Am 17. und 18. März 2005 findet wieder in Berlin in der britischen Botschaft die »International Spring Conference – Prospects for the European Economy« statt. Am ersten Tag werden die wirtschaftlichen Perspektiven wichtiger Weltregionen behandelt. Im Mittelpunkt des zweiten Tages steht die konjunkturelle Entwicklung in bedeutenden Branchen der europäischen Industrie. *Peter Wells* vom Center for Automotive Industry Research, Cardiff, wird einer der Referenten sein.

Nähere Informationen zur Konferenz finden Sie unter www.cesifo.de/isc. Weitere Auskünfte erteilen Dr. H.-G. Vieweg, managing director, Tel.: +49(0)89/9224–1362 oder Deirdre Hall, Tel.: +49(0)89/9224–1410.

The New European Automotive Industry

The expansion of the European Union 15 to include the new Member States was both a symbolic moment and a practical step in the redefinition of the European automotive industry. Of course, the industry had already spread beyond the borders of the EU15, most overtly and decisively with the integration of the former German Democratic Republic, but still the accession of ten new Member States has reinforced the shift in the centre of gravity of automotive production and markets. In turn, this has raised questions in the old industrial heartlands and particularly in Germany where the automotive industry is of such paramount economic importance. Can the European vehicle manufacturers continue to compete on the world stage? Can the automotive industry, vehicle manufacturers and suppliers alike, resist the pull of low-cost production locations? Will the 'old Europe' countries remain viable as places to build cars? What will happen to the currently positive trade balance that the EU enjoys in the automotive sector? Is the European industry going to become a victim of regulation, social and environmental, or are its troubles of its own making? Do we in Europe actually need our own car industry, or is it time to move on into activities that are less capital intensive, less risky and with higher returns?

Finding answers to some of the above questions is the current task being set with the European Commission, and also by the vehicle manufacturers themselves through ACEA. The industry position will be clear enough, because ultimately it will reduce down to that which all individual vehicle manufacturers can agree on: that it is government regulation, classic 'red tape', that is strangling the proper operation of the market: manufacturers have insufficient freedom of action because of labour laws, etc. while consumers are being forced to pay vast premiums over and above the true economic cost of motoring by government taxes. The position taken by the European Commission, and indeed by other external analysts, may be somewhat different: highlighting the contribution made at national and EU level towards R&D for example, or the ways in which high social costs result in (among other things) a skilled and productive workforce.

This paper can only touch on those debates in the brief space available. Rather, two simple scenarios are presented to consider the future of 'Europe', however defined, as a production location for the automotive industry. These scenarios are termed the 'cost reduction scenario' and the 'value enhancement scenario'. It can be seen that they lead to very different conclusions.

Peter Wells

The cost reduction scenario

The cost reduction scenario is premised on an industry based on a linear value-added chain of production in which raw materials are transformed into customer value through a series of sequential steps, and where the market is expanded and/or profits made through economies of scale, capacity utilisation and cost reductions. Notwithstanding the efforts of brand marketing, the car is this scenario is a com-

Table 1
Example plant closures and capacity reductions in Western Europe from 2000

Year	Country	Location	Nature of closure
2003	Belgium	Antwerp	GM Opel. Reduction of capacity from 400,000 to 264,000
2002	France	Romorantin	Loss of Espace production by Matra (70,000/yr)
2004	Netherlands	Born	Reduction of NedCar capacity from 280,000 to 250,000 (Smart)
2002	UK	Dagenham	Closure of assembly plant (cap: 300,000/yr)
2001	UK	Luton	Closure of Vauxhall assembly
2001	Italy	Rivalta	Closure of Fiat plant
2000	Portugal	Azambuja	Closure of Ford plant

Table 2
Key investments in Central and Eastern Europe from 2000

Year	Country	Location	Nature of investment
2005	Czech Republic	Kolin	Full scale Toyota / PSA car assembly plant, small car (cap: 300,000/yr)
2001	Poland		Former Daewoo assembly plant
2006/7	Slovakia	Zilina	Full scale car Hyundai / Kia assembly plant (cap: 200,000/yr)
2006	Slovenia	Novo Mesto	Refurbished Renault Plant (cap: 220,000/yr)
2006	Slovakia	Trnava	PSA plant (cap: 300,000/yr)
2004	Slovakia	Bratislava	VW (Skoda) expansion to 300,000/yr
2005	Ukraine	Uschgorod	VW (Skoda) expansion to 40,000/yr kit assembly
2005	Romania	Pitesti	Renault refurbishment of Dacia factory to produce Logan
2008	Hungary or Czech Republic		Daihatsu looking for a production location
2002	Russia	Moscow	Renault take-over of former Moskvich plant, to produce Logan model (cap: 60,000/yr) in 2005

modity with low levels of differentiation between products. In this scenario the older, inefficient plants or those producing product for which there is insufficient demand will close following the pattern illustrated in Table 1. Eventually, all high-volume production will be removed from the EU15.

In the 1990s plant closures included Renault Vilvoorde, Criel, Billancourt, Valladolid, and Setubal; SEAT Barcelona; Volvo Kalmar and Uddevalla; Lancia Desio and Chivasso; Fiat (Innocente) Lambrate; and MG Rover Cowley South. These were not sufficient to redress poor levels of capacity utilisation in the industry as a whole.

Rather than assuage concerns over future production in Europe, these plant closures appear to have increased the pressure on those remaining manufacturing locations. In 2004 other plants came under threat, including Land Rover Solihull, Jaguar at Browns Lane, the former Suzuki plant in Santander, Spain, MGRover at Longbridge, and GM operations in Opel Germany and Saab Trollhatten. Other plants have faced pressure for significant reductions in the workforce, for example Nissan Barcelona and SEAT Martorell. In all cases the complaints from senior management appear to be the same: the workforce is not productive enough relative to costs. Indeed, a feature of the last ten years or so in the European automotive industry has been the creation of novel working practices and shift patterns that seek to achieve greater flexibility in the use of labour, and more intensive use of the productive assets of the plant. Alongside this, plants within the large, multiple-plant vehicle manufacturers have to compete for future investment rounds in a practice that can result in one location being 'played off' against another.

Moreover, the 'headline' attention devoted to the vehicle manufacturers has tended to obscure the shift in production, already established but still accelerating, by the supply base. This trend among the suppliers started with the more labour-intensive operations such as wiring harness assembly, and has continued into many 'commodity' components and sub-assembly operations such as simple stamping, casting, and plastic moulding. Indeed, the situation is fast-developing whereby the only components operations left in Europe are those associated with final system assembly or are located alongside the vehicle assembly plant to achieve sequenced production. According to some estimates, at least 100,000 manufacturing jobs have been lost in the German automotive supply sector as a result of relocation. The other side to this scenario is growth in production in Central and Eastern Europe, as Table 2 illustrates.

If all the planned investments and existing plants work at full capacity, by 2010 car production could be over 4 million units in Central and Eastern Europe. Markets in the region, though growing, are unlikely to expand in line, with the re-

Table 3
Car production, 2002 and 2010 in selected countries (000s)

Country	2002	2010
Czech	441.3	750.0
Hungary	138.6	200.0
Poland	293.7	700.0
Romania	63.7	400.0
Russia Federation	980.7	1,000.0
Serbia	9.8	0.0
Slovak	225.4	600.0
Slovenia	126.6	180.0
Ukraine	50.3	200.0
Turkey	204.1	250.0
Total	2,534.2	4,280.0

sult that a high proportion of output will come back to the EU15, putting further pressure on existing plants. The overall market in the EU15 is broadly stagnant, at least in unit terms although there may be scope for growth in value terms. Emerging controls over car usage, in city centres in particular, along with the likely increase in costs arising from the need to meet carbon dioxide reduction targets do not bode well for further market growth.

In the long run, the industry continues to drift eastward, and that in the EU15 declines to a residual rump – perhaps salvaged by a relatively buoyant and export-based prestige sector as discussed below. Other activities such as R&D might remain in the traditional locations, but even in the case of these highly skilled workers there is an emerging supply in Central and Eastern Europe.

The value enhancement scenario

This scenario probably has two aspects. The first is the concentration on high value, diverse and customised vehicles built to order. The second is the emergence of alternative production/retail structures that allow 'usership' rather than ownership.

It is often forgotten that there has been significant investment over recent years in the EU15. Often, investments relate to the refurbishment or extension of existing plants. In some cases, such as the MINI plant at Oxford or the Maserati plant in Italy, an existing plant is virtually 'born again' and these plants can be considered new. In other cases, such as the new paint shop in the Ferrari plant in Modena, a vital bottleneck is removed. Such investments are of course vital to the continuing competitiveness of any plant and in reality form the overwhelming majority of all investments undertaken. Other investments in, for example, engine production or R&D facilities, or novel developments such as the VW Autostadt in Wolfsburg are of importance too, though space does not allow them to be considered here.

Equally, there have been completely new plants built in Europe over recent years, as Table 4 illustrates. Moreover, these plants are hardly tucked away into the low-cost enclaves of places like Portugal.

Table 4
New plants in Europe, 1995 onward: an illustrative list

Year	Country	Location	Nature of investment
1998	France	Hambach	MCC Smart production facility (cap: 200,000/yr)
1997	France	Valenciennes	Toyota assembly facility (cap: 180,000/yr)
2001	UK	Oxford	MINI plant by BMW
1999	UK	Halewood	Jaguar X-Type assembly plant
2003	UK	Goodwood	New Rolls-Royce plant by BMW
2001	Germany	Dresden	VW plant to produce Phaeton model (low volume)
2003	Germany	Leipzig	Porsche Cayenne and Carrera GT plant (low volume)
2005	Germany	Leipzig	BMW plant (cap: 300,000/yr)
2000	Germany	Stuttgart	Maybach plant within Mercedes Sindelfingen.
2002	UK	Gaydon	Aston Martin plant, 5000 per year.

There has been a clear revival of the 'superluxury' sector, a part of the industry for which Europe has no real rivals. It could be argued that this boutique sector has little economic relevance in the greater automotive industry, and there is some merit in this view. Along with this has come the (largely) continued prosperity and competitive success of the 'prestige' producers (Mercedes, BMW, Audi, Porsche, Volvo, Saab, Jaguar, Land Rover) whose strategies owe as much to differentiation and cost recovery as they do to cost reduction. Aided by the environmentally-forced innovation process, overall this sector could lead the transformation of the core technologies of the industry into light-weight structures and alternative power sources. In this regard it is of some concern that the Japanese automotive industry, and in partic-

ular Toyota, has been so forthright in the deployment of petrol-electric hybrid technologies so securing valuable learning, as well association in the market with environmental leadership. Where the European industry has done well is in novel vehicle architectures, and in build to order systems embracing high levels of product variety articulated through sophisticated 'customer relationship management' systems. This latter point could be vital to resist 'long range' imports of relatively undifferentiated and low-cost product from places such as China and India. Again this question of product variety proliferation is an aspect of production strategy and product design that requires careful consideration, both from a technical perspective (i.e. how is it to be achieved) but also from a brand perspective. Already the industry is trying to shift from the rather static and illusory concept of platforms, towards the more elastic and three-dimensional concept of architectures in the creation of new models and variants. There is at least short-term evidence that the shift into higher value market segments by some brands has met with resistance (VW), while the search for higher volume has proved problematic for others (Jaguar; Mercedes) and the development of new brands has been expensive (Smart, MINI). Others have so far been successful (Porsche, BMW) in growing volume without diluting brand equity, but it is potentially a high-risk strategy.

Beyond this, there appears to be growing pressure for a new business model in Europe, one that does away with 'fire and forget' production. An example is the Indego concept, recently revealed by ATKearney and the former CEO of Ford Europe. This concept seeks to combine some of the aspects of the globalisation of production, in for example importing engines and other components from China, with localisation of final assembly and marketing through micro factories that are also the point of sale, service and product support. An important element in these emerging concepts is that the ownership of the vehicle is retained by the manufacturer, and that it can then be returned to the local micro factory for periodic 'refresh' treatments before being leased to another customer. In other words, the future of the European automotive industry rests on innovation: not just technical but also organisational, with new ways of delivering customer value. These types of business models cannot easily be displaced by global production, because the local element is integral to the delivery of customer value, while they simultaneously reduce the capital requirements of the business and therefore improve the returns on investment.

Conclusions

Ultimately, the likely outcome is a continued fracturing of the market for automobility, with differing customer needs being met in differing ways. Presently, the greatest pressure appears to be on the volume producers that, with low per-unit margins, are most exposed by both high unit costs and market fragmentation accentuated by reduced product life cycles. Of course there are exceptions, but in a stagnant market one vehicle manufacturer can only gain volume at the expense of another. Recently, the volume 'winners' have been PSA and Renault (with much of their success attributable to aesthetic design issues) while the 'losers' have been Ford, GM Opel, VW, and Fiat. The specialist or premium producers have effectively been cushioned by a strong US market where issues such as fuel consumption count for little. This bubble economy cannot last, and it is not at all clear that the European premium producers are in a position to survive a large-scale drop in US demand.

The real challenge will be to create an industry that in all respects is more sustainable than that which we have now: ironically, being in a highly regulated Europe is going to be an advantage there. Indeed, there is a strong case for suggesting that the divergence of opinion between the European Commission and the industry is misplaced, and that the ultimate competitiveness of the industry will be improved and enhanced by stronger regulatory controls. In other words, both the industry and the European Commission have much to benefit from greater regulation, and that as a result the European automotive industry should actively embrace issues such as the reduction of carbon dioxide emissions and the recycling of end of life vehicles. A strategy of resistance and denial will only become counter-productive.