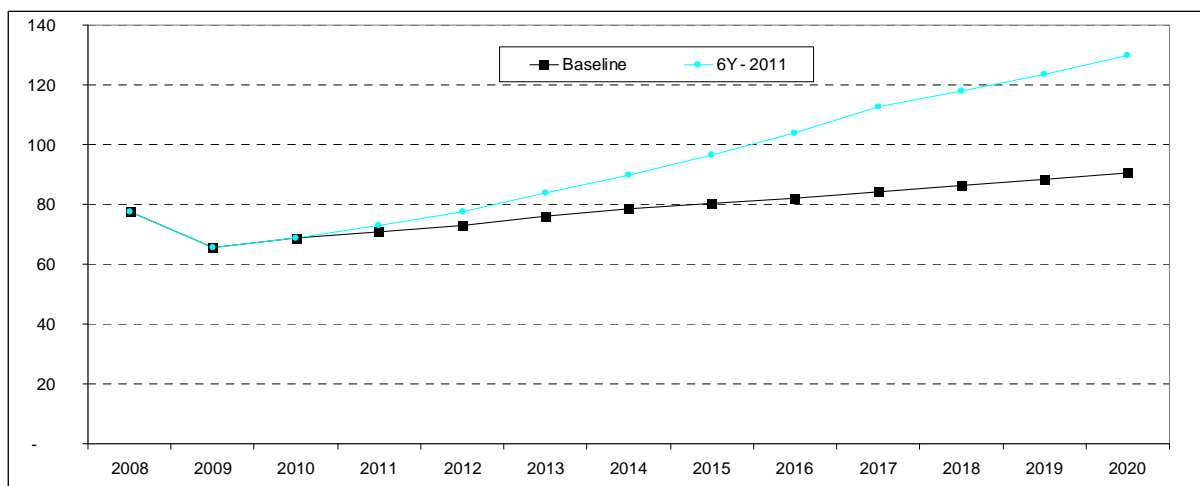


Exhibit 79 EU Motor Vehicles Import from ASEAN Impacts (000's vehicles)



Source IHS GLOBAL INSIGHT

Applying an average € unit value to € trade values allows us to convert trade values into 000s vehicles. Note we have assumed, in the case of EU exports to ASEAN, and only for Scenario 2011-2021, that average values will fall quickly as less expensive (but still luxury) cars become more attractive in ASEAN. EU 2008 exports to ASEAN countries were 20,828 units, 7,996 luxury (Segment E and F); and of these 5,267 went to Singapore (where tariffs are already negligible so will not be affected). So the net effect of Scenario 2011 1st step is a small volume increase – approx 3,000 units p/a – by 2020.

6.2 Vehicle Parts

6.2.1 Detailed Assessment

Exhibit 80 identifies the scenarios chosen to describe the potential impact of bi-lateral trade agreements between the EU and the major markets of ASEAN extended to cover the ASEAN region concerning Parts. In effect the key variables are

- The start date of the reduction in tariffs
- The period over which tariffs are reduced to NIL
- Changes, if any, in the non-tariff barriers (NTBs)

Exhibits 81 and 82 highlight the potential impact in €s for exports and the net trade balance.

NB: There is no scenario for the Parts tariff changes from ASEAN to the EU since existing tariffs are negligible so we will use our baseline case to establish imports from ASEAN. Note also that our analysis finishes in 2020 although the incremental affects of the scenarios continues beyond this date for 2011-2022.

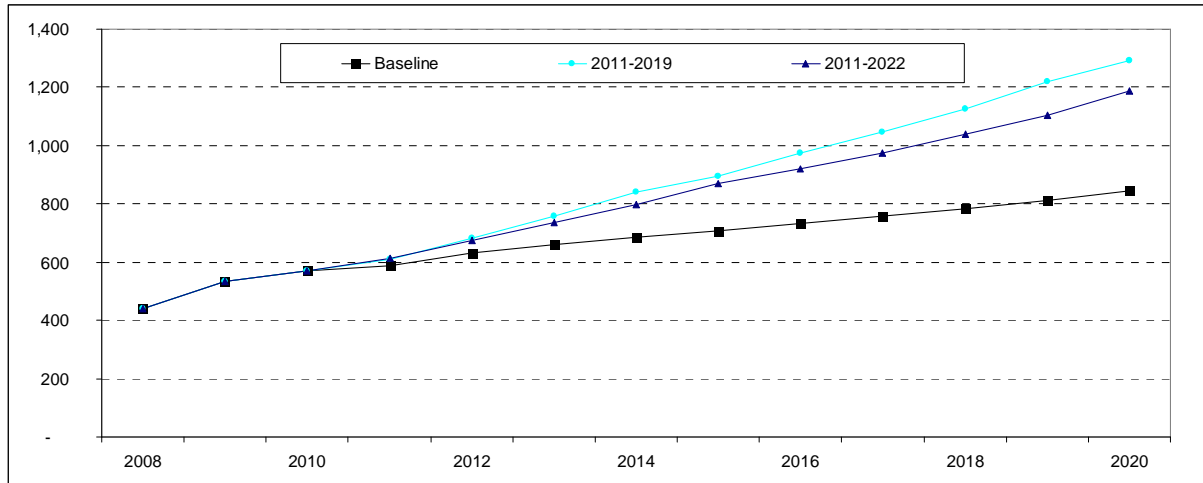
Exhibit 80 ASEAN Trade Hypothesis

Scenario Name	Start Date	Comments
2011-2019	2011	<ul style="list-style-type: none"> • Global period of tariff rate elimination • Linear elimination of tariffs over 3 or 8 years according to country • Improving NTB indicator varying according to country
2011-2022	2011	<ul style="list-style-type: none"> • Global period of tariff rate elimination • Linear elimination of tariffs over 4 or 11 years according to country • Improving NTB indicator varying according to country

Source IHS GLOBAL INSIGHT

6.2.2 Impact upon Trade

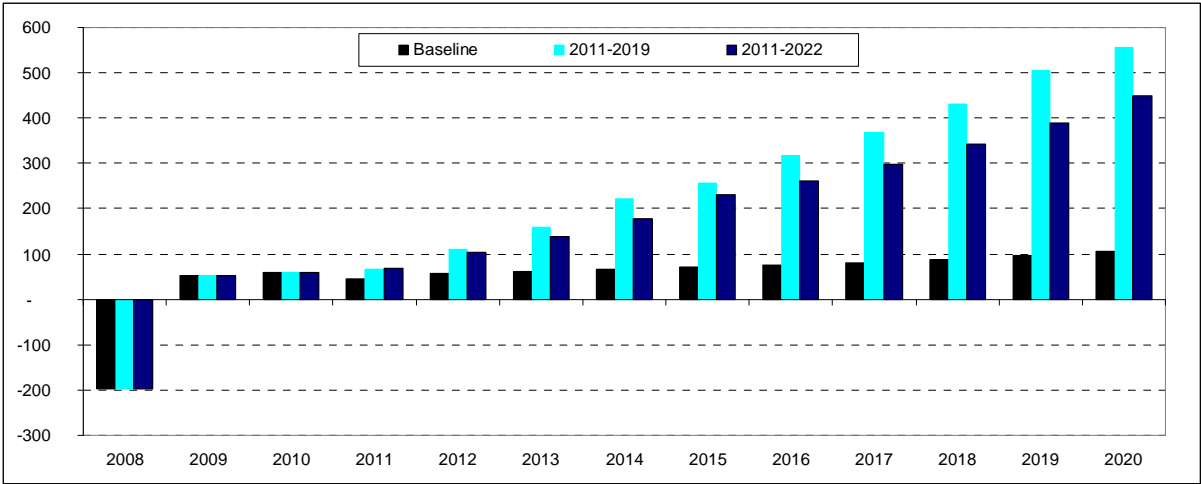
Exhibit 81 EU Vehicle Parts Export to ASEAN Impacts (M €)



Source IHS GLOBAL INSIGHT

EU parts exports will increase by at least 50%, according to the scenarios, and will break the €1bn mark during the study scope period.

Exhibit 82 EU Vehicle Parts Trade Balance with ASEAN Impacts (M €)



Source IHS GLOBAL INSIGHT

2009 sees a return to a positive trade balance for the EU due to a decline in imports greater than the decline in exports – this positive trade balance is expected to continue through the study scope period in the baseline case; in the two scenarios the positive balance is important.

6.3 Automotive Industry Impacts

6.3.1 Detailed Assessment

Exhibit 83 ASEAN Trade Combined Hypothesis

Scenario Name	Motor Vehicle	Vehicle Part
Scenario 1	2011-2021	2011-2019
Scenario 2	2011 1 st Step	2011-2022

Source IHS GLOBAL INSIGHT

Exhibit 84 EU Trade Hypothesis

Scenario Name	Start Date	Comments
6Y-2011	2011	<ul style="list-style-type: none"> Linear elimination of tariffs over 6 years period

Source IHS GLOBAL INSIGHT

6.3.2 Overall Impact

Exhibit 85 EU Automotive Industry Export to ASEAN Impacts (M €)

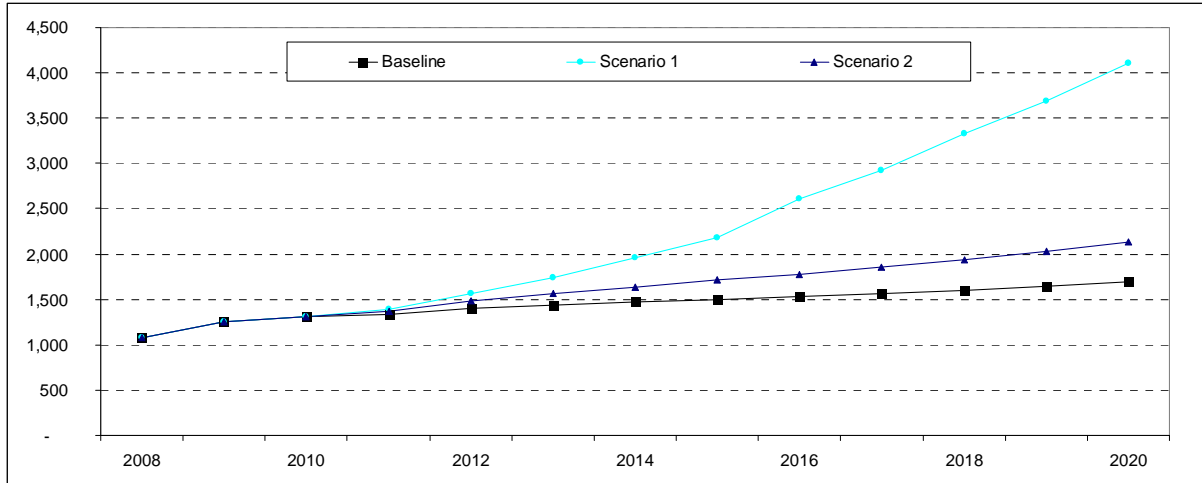
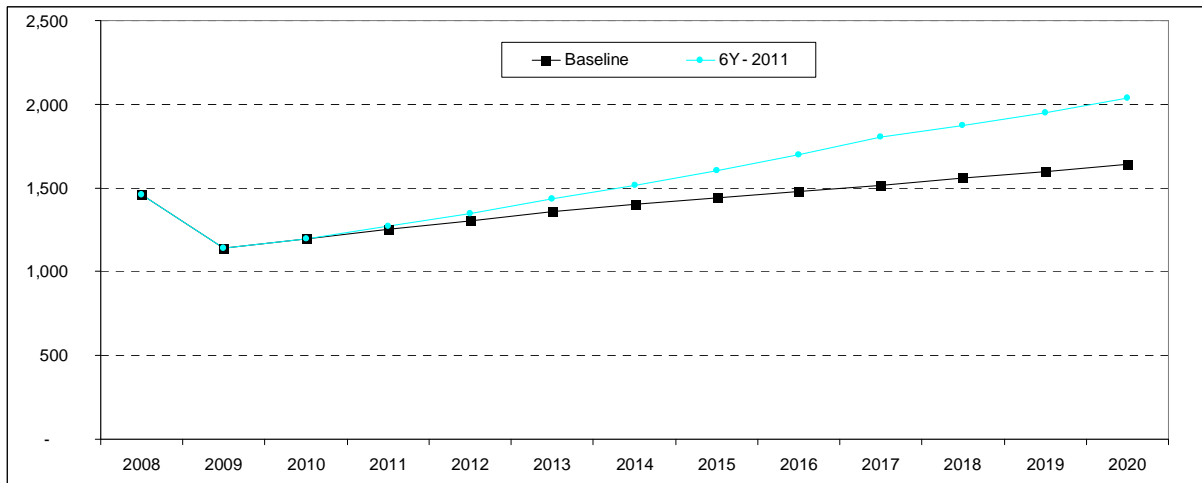
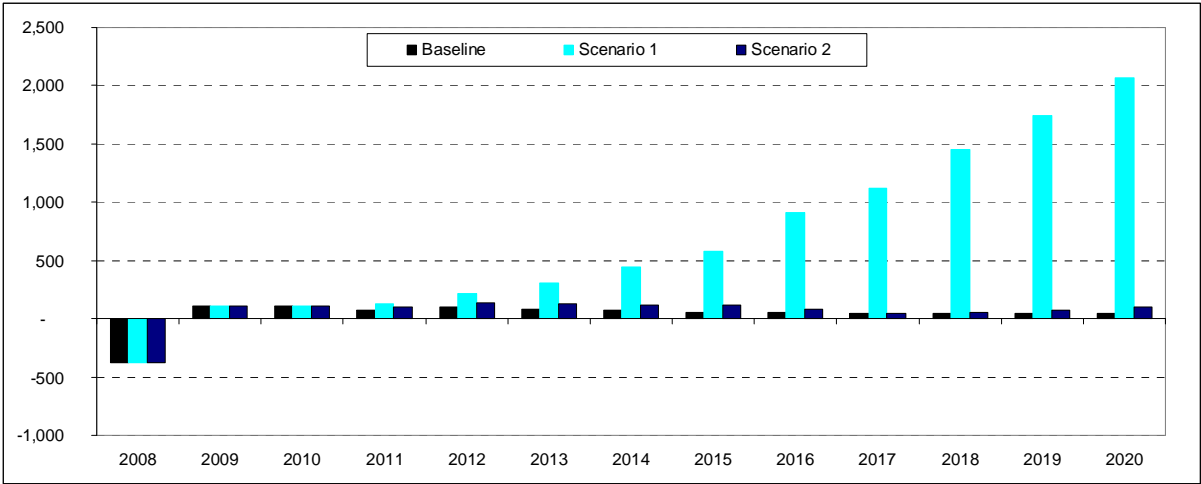


Exhibit 86 EU Automotive Industry Import from ASEAN Impacts (M €)



Source IHS GLOBAL INSIGHT

Exhibit 87 EU Automotive Industry Trade Balance with ASEAN Impacts (M €)



Source IHS GLOBAL INSIGHT

Baseline and Scenario 2 (driven by Motor Vehicles 1st step) show very little difference - changes are modest - whilst the full elimination of tariffs, almost completed in Scenario 1 (actually completed in 2021) produces a trading surplus for automotive of in excess of €2bn p/a.

6.3.3 Distributed Effects between EU and ASEAN Countries

Note: market share only include 5 ASEAN countries (Indonesia, Malaysia, Philippines, Singapore and Thailand) and not all countries as in Chapter 3.

Exhibit 88 Main EU Motor Vehicle Exporters Market Share with ASEAN Impacts (%)

	2008	2020
Germany		
Baseline	51.0%	52.1%
2011-2021	51.0%	51.0%
2011 1st step	51.0%	51.6%
Italy		
Baseline	3.8%	3.3%
2011-2021	3.8%	1.7%
2011 1st step	3.8%	3.1%
UK		
Baseline	18.1%	19.8%
2011-2021	18.1%	23.9%
2011 1st step	18.1%	20.3%

Source IHS GLOBAL INSIGHT

Exhibit 89 Main EU Vehicle Part Exporters Market Share with ASEAN Impacts (%)

	2008	2020
Germany		
Baseline	48.8%	48.9%
2011-2019	48.8%	45.3%
2011-2022	48.8%	45.8%
Italy		
Baseline	14.1%	14.8%
2011-2019	14.1%	13.7%
2011-2022	14.1%	13.7%
UK		
Baseline	10.0%	10.6%
2011-2019	10.0%	12.4%
2011-2022	10.0%	12.0%

Source IHS GLOBAL INSIGHT

**Exhibit 90 Main EU Automotive Industry Exporters Market Share with ASEAN
Impacts (%)**

	<i>2008</i>	<i>2020</i>
Germany		
Baseline	50.1%	50.5%
Scenario 1	50.1%	49.2%
Scenario 2	50.1%	48.3%
Italy		
Baseline	8.0%	9.1%
Scenario 1	8.0%	5.5%
Scenario 2	8.0%	9.0%
UK		
Baseline	14.8%	15.3%
Scenario 1	14.8%	20.3%
Scenario 2	14.8%	15.7%

Source IHS GLOBAL INSIGHT

The EU countries currently exporting to ASEAN countries will continue to be the major trade partners under our model with very little variation in comparison to their current share of total EU automotive exports.

Chapter 7

Conclusion and Recommendations

7 Conclusion and Recommendations

7.1 Conclusion

First of all it is clear that the EU automotive industry offers products and services which, without doubt, would have a greater impact upon the automotive markets of India and ASEAN were there not barriers to entry in place. Specifically the EU automotive offer would be of particular interest to the Indian and ASEAN markets across

- light vehicle segments with the exception, perhaps, of low-cost cars (which is, admittedly, a large part of the passenger car market and is likely to be for the foreseeable future)
- commercial vehicle segments
- parts and accessories for original equipment fit
- technology, design, production and logistic processes

In order for the EU automotive industry to be able to fulfil the potential of these markets requires (further) direct investment and exports which in turn requires easier and more assured access.

There are a number of similarities between the Indian and ASEAN automotive markets and their interaction with the EU with regard to the challenges involved in seeking enhanced trading terms between them and the EU

Both markets are definitely worthy of concerted action since they offer significant opportunity for growth.

- economic (because of competitiveness, demographics, domestic demand etc.) to be reflected in GDP growth way beyond the global “norms”
- light vehicle demand (increasing number of “wealthy” families, current low / very low levels of cars per 000s population etc.) reflected in Light Vehicle growth volumes
- commercial vehicle demand to assist the economic growth and infrastructure improvements

In turn, and working on the assumption that national governments will look to supply much of the local demand through local production

- vehicle production will grow to satisfy domestic demand: it will also provide critical mass in order to meet the objectives of various government plans which call for automotive exports to support national balance of payments and foreign currency plans
- parts and accessories production will grow, specifically to supply Original Equipment demands, although this could also offer opportunities for export of OE components and to supply the global aftermarket

Current automotive production volumes, both in India and ASEAN, benefit through protection. This manifests itself through

- in-bound tariff rates – particularly on CBU vehicles but also upon CKD vehicles and parts and accessories
- a range of non tariff barriers, administrative, port entry, infrastructure etc.
- an unwillingness and/or tardiness to accept and implement global technical standards UNECE 1958 and 1998 which would facilitate multi-market supply
- vehicle production driven by “closed” local demand, rather than a broader geographic offer, is itself a barrier to entry for EU suppliers with a global / multi-market offer
- relative difficulty and/or lack of attractiveness of investment because of terms and conditions

On top of this there are aspects which are unique to either India or ASEAN and which add an extra dimension to the quest for improved trading terms between the EU and India, EU and ASEAN, the most obvious being that the ASEAN is not a coherent, homogenous commercial community and is unlikely to be so, at least until 2015 with the establishment of the ASEAN Economic Community (AEC). So negotiations are not easy and this is certainly, in part at least, cause of negotiations with ASEAN stalling and attention now being placed upon bi-lateral negotiations with individual ASEAN member states.

Finally, it also has to be said that both the Indian and the ASEAN markets have shown a greater affinity towards other Asian automotive industries, Japan, and increasingly, China rather than the auto industries of Europe (or the US); is this a matter of culture and taste or rather a reflection that local Asian OEMs and suppliers have been more successful?

Whatever are the factors, and the mix of those contributory factors, the result for the EU automotive industry is that its performance in these markets is, at best, poor.

The EU automotive industry penetration of both the Indian and the ASEAN markets, in unit terms is negligible. The sum of exports and local production of EU vehicles generated a market share of less than 1% in 2008 and the IHS Global Insight baseline forecast for the next decade sees no significant improvement despite significant market growth and a real thirst for motorisation in many parts of these two markets. It is not possible to calculate an equivalent EU supplier share of the total OE parts market but with a very few, possibly only one exception, Bosch, it is unlikely that auto suppliers exceed single figure penetration within product areas, let alone across the total OE components market.

The EU automotive industry trading situation, reflecting the poor performances identified above and despite the substantially higher average unit values, saw 2008 deficits in net trade balance of €300m with both India and, coincidentally, with ASEAN; the financial crises will probably positively affect our net trade position, certainly in 2009, as we cut back more on imports than they cut back on our exports but our IHS Global Insight trade balance baseline forecasts see the trading deficit with India continuing and increasing during the next decade, whilst our trade baseline forecasts for ASEAN sees a stabilising of our position at an equilibrium level.

These performances do not reflect the relative competitiveness of the EU automotive industry on a global level; rather they reflect the relatively closed states of these markets to the EU automotive industry.

7.2 Recommendations

Fulfilling the potential for the EU automotive industry requires a mix of (further) investment and a substantial freeing up of trade access to India and the key markets of the ASEAN in order to see a significant increase in EU export of vehicles and components.

Specifically a number of objectives can be set. These are presented in two groups, one for India and one for ASEAN: clearly there is some duplication given the similarities that exist in the trading situations.

7.2.1 India

- 1. Focus tariff line negotiations with India where they might be most successful; medium, large and luxury cars.** These are not a significant part of the Indian market at the moment and are unlikely to be as long as import tariffs are high; but, if tariffs were reduced, or even better, eliminated, this part of the market could bring useful export volumes for European OEMs without adversely affecting the Indian auto industry (Tata might even support an approach that allowed greater volume sales of Jaguar and Land Rover vehicles in India). The full elimination of tariffs would see significant increases in export volumes; in our model 70,000 units exported from the EU to India much of these within the large and luxury car segments
- 2. Seek the elimination of tariffs with India on parts and accessories.** Negotiations in this area are probably viewed as being less sensitive than negotiations concerning vehicles but could offer some reasonable trade gains for the EU which would be distributed over many rather than few EU member states. In our model the scenario which eliminates tariffs quantifies a €300m shift turning an EU deficit of €50m into an EU surplus of €250m once tariffs are fully phased out
- 3. Non tariff barriers (and impending non tariff barriers) need to be identified and phased out.** It must be realised that there is a different business culture in Asia from that in Europe and that some NTBs are no more than the Indian way of doing business. Notwithstanding this consideration needs to be given now to those working methods which currently constitute a

NTB and/or which could become a NTB of the future with, for instance, an increase in volumes and or a larger number of smaller exporters. Typical examples quoted include delay for duty drawback claims; better IT in order to facilitate the logistics of physical and administrative movements; tyre labelling etc.

4. **Push for adoption and implementation of automotive technical harmonisation through UNECE 1958 and UNECE 1998.** India should accede to the UNECE 1958 and 1998 agreements and participate actively in the global harmonisation process. The recent, well-publicised, case concerning radial tyres requiring an additional, unique to India, certificate of conformity, suggests a lack of regard for the importance of UNECE standards.
5. **Efforts need to be made to encourage and support EU automotive companies' foreign direct investment in India.** The Indian market offers huge, local demand based opportunities in the small car segments; for commercial vehicles; and for OE parts and accessories. All of these sectors are likely, because of their importance to the Indian economy, to be protected even if agreements are achieved in tariff reduction/tariff elimination. In addition the Indian government has a goal to establish itself as a global export hub for small cars, a goal which could be realised if it is successful in meeting its own demands through vehicles like the Nano. And there are opportunities, driven by India and like-minded markets, for new technologies to be created, opportunities unlikely to be realised in Europe with its "established" (that is, sometimes, too "structured") approach to innovation and research and development).

7.2.2 ASEAN

1. **In the absence of negotiations with ASEAN, pursue bilateral trade agreements with the 7 countries for which the Commission has a political mandate to negotiate.** However not all of these countries are "equal": it might be expeditious to concentrate on one or two countries, perhaps just one country, Thailand, using this as an exemplar case. Thailand has a big car market, ambitious objectives for its automotive industry and no indigenous vehicles manufacturer.

- 2. Ensure the broadest range of passenger vehicles (from luxury down) are included in the tariff reductions/eliminations.** There is already precedence, in so far as Japan has negotiated favourable terms with a number of the ASEAN countries for a very limited range of passenger cars (those with the biggest engines >2500cc Diesel: >3000cc Petrol) for EU negotiations equally to be limited to a very narrow range of vehicles; our model suggest this would only bring small advantages and our recommendation is that negotiations should focus upon passenger vehicles >1500cc (petrol or diesel). Our model suggests that, accepting the “Japanese” example, as expressed in our 1st step scenario, would lead to only a small increase in annual export volumes to ASEAN – possibly as little as several thousands units extra per annum, given the small market size of the segments covered, the existing presence of (Japanese) competition, and the fact that Singapore, an important market for luxury vehicles is already open to EU exports - 5,267 segment E and F vehicles in 2008.
- 3. Seek the elimination of tariffs with ASEAN (basically vehicle manufacturing countries) of parts and accessories.** Negotiations in this area are probably viewed as being less difficult than negotiations concerning vehicles but could offer some good trade gains for the EU which would possibly be distributed over many rather than few EU member states. Key ASEAN countries for bi-lateral agreements here would be Thailand and Indonesia. . In our model the scenario which eliminates tariffs quantifies a €750m shift turning an EU deficit of €200m into an EU surplus of €550m once tariffs are fully phased out
- 4. Non tariff barriers (and impending non tariff barriers) need to be identified and phased out.** It must be realised that there is a different business culture in Asia from that in Europe and that some NTBs are no more than the ASEAN way of doing business. Notwithstanding this consideration needs to be given now to those working methods which currently constitute a NTB and/or which could become a NTB of the future with, for instance, an increase in volumes and or a larger number of smaller exporters. Typical examples quoted include transparency, clearance times and administrative burden, more specifically a lack of consistency with WTO rules with regard to customs valuations; complex import procedures; the lack of respect for intellectual property and/or patents; infrastructure etc.
- 5. Push for adoption and implementation of automotive technical harmonisation through UNECE 1958 and UNECE 1998.** ASEAN countries which have not done so yet should accede to the UNECE 1958 and 1998 agreements and participate actively in the process; Thailand and Malaysia, both signatories to the 1958 agreement, should be encouraged to

implement the regulations. There does seem to be a push from the ASEAN secretariat to sign the UNECE agreements and this needs to be assisted by the EU as far as possible.

- 6. Efforts need to be made to encourage and support EU automotive companies' foreign direct investment in Thailand.** Each of the ASEAN countries have an independent and nationalistic approach to the automotive industry; perhaps, of the major ASEAN vehicle production countries, Thailand is most likely to facilitate European FDI which supports it's own objectives of establishing a global Eco-Car competence. There is no doubt that "green cars" are a growth sector for the future so, as with India above, there could be opportunities for new technologies to be created. This could be positive for both OEMs and Suppliers.

Appendix

Model Overview and Technical Definition

Appendix: Model overview and technical definition

The centrepieces of the quantitative analysis are two gravity models for panel data, one for the exports of motor vehicles, and the other for parts of motor vehicles. The explanatory variables are accordingly real exports of motor vehicles as well as parts of motor vehicles from country *i* to country *j*. The analysis includes as exporting countries 38 car producing countries (intersection of the IHS Global Insight's World Trade Service (WTS) and Automotive Division (AMD) production database) and as importing countries 54 countries from the WTS (see Table 1). Thus, altogether, we have 2014 country pairs. The estimation period is from 1997 to 2007 (11 years), leading to 22154 observations.

The estimation approach applied is a gravity model with fixed country pair effects and fixed time effects. Fixed country pair effects capture all time invariant influences affecting the exports of vehicles between countries *i* and *j* (e.g. distance, cultural similarity, common language or borders, trade agreements started before 1997). Fixed time effects capture influences affecting all countries in certain periods (e.g. common business cycles). All further variables – explanatory as well as explaining – are taken in logs.

The following further variables are included in the models. The natural log of the sum of countries *i* and *j* real GDP

$$\ln(GDP_{it} + GDP_{jt})$$

is used as mass variable. For this variable a positive sign is expected.

The similarity index of the two trading partners' GDP:

$$\ln \left[1 - \left(\frac{GDP_{it}}{GDP_{it} + GDP_{jt}} \right)^2 - \left(\frac{GDP_{jt}}{GDP_{it} + GDP_{jt}} \right)^2 \right]$$

serves as a measure of relative country size. Here, we also expect a positive sign.

Absolute difference in relative factor endowments are approximated by

$$\left| \ln \left(\frac{GDP_{it}}{POP_{it}} \right) - \ln \left(\frac{GDP_{jt}}{POP_{jt}} \right) \right|.$$

A negative sign is expected for this variable if intra-industry trade is dominant, while a positive sign is expected if traditional Heckscher-Ohlin is the most used form of foreign trade.

As a variable specific to the car industry, the car production capacity of each export country is included. It is measured as the number of units produced. In order to prevent collinearity problems

with the GDPs of the exporting countries, the production variable has been calculated as a percentage of the exporting countries' GDPs.

The trade effects of the EU membership of new members entering the EU in 2004 and 2007 are captured by two dummy variables. One grasps the trade generating effects with regard to the old EU members (*DEUG*), while the other captures the trade effects to third countries (*DEUX*).

Furthermore, dummy variables for three types of FTAs are included. The first type are FTAs between EU and third countries (FTAG) with date of entry into force after 1997, namely:

- EU – South Africa (1 January 2000)
- EU – Israel (1 June 2000)
- EU – Mexico (1 March 2001)
- EU – Chile (1 February 2003)
- EU –Egypt (1 June 2004).

For this dummy variable, we allow for an interaction with the mass variable:

$$FTAG_{ijt} \cdot \ln(GDP_{it} + GDP_{jt}),$$

as well as an interaction with the vehicle production variable:

$$FTAG_{ijt} \cdot \ln(PKW_{it}).$$

The second type of FTAs are captured by a dummy variable for FTAs between new EU members before their membership with third countries (FTAE), namely

- Hungary – Turkey (1998)
- Hungary – Israel (1998)
- Romania – Turkey (1998)
- Poland – Israel (1998)
- Poland – Turkey (2000).

Here, we again allow for an interaction with the mass variable:

$$FTAE_{ijt} \cdot \ln(GDP_{it} + GDP_{jt}).$$

The third group are FTAs between third countries with date of entry into force after 1997, which are captured by the dummy variable FTAO. These FTAs are:

- Israel – Turkey (1998)
- Mexico – Chile (1999)

- Mexico – Israel (2000)
- Egypt – Kenya (2000) [Common Market for Eastern and Southern Africa]
- ASEAN (1998): Indonesia, Philippines, Singapore, Thailand.

Accordingly, the interaction of FTAO with the mass variable is captured by

$$FTA O_{ijt} \cdot \ln(GDP_{it} + GDP_{jt}).$$

Furthermore, we also tested whether there are interactions of the FTA dummy variables with distance as well as other variables (e.g. patents as an indicator for innovativeness).

As far as the data situation allows it, further variables are included in the model. These are, on the one hand, tariff rates and indicators for non-tariff barriers, and, on the other hand, indicators for the innovative capabilities and knowledge diffusion. Since tariff rates do not vary over time, on the one hand, and, on the other hand, many countries have similar tariff rates, the estimation of their effects amounts to a grouping of countries with low, medium and high tariff rates.

Once the gravity models are estimated within the Eviews systems procedure, they are transformed into systems of bilateral trade equations within the Eviews model procedure, which can be used to simulate alternative scenarios for FTAs between the EU and India as well as the EU and ASEAN countries. Thereby the model is solved with the Gauss-Seidel algorithm. Besides a baseline solution, the alternative scenarios can be more or less ambitious in terms of tariff reductions, elimination of non-tariff barriers and investment. One important variable to capture the trade creation effects is the dummy variable capturing the effects of already existing FTAs between the EU and third countries with date of entry into force after 1997, but also other variables can be changed to simulate a certain scenario.

Table 1: Countries in the sample

Import countries	Export countries
Argentina	Argentina
Australia	Australia
Austria	Austria
Belgium	Belgium
Brazil	Brazil
Bulgaria	
Canada	Canada
Chile	
China	China
Colombia	Colombia
Czech Republic	Czech Republic
Denmark	
Egypt	Egypt
Finland	Finland
France	France
Germany	Germany
Greece	
Hong Kong	
Hungary	Hungary
India	India
Indonesia	Indonesia
Ireland	
Israel	
Italy	Italy
Japan	Japan
Kenya	
Malaysia	Malaysia
Mexico	Mexico
Netherlands	Netherlands
New Zealand	

Norway	
Pakistan	Pakistan
Peru	
Philippines	Philippines
Poland	Poland
Portugal	Portugal
Romania	Romania
Russia	Russia
Saudi Arabia	
Singapore	
Slovak Republic	Slovak Republic
South Africa	South Africa
South Korea	South Korea
Spain	Spain
Sweden	Sweden
Switzerland	
Taiwan	Taiwan
Thailand	Thailand
Turkey	Turkey
United Arab Emirates	
United Kingdom	United Kingdom
United States	United States
Venezuela	Venezuela
Vietnam	

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