
Logistics in the Post Recession Automotive Industry

A Summary of Presentations
from the
First Buckingham-CEVA Automotive Logistics Forum

September 2010

Professor Peter N C Cooke
Professor of Automotive Management
University of Buckingham

September 2010



Buckingham- CEVA Automotive Logistics Forum

Introduction

The first of a series of Logistics Forums, sponsored by CEVA Logistics Ltd, was held at The University of Buckingham Business School on 9 September 2010.

The objectives of this series of logistics forums are very simple and might be summarised as follows;

- To examine, through presentation, debate and discussion, with automotive logistics industry executives the current status and anticipated developments of the global motor industry, in Europe and, more particularly, the United Kingdom
- To consider some of the drivers for change impacting on automotive industry logistics and debate those expectations.
- Encourage Forum participants to discuss issues regarding the development of automotive logistics and their own developing requirements, thinking 'outside the box' and discussing the issues in a neutral location.

The Buckingham – CEVA Automotive Logistics Forum had some 30 industry practitioners attending the first event. The format used has been developed and evolved over the past few years by the Centre for Automotive Management at Buckingham and is intended to encourage participants to debate and discuss the topics reviewed. The first Buckingham – CEVA forum certainly achieved this objective.

Far too often conferences seek to pack in as many speakers as possible to maximise their market opportunity. The Buckingham model is much simpler – fewer speakers and plenty of time for debate and discussion. Equally important, Buckingham presenters are not seeking to sell their products or services.

While spaces at the Forum events are deliberately limited, and free, there may be a few vacancies for the next event on Thursday 11 November 2011. If you have not been invited and would like to attend, please contact Professor Peter N C Cooke at Buckingham – peter.cooke@buckingham.ac.uk

In the meantime, I commend the following commentary to you.

David Jackman
Vice President – Automotive
CEVA Logistics



Developing Automotive Industries;

New Owners; New Markets, New Ways of Doing Business?

Professor Peter N C Cooke
University of Buckingham

The global automotive industries have been through a serious recession, of that there is no doubt. However, that recession has hit different parts of the industry in different ways depending upon location, position in the supply chain and specific markets, among others.

The recession's impact and rate of recovery can have a significant strategic influence on the automotive logistics industries whether for components supply, the movement of finished vehicles or scrapping of old units.

The first presentation at the Buckingham-CEVA Forum sought to put the global automotive industry in context for future development. The prime objectives of the first presentation might be summarised as follows;

- Review current status of global automotive industry and expected development
- Examine the changing shape of the UK automotive sector.
- Consider the ongoing development of the supply chain and associated logistics needs.

It is against these principal objectives that the presentation was delivered; however, as the programme develops, these objectives will become more focused and refined through participant discussion and debate.

Global Pressures on the Automotive Industries

The global automotive industries are under continuing external pressures as the locations of markets and manufacturing evolve. Markets appear to move first, but assembly plants will not be far behind – to transport large amounts of air in finished vehicles is not a cost effective use of scarce resources and there is always the risk of damage.

There is an enormous number of stakeholders in industry mobility – the exact value of individual stakeholders and pressures will vary between facilities and indeed countries.

The paradigm in Figure 1 highlights a cross section of the stakeholders and their different interests. The cynic would claim, that to be able to satisfy them all is close to impossible, but the industry has to try.

Figure 1; Stakeholders in Industry Mobility



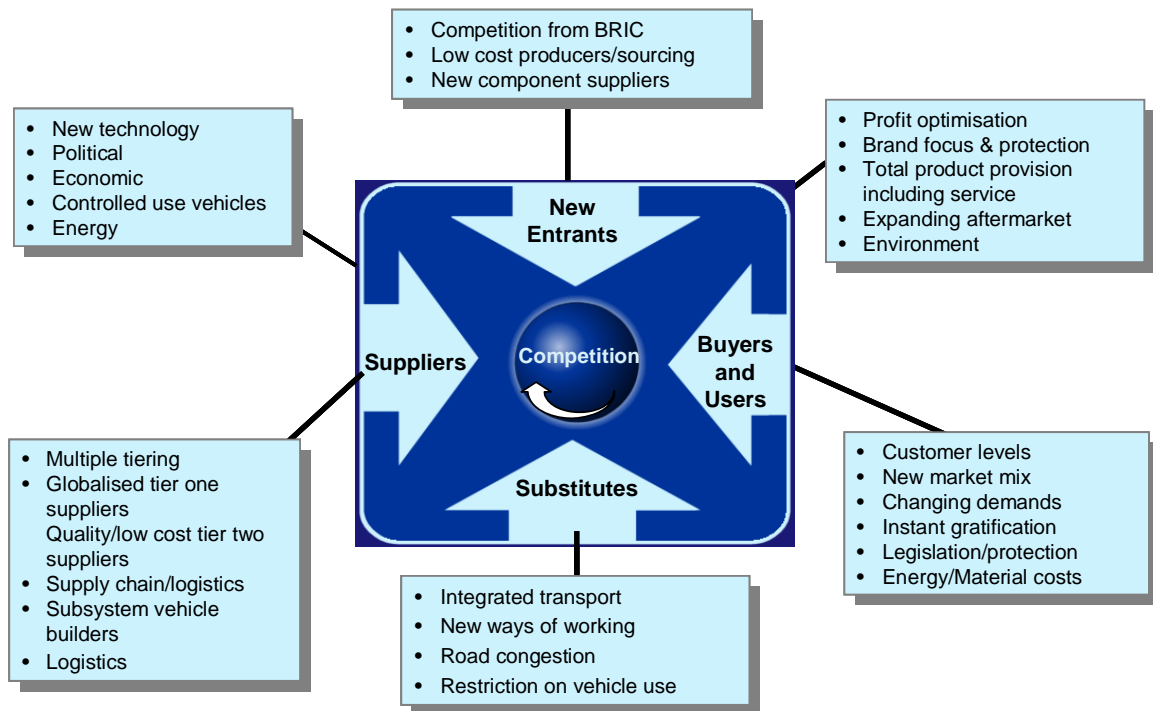
Source; Buckingham

However, the migration of both markets and manufacturing and assembly facilities can create special problems for the supporting logistics industries.

Focus tends to be on the prime consideration – markets or manufacturing – while support services, including logistics, tend to be too often left behind. While logistics services frequently depend on third party services such as roads, ports and railways, automotive industries in new and development locations may easily run ahead of those critical infrastructure services, so creating additional problems for logistics support.

Figure 2 overleaf highlights, in a visual format, the drivers for change impacting on the global manufacturing player.

Figure 2; Global Manufacturing – Drivers for Change



Source; Buckingham

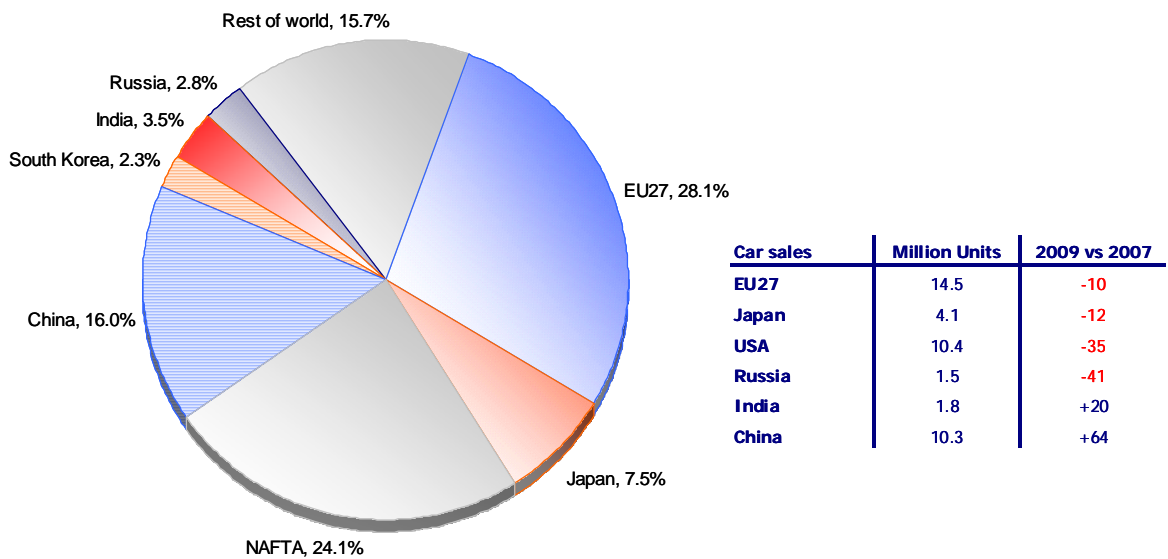
Given the range of drivers for change, one can see why the automotive logistics industry considers, quite rightly, that it provides the glue to hold the whole industry together but, like the proverbial toothpaste tube – gets squeezed at both ends

The Migrating Automotive Industry

That sense of logistics industry being squeezed, or 'piggy in the middle' is further accelerated when one consider the way that sales have changed over the past few years, moving from the traditional western markets towards the east.

The chart in Figure 3 shows the sales case and Figure 4 takes the picture one step further in terms of presenting world car production in 2009.

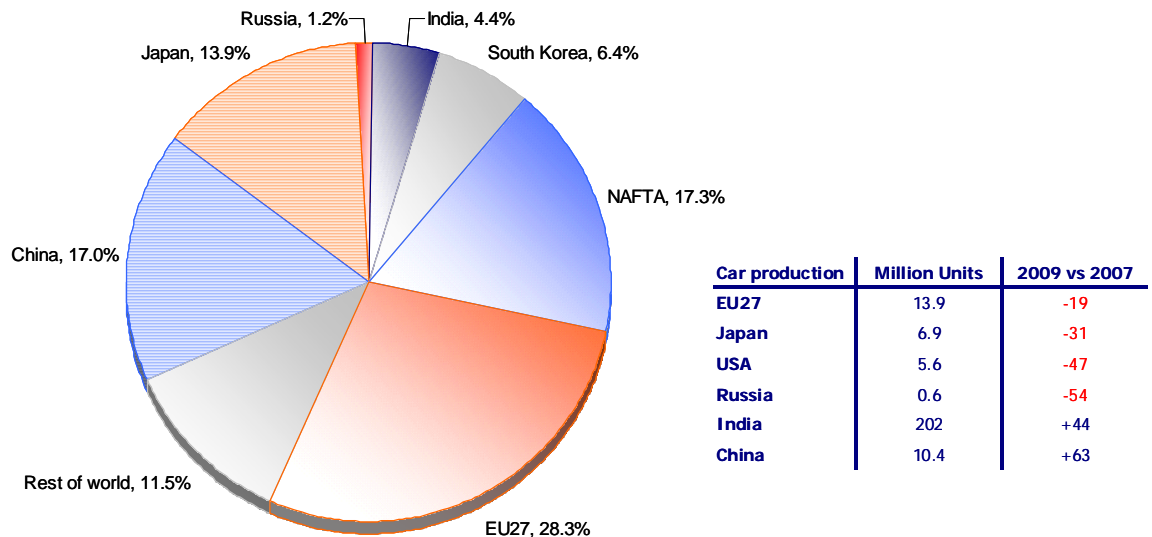
Figure 3; World New Car Sales 2009



Source; ACEA

In both charts, the small box on the right hand side illustrates recent changes in sales and production.

Figure 4; World Car Production 2009

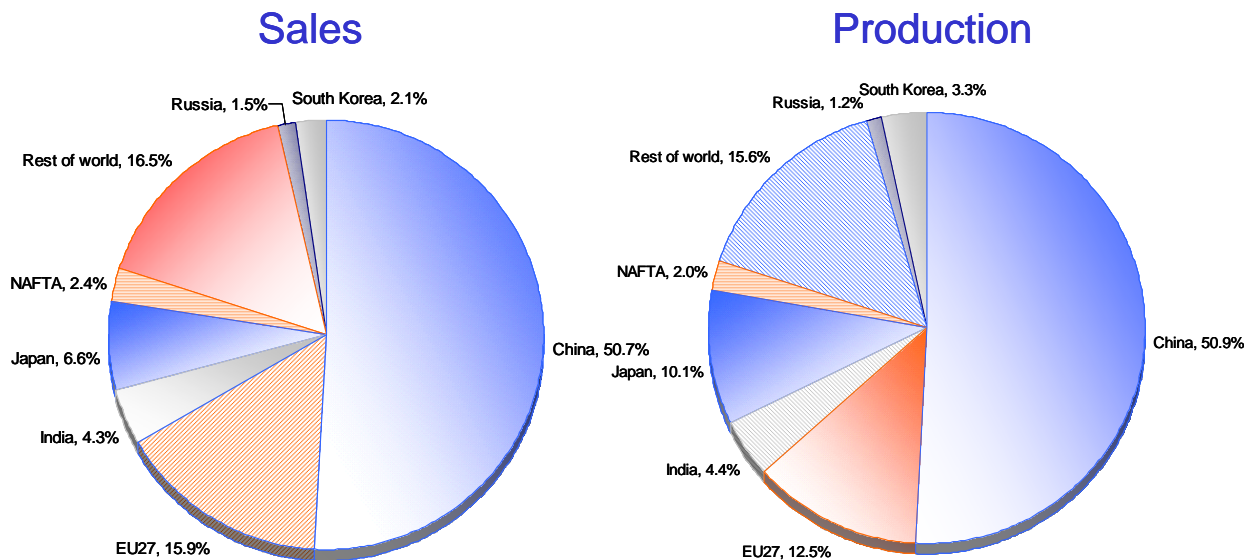


Source; OICA

While the recent recession has perhaps accelerated the change in sales patterns between North America and Europe compared with Russia. India and China, the speed of change between the old production countries and the new may give an indication of the rate of future migration of the industry.

Global sales and production of commercial vehicles, as set out in Figure 5 show an even stronger orientalisation of the industry with half of global sales and production in China, although a considerable proportion of this is in the LCV sector.

Figure 5; World CV Sales & Production 2009



USA – sales of LCVs not included, classified as cars

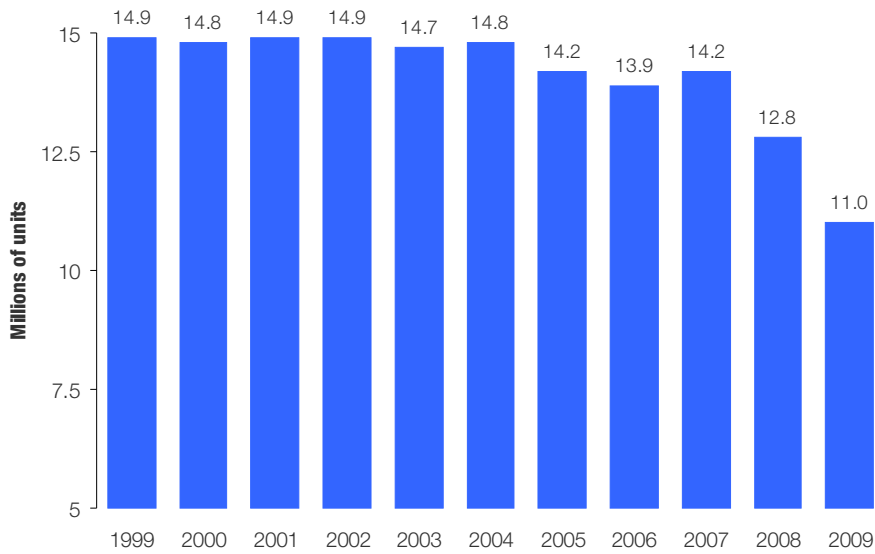
Source; ACEA

European Market Changes

While the previous paragraphs may have indicated some considerable changes in global sourcing and market patterns, when one looks more closely at the European situation that too is dynamic, with the issues it raises for automotive logistics.

Figure 6 indicates how new car production has slipped in Europe in the past few years, with the added pressures that brings to OEMs in terms of plant capacity and purchasing/sourcing strategies.

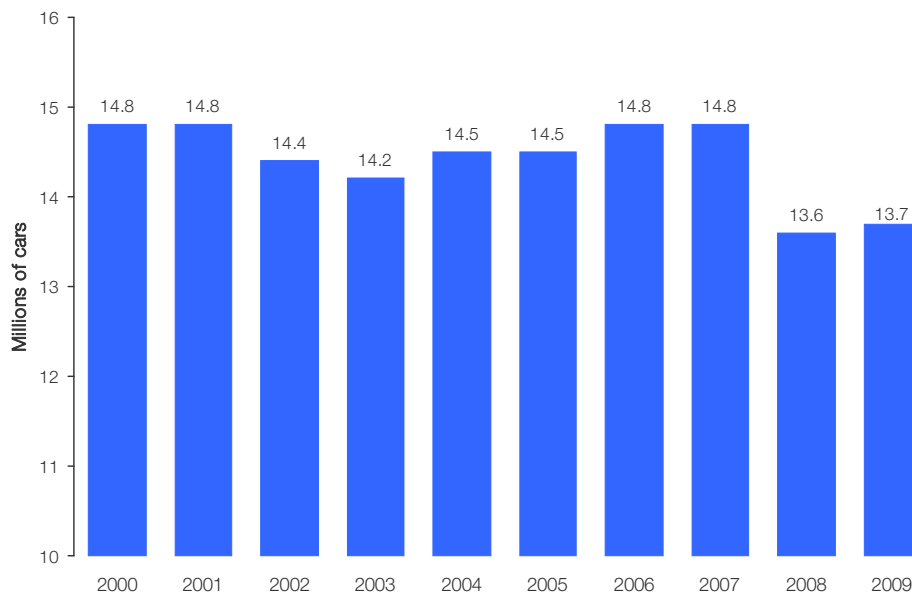
Figure 6; European New Car Production 2000-2009



Source; ACEA

While production may have been relatively steady as those facilities will in part have satisfied global demand, the sales picture is significantly more volatile as can be seen in Figure 7 for the original western EU members. Sales have fluctuated by more than a million units across the review period.

Figure 7; European (EU 15) New Car Sales 2000-2009

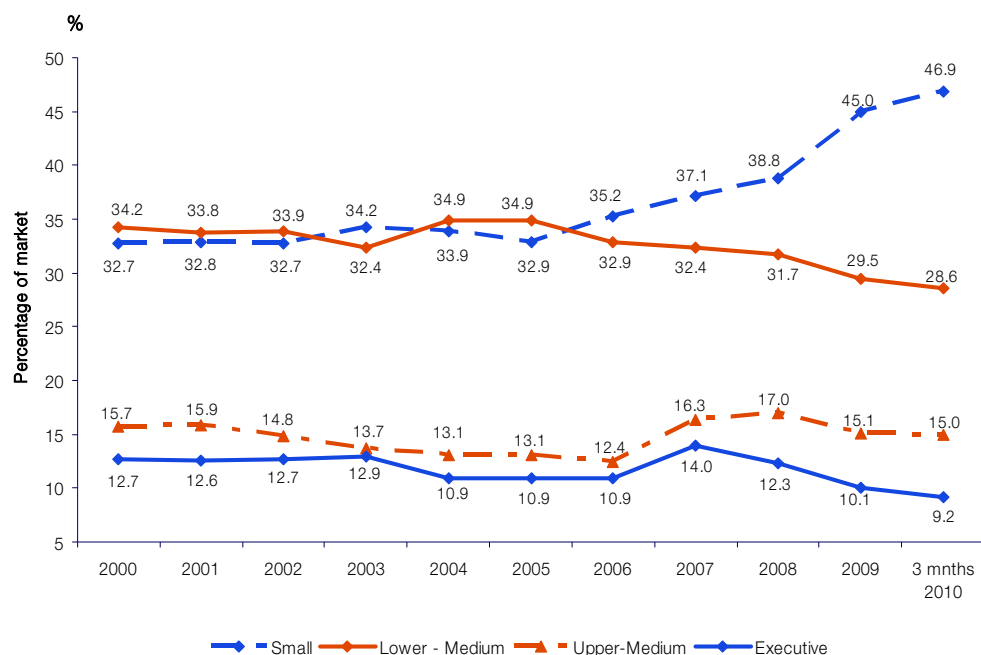


Source; ACEA

The two slides regarding European production and sales can, from a logistics viewpoint, be put into even starker contrast when one adds the analysis represented by the changing and downsizing of vehicles, shown in Figure 8 below.

This chart clearly shows that the mix of vehicles being acquired has been changing significantly with the 'small' segment growing significantly and perhaps achieving half of the market in 2010, while the luxury segment has slipped from more than 12% to just over 9%.

Figure 8; EU 15 New Car Market Shares by Segment



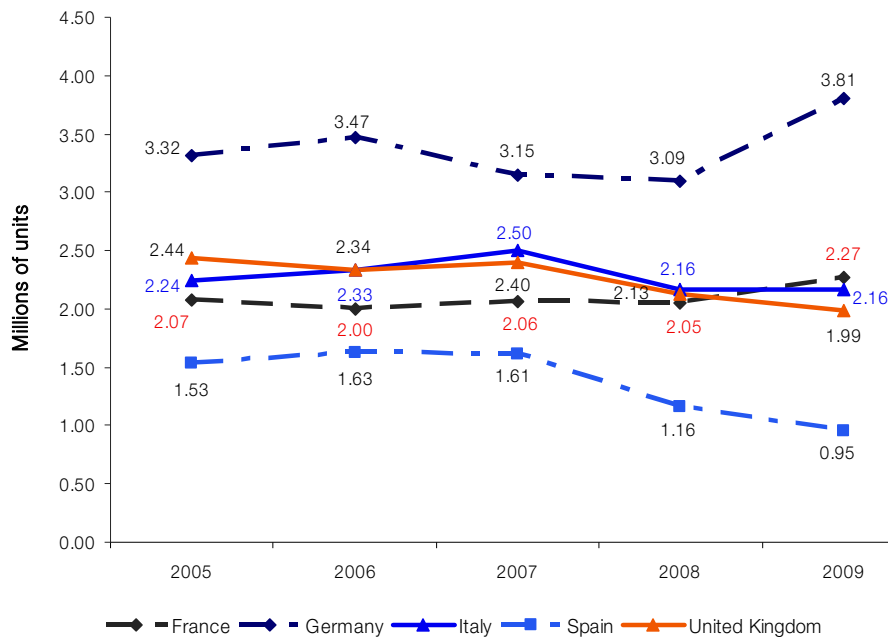
Source; ACEA

While prices may hold up as more and more equipment is packed into ever smaller cars, in terms of physical logistics requirements, the change in product mix may represent significant changes in operational needs.

That dynamism in the market place is further reflected in the Figure 9 below which indicates how sales have changed between major markets in Europe over recent years. It will be noted that while Germany has boomed, Spain has slipped.

From a finished vehicle logistics viewpoint, such changes can be seriously magnified. OEMs manufacture in essentially the same plants wherever those units may ultimately be sold while the automotive logistics players need to determine how to move these units to new expanding – or declining – markets as cost effectively as possible.

Figure 9; New Car Sales – Major EU Markets; 2000-2009



Source; ACEA

For the automotive logistics provider, these production and sales charts represent perhaps a greater impact for change than they do on the OEMs which work from essentially static locations and distribute through independent franchised dealers.

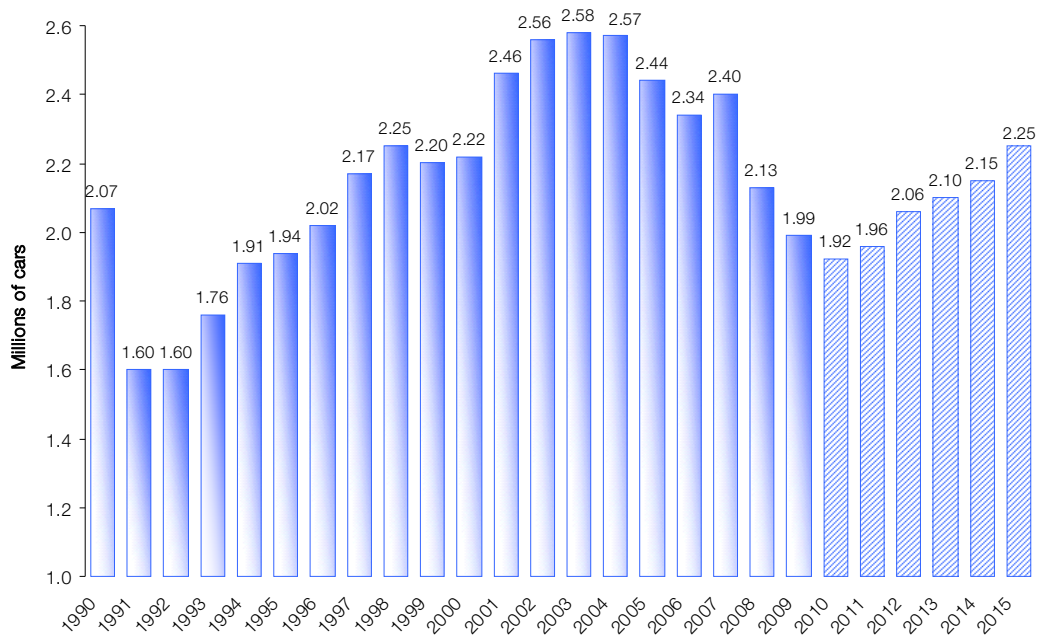
The significant downsizing of products would suggest there are further pressures to be brought on the logistics players in that percentages of total costs allocated to logistics issues will drop in absolute terms thus bringing new financial pressure to bear on their already finely cost tuned activities and creating an imperative of further efficiency savings and cost reduction.

The United Kingdom – An Extreme Example?

It would be possible to pick on almost any of the European markets and single them out for 'unique conditions'.

The presentation focused on the United Kingdom with regard to new car registrations and the strategic implications changes may have for the automotive logistics industries. The paradigm presented in Figure 10 below highlights the historic and predicted new car market in the United Kingdom.

Figure 10; UK New Car Registrations; 1990 – 2015



Source; SMMT/Buckingham

While sales escalated from the early 1990s through to a peak in 2004, they have dropped pretty dramatically through to 2009 and have now, we are told, started to recover.

Looking Forward – Some Objective Predictions

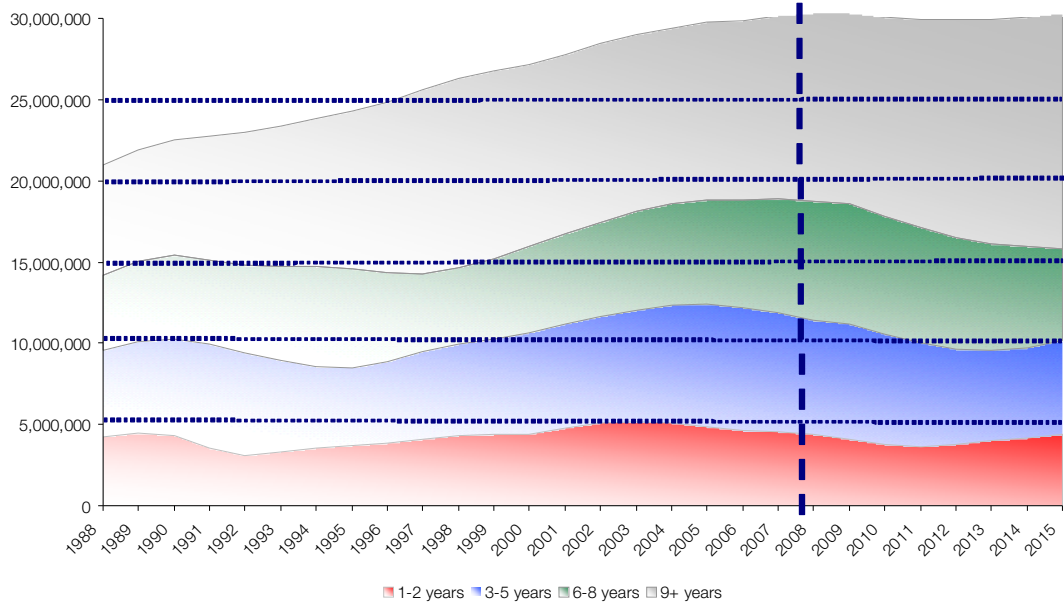
While we have no particular vision of future sales, the second part of the Figure 19 represents a steady rather than spectacular recovery over the next five years. Better to be conservative rather than unrealistic in terms of expectations.

Certainly the automotive logistics will be able to adapt to these changes in vehicle volumes. The challenge is ‘what happens to the aftermarket – and what might be the logistics implications?’

The autumn of 2010, with the political changes expected, might be called the dawn of the age of austerity for the automotive industries. Further vehicle downsizing, pressure on the provision of company cars – perhaps to be replaced by daily rental, replacement cycles extending and buyers looking to protect their cost bases. All of these changes may be thrust through to the logistics company.

Figure 11 below predicts the UK car parc broken down by age through to 2015 as well as historic analyses. Such patterns are difficult to influence – they are like vintage wines – one cannot create a used vehicle parc overnight – the units have to age in it.

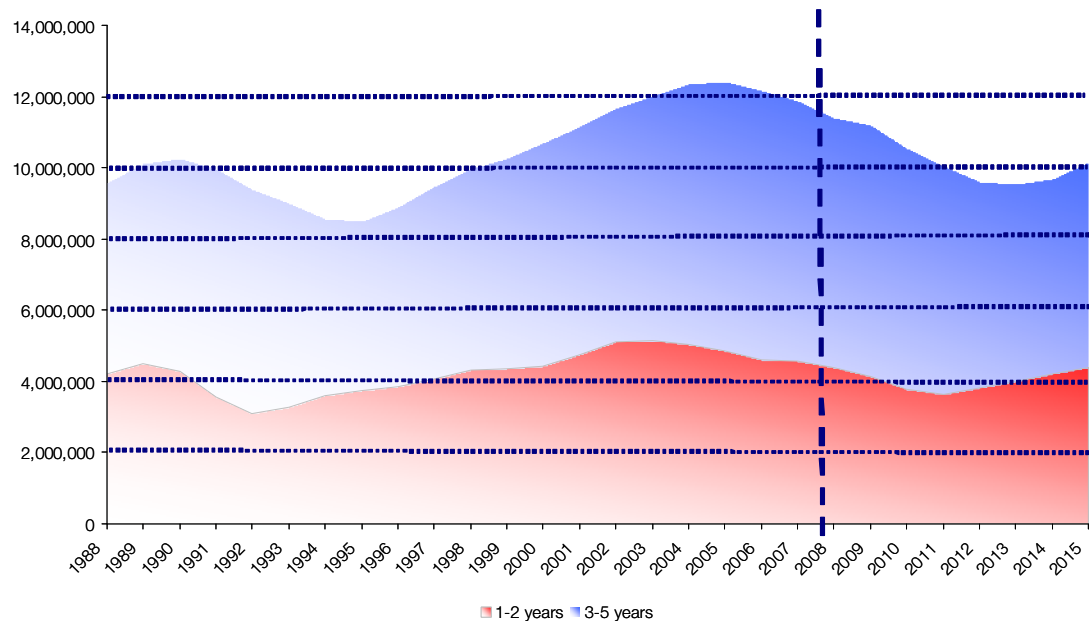
Figure 11; UK Car Parc by Age Groups; 1990 – 2015



Source; SMMT/Buckingham

The message is quite clear in that there will be a dip in the total car parc and some changes in the size of the different sectors. This, in turn, may have an impact on logistics requirements for the aftermarket in terms of component requirements. A changing parc may require different components; as important, buyers may seek those components through different channels to market.

Figure 12; UK Car Parc; 0-5 Year Old Age Groups 2000-2015



Source; SMMT/Buckingham

The challenge highlighted in this second car parc slide is one of 'changing business dynamics'. Traditionally the franchised dealer has focused their activities on new cars and vehicles up to about five years old. Given that, historically, franchised dealers have service facilities to manage a car parc of more than 12 million five years or younger, in future the demand for that market segments will drop to 10 million units in operation – unless dealer change their target markets.

The logistics dynamics of the situation do not need to be spelt out – they could change and change significantly as dealers seek to recover business with older cars which they have long since abandoned. Either dealers cut their service capacity or seek new business or protect business which they have allowed to walk through lack of attention.

Changing Demand for Logistics Services

A number of immediate issues regarding the changing demand for automotive logistics services can be highlighted from the foregoing analysis. Perhaps some of the most important and relevant might be highlighted as follows;

- Potentially there could be a reduction in demand for total automotive logistics services in some markets while there will be a growth in new markets and manufacturing nations.
- Logistics patterns will change given the shift in supply and demand which, in turn, may mean a growth in demand for new facilities whether provided by the automotive logistics companies or third parties.
- Globally, and perhaps most in the mature markets of Europe, logistics patterns may be driven by the age of austerity as economies are restructured and through the changes in distribution heralded by the growing use of the internet, particularly in the aftermarkets.
- Logistics companies will need to be able to respond to these changing business patterns and there will perhaps be an added risk in determining what is a short-term issue and what is a longer-term trend.
- From the practical revenue generating angle, it will be necessary to generate new ways of doing business and new business models – perhaps sharing logistics and facilities to retain and recover profitability
- At a dealer level there may be a need to share logistics while still retaining competitiveness for all parties.
- New sources of aftermarket components are steadily entering the market – these need careful monitoring and management to ensue they are distributed appropriately.
- Above all of the issues raised to date, logistics companies need to beware of issues of the carbon footprint and effective use of resources.

Overall, the key message is perhaps a complex yet focused one – does the automotive logistics model need serious analysis and redevelopment to be able to handle changing business needs?

Some Implications and Conclusions

The forgoing pages have sought to demonstrate the rapidity of change within the automotive industries and the ways that these dynamics may, in turn, impact on the global automotive industries.

Perhaps the strongest message emerging from the exercise is the critical importance of a growing exchange of requirements and expectations within the industry. While automotive logistics players may be in cut throat competition at grass roots level, there are immense opportunities for debate and discussion as to how objectives may best be achieved and the logistics players able to respond to these new pressures.

Strategic Developments in Automotive Logistics

David Cardle
Visiting Fellow in Automotive Logistics

A further presentation was delivered at the CEVA Buckingham Automotive Logistics Forum which focused on some of the broader issues highlighted during the global overview. The principal topics covered in the presentation might be summarised as shown below.

Environmental Issues Associated with Automotive Logistics

Environmental issues are considered to be rising up the list of logistics management topics and, although they may have slipped during the recession, they are once again on the march.

Among the issues germane to the subject the following were identified during the presentation;

- CO2 emissions legislation is anticipated to have a considerable impact on supply chain; this is further complicated by different geopolitical blocs having different rules and indeed different attitudes to the issue. There may be further international trade tensions associated with CO2 emissions.
- Moves towards the greater use of rail and sea away from road use; while there may be additional concerns of flexibility and capital investment the longer term cost issues could be considerable.
- Extreme climatic conditions are likely to cause further disruption to the automotive industry supply chain in future, especially with the development of novel routes becoming available through global warming and also through the impact of changing manufacturing and market locations.
- Issues of flexibility and cost may require sourcing patterns and interrelationships between components for assembly and for the aftermarket to be re-evaluated – with implications for logistics.
- Political focus on economic recovery may become important medium term, as may pressures to keep currencies artificially weak – a new phenomenon in globalisation in industries where there is excess installed manufacturing capacity.

While the environmental issues have not been accepted by all markets and sourcing countries, over time this will become an increasingly important concern.

Supply Chain Security

A rising phenomenon among the issues of Supply Chain development and management are topics associated with security. The broadening of both the supply base and markets have caused natural development of the issues but so have the growing number of asymmetric conflicts.

A number of key issues need to be considered by Automotive Logistics players – and the list is likely to continue to grow;

- Extended global sourcing provides greater opportunities for malevolent organisations – economic, political or religious to seek to damage the supply chain as it is a highly visible function.
- Transit of finished vehicles, components and spare parts through politically unstable regions and locations is becoming more widespread and is likely to grow as more countries seek to provide inputs and use the most cost effective routes to market.
- The supply chain is becoming increasingly complex and more time conscious but security measures are simply failing to keep up with the changes.
- Supply chain security could well be one of the areas to be hit by economic recession, especially where it is considered a 'luxury'. It's not.
- The cost and potential disruptive nature of security and the supply chain can create significant disruption and cost – so in some cases they tend to be ignored.

The cynic may well claim the industry needs a high profile disaster to pull it back into the mainstream – could that be a cynics view?

Corporate Social Responsibility

A further strategic issue which may have lost its place in the list of priorities during recession – but it is still protected by law so should never be overlooked. During the presentation, five principal issues were highlighted. Consider them;

- The profile of the automotive industries means that industry logistics will attract attention, particularly as it is regarded as being intrusive in many cases.
- CST is a new topic, not yet accepted in some emerging economies – but their performance is judged against best practice in mature markets – a difficult concept to sell in cases of low profit margins.

-
- It could be claimed that society wants the benefits of global market without the norms of best-practice CSR, particularly if CSR is seen to have a possible oncost.
 - CSR may be regarded as anti competitive in some situations and there is an easy temptation to ignore it in an attempt to gain competitive advantage – at least short term.

It is logical to anticipate that corporate social responsibility will not be easily achieved globally until all economies are at a parallel level of development.

Training and Skills

Regarded by many as the Achilles' Heel of logistics industries, including automotive logistics, training and skills levels vary considerably across the globe and efforts will be needed to lift standards. Among the more pressing issues, the following might be highlighted;

- A lack of skills and a trained workforce can easily create a dangerous situation – with its associated longer-term costs and reputational risks.
- The standards of skills and training across the world are not commensurate with the level and sophistication of modern logistics equipment – and in developing markets state of the art equipment ahead of the skills base is a real risk.
- Currently automotive logistics is not seen as an attractive career path in developed western countries so there is a shortage of skilled and well educated management and operatives. It is estimated that in the United Kingdom barely a quarter of middle managers in the logistics sector have any formal qualifications.
- There is a demand, not only for technical skills, but also for language skills as the crews of ships come from ever wider backgrounds and new markets and suppliers are constantly being opened up.

While there may be an attitude, among SMEs in the supply chain, that training is an unaffordable luxury – it's not, and cannot be ignored if the industry is to move forward and provide automotive manufacturing and distribution with the service it requires.

Programme Debate

While the foregoing pages present a short summary of the formal presentations delivered during the CEVA-Buckingham Automotive Logistics Forum – there was considerable debate both during and after the individual sessions.

The Buckingham Automotive model has been developed specifically to encourage debate and discussion under the strict control of the chair. In the case of the CEVA programme this objective was well managed and the majority of members participated in the discussions.

At the end of the session, members were asked to vote on a list of potential topics for the next session – and to write in with other issues they would like to see debated and discussed.

It was felt that an effective contributor to the development of the logistics industry is for members to participate in such debates and discussions as are held at Buckingham as it provides the opportunity for them to voice their own views and options and also listen to and challenge other opinions.

Professor Peter N C Cooke
Professor of Automotive Management

Buckingham-CEVA Automotive Logistics Forum

The Buckingham-CEVA Automotive Logistics Forum series seeks to be totally interactive and driven by its members. That means participants are invited to nominate topics for debate, discussion and presentation. To kick off the process, members are invited to nominate topics they would like to see reviewed in a presentation or subject to a debate, at the next Forum on 11 November 2010.

Below are seven possible topics presentation/debate topics. The voting is as follows;

- Please select THREE from the list in order of preference to be included at the next event. Please indicate your preferences in descending order 1-2-3.
- Additionally there is space for you to write in 1-2-3 topics you would like to have considered that currently are not on the list.

Do UK dealerships expect a higher level of service than their European counterparts? **1 2 3**

Are logistics costs becoming more important than quality? **1 2 3**

If collaboration in logistics is required does that lead to mediocrity? **1 2 3**

Does the automotive industry consider the environment when making supply chain decisions? **1 2 3**

Does the UK automotive industry have sufficient supply chain security and disaster management in place? **1 2 3**

How might the UK use supply chain management expertise to attract more auto industry investment? **1 2 3**

How might the recession impact on consumer demand for motor cars and its impact on the supply chain? **1 2 3**

.....

.....

.....

Many thanks for your inputs and opinions