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	- Extended impact assessment

Delegations will find attached Commission staff working document SEC(2004) 1097.

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# COMMISSION OF THE EUROPEAN COMMUNITIES



Brussels, 14.9.2004 SEC(2004) 1097

# COMMISSION STAFF WORKING DOCUMENT

# PROPOSAL FOR A DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL AMENDING DIRECTIVE 98/71/EC ON THE LEGAL PROTECTION OF DESIGNS

# EXTENDED IMPACT ASSESSMENT

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#### INTRODUCTION

This extended impact assessment has been drawn up making use of the available data at the disposal of the Commission. In particular the answers to the questionnaire sent in 1999 (to vehicle manufacturers, suppliers, independent component producers, insurance companies, parts distributors, repairers and consumer organisations), the results of the impact study undertaken in 2003, the various reviews and reports concerning Intellectual Property Rights, IPR, and the data sent to the Commission by other interested parties.

#### 1. WHAT PROBLEM IS THE PROPOSAL EXPECTED TO TACKLE?

# 1.1. Background

# 1.1.1. Existing legislation

Directive 98/71/EC on the legal protection of designs was adopted on 13 October 1998. It aims to ensure coherence between national provisions of design law which most directly affect the establishment and functioning of the internal market.

The objective of design protection is to grant exclusivity in a new and original design. During the negotiations of the Directive, there was a lack of agreement on the role of design protection in respect of so-called "must match" spare parts for complex products. The Commission had proposed the liberalisation of the market in such spare parts already in 1993 after the expiry of a period of exclusivity of 3 years. Further to the opinion of the European Parliament, the Commission introduced an alternative approach to achieve the same result through a proposal for a "repairs clause" with a remuneration clause in its amended proposal of 1996. No agreement could be found in the Council of Ministers and the repairs clause had to be replaced by the current article 14 so that the Directive could be adopted in conciliation procedure in 1998.

The decision to open up the aftermarket for competition was already taken at the moment of adoption of the Directive and leaving the choice of its implementation. At present, the Directive does not require any harmonisation with respect to the protection of spare parts by a design right. Article 14 of the Directive stipulates that Member States shall maintain their existing laws in this regard. They may, however, change those provisions only in a way that liberalises the spare parts market (the "freeze plus" solution). A Member State that, at the time of adoption of the Directive, did not grant design protection of spare parts could not thus not reintroduce such protection.

To date all Member States, before accession of the new ten Member States on 1st of May 2004, have transposed Directive 98/71/EC into their national legislation.

Austria, Denmark, Finland, France, Germany, Portugal and Sweden *de jure* still have design protection for spare parts. In Belgium, Ireland, Italy, Luxembourg, The Netherlands, Spain and United Kingdom a repairs clause is foreseen, allowing design protection on new products but leaving the possibility for alternative parts in repair or replacement in the aftermarket.

Greece provides for a repairs clause combined with a term of protection of 5 years and a fair and reasonable remuneration.

As far as the new Member States are concerned, Cyprus, Czech Republic, Estonia, Lithuania, Malta, Poland, Slovakia and Slovenia have not adopted special provisions for spare parts, thus these enjoy *de jure* protection. Hungary and Latvia have included a "repairs clause" in their legislation.

# 1.1.2. Problems and deficiencies inherent in the status quo

The current situation of different, opposed regimes of design protection for spare parts where 9 Member States have liberalized and 16 Member States extend design protection to spare parts is totally unsatisfactory from an internal market point of view. In the automotive sector, which is the most affected one (see 1.2) there is a single market for new cars but no single market for their spare parts. Automotive spare parts currently cannot be freely produced and traded within the Community. Due to this fragmentation and the uncertainty about the evolution of the Community's design regime citizens are insecure whether or not and in which Member State the purchase of certain spare parts is lawful and they are deprived in parts of the Community of choosing between competing spare parts. For the same reason, parts producers cannot use the economies of scale offered by a single market as they are discouraged to generate investment and employment which they otherwise might do.

The economic impact of design protection on the prices of spare parts has been disputed by interest groups from both sides. However, price comparisons provided by industry associations and other stakeholders are mainly based on anecdotal evidence or at best on simple averages over some parts and countries. As such information would be rather weak to base a Community directive on, the Commission carried out multivariate regressions of the relative price on a number of control variables. With this instrument it is possible to assess whether there is a systematic difference in the prices of spare parts in Member States with design protection and Member States without design protection for such parts. Such differences would allow the conclusion that markets are systematically distorted.

The analysis of prices for 11 spare parts for 20 car models in 9 Member States and Norway, 6 of these countries grant design protection for these parts and 4 do not, revealed that prices for 10 of these parts are significantly higher in Member States with design protection than in Member States without. The only part for which the price is not significantly higher is the radiator – the only part in the sample that does not benefit from design protection as it is not part of the outer skin of a car. For the other parts, bumpers, doors, wings, lamps, lids and bonnets, prices were between 6.4% and 10.3% higher in Member States granting design protection. The results of the regressions are quite robust. Details of the analysis are presented in the **annex**. They show that vehicle manufacturers as the right holders exercise considerable market power in these Member States to the detriment of consumers. The result is the more important as it is the outcome of a fairly low level of competition. As will be described below, market shares of independent suppliers are only in the region of 15% on average in these countries.

However, the results only reflect the price differences between parts in different Member States. They do not show the difference between the prices of spare parts from independent suppliers and original equipment. In addition, the analysis cannot reveal the impact of the design protection on the market structure and the market behaviour of the different suppliers in the market

The current situation with a mixed protection regime is creating trade distortions in the Internal Market: resources and production are not allocated within the Internal Market on the basis of competitiveness, i.e. the capacity firms have to produce high quality products most efficiently at lower prices for the aftermarket. Production is not determined by market mechanisms but by firms' management decisions. Prices are distorted and there are obstacles to trade. It can therefore be expected that in a liberalised uniform Internal Market prices would decline further.

Therefore a solution of the spare parts issue is urgently needed. This proposal is now the third attempt of the Commission to achieve harmonisation and completion of the internal market in this area.

#### 1.1.3. The peculiarities of design protection for spare parts

The sole subject matter of design law is to protect the appearance, the outside and visible form, of a product, not the product itself. Such design protection cannot only be granted for "one-unit" products, such as a vase or a belt buckle, but also for "complex" products the outer skin of which is composed of various components, such as the body of a car. As long as they are produced and marketed as new products there is no difference between "one unit" and "complex" products. Both follow the same rules of design law and the effects of design protection are identical.

The situation is different once the design protected product is damaged in a way that it can no longer serve its purpose. The vase which is broken must be replaced by a new one, either by one of the same design, or, if the consumer so prefers, by one of another design. The body of a car, however, can be repaired and – being a durable good – the consumer will choose to repair it by replacing individual components such as a wing, a front lamp or a windscreen; there is, for each component part of a complex product, a corresponding spare part. Contrary to "one unit" products, the market for the new, the "primary" market for the complex product is closely related to the market for components of complex products: the "secondary" market for the components, i.e. spare parts (also called the "aftermarket").

Whenever a complex product needs maintenance or repair the owner has to decide whether he will invest in the maintenance or repair to keep the product in use or to replace the entire complex good. This decision is of course heavily influenced by the prices for both alternatives. In the case of a car the price difference between the car and a spare part plus repair costs is usually so large that the owner in most cases opts for the repair. As the spare part must perfectly match with the complex product, he is "locked-in" in the spare parts market for the respective car. If in turn this market is protected by design rights there is no alternative to the offer from the vehicle manufacturer.

For the purposes of this impact assessment, however, it is nevertheless important to distinguish between the primary and the secondary market, for two reasons. First, only the latter is concerned by the proposal. Secondly, the effects of design protection in the aftermarket – which is relevant here - are different from the ones in the primary market and

call, as will be explained in detail below (1.3.3), for an independent assessment and evaluation.

It must therefore be stressed that the **debate on the protection of spare parts focuses only on the secondary market** (the "repair" and "replacement" market) without questioning the existing design protection in the primary market. It will, however, consider the strategic linkages between the markets and possible repercussions of a change in the regime of the aftermarket on the primary market.

#### 1.2. Sectors affected

The Design Directive applies to **any sector** where the replacement and repair of visible components of complex products is at stake and which therefore would be affected by an eventual harmonisation at European level.

In order to make design protection of such spare parts an issue for an industrial sector, several factors ought to come together:

- Design protection of complex products has to play a significant role in the sector;
- There should be a case of repair or replacement related to "outer skin" components of complex products, in terms of their appearance;
- There needs to be the prospect of a viable market in replacement parts such that third parties will be interested in entering it. That is, replacement rates should be foreseeable, if not regular, and of a certain volume.

The automotive aftermarket is unambiguously the sector for which these factors are most relevant. It would therefore be most affected by a change in the design protection for spare parts. The impact assessment therefore focuses thereon, even if the scope of application of the Directive is by no means limited to any particular sector and the legal solutions suggested are not "sector-specific".

Other sectors for which removal of design protection might have minor impacts are, *for instance, domestic electrical appliances, sanitary appliances, motorbikes and watches.* Yet, it again has to be recalled that the sectors as such are not affected but only the respective markets for spare parts.

# 1.3. Description of the market concerned

The basic indicator for assessing the significance of the spare parts issue is the size of the market affected. As regards the automotive aftermarket the data on volume, structure and prices are not in all respects complete or unequivocal. However, the information received by various means is considered sufficient to evaluate the current situation and to draw the necessary conclusions. This section tries to describe background, size and structure of this market.

#### 1.3.1. Size and economic background

#### 1.3.1.1. The automotive aftermarket as a whole

The starting point is both the production of new cars and, even more so, the number of cars on

EU roads. According to ACEA, production of motor vehicles was around 17 million per annum in 2000 and 2003. Germany and France together account for about half of production, and Spain, UK, Italy and Belgium for another 40%, the remainder being produced in Austria, the Netherlands, Portugal and Sweden. In the new Member States joining the EU in May 2004, there is noteworthy production in the Czech Republic, Hungary and Poland. There are about 215 million vehicles (both passenger cars and commercial vehicles) on the roads in the EU-15, an additional 20 million in the new Member States, i.e. a total of roughly 235 million (tendency upward). The owners of these cars spend about € 84 billion annually for repair and service.

The automotive market in the EU is widely regarded as competitive. Competition among VM is fierce although somewhat restricted by the control over distribution networks. VMs make full use of design protection which is not disputed at all. It is linked to the so-called aftermarket for spare parts in numerous and complex ways:

- At least some intellectual property rights like patents and trademarks are valid in both markets.
- Parts for both markets are often produced by the same tools; accordingly some companies deliver both markets.
- In doing so they have the possibility to transfer costs/profits between the market segments, e.g. development costs.
- Purchase decisions in the primary market are to a certain extent determined by the market situation in the aftermarket. E.g. the type classification of motor insurance companies might have an influence on buyer decisions.
- VMs are required to deliver the aftermarket with spare parts for 10 years after the end of production.

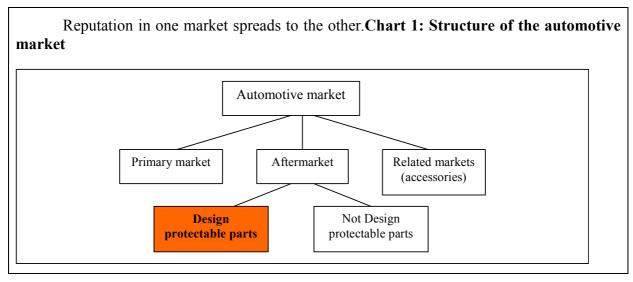


Table 1: New registrations passenger cars: Market shares in %, 2003

	UF	ζ	IT		FR		E	S	DE	
1	Ford	14,4	Fiat	20,5	Renault	27,2	Renault	12,7	VW	18,5
2	Renault	7,3	Ford	8,8	Peugeot	18,9	Citroën	11,2	Mercedes	11,4
3	Opel	7,3	Renault	7,4	Citroën	13,5	Peugeot	10,8	Opel	10,3
4	Peugeot	7,2	Opel	7,3	Opel	6,0	Seat	10,7	BMW	7,8
5	VW	6,9	VW	6,5	VW	5,9	Opel	9,7	Audi	7,4
6	Vauxhall	5,4	Citroën	5,8	Ford	4,6	Ford	9,6	Ford	7,3
7	BMW	5,2	Toyota	5,6	Toyota	3,6	VW	7,0	Renault	6,3
8	Toyota	4,9	Peugeot	5,2	Fiat	2,8	Audi	3,1	Peugeot	3,8
9	Citroën	4,6	Lancia	3,9	Mercedes	2,6	Fiat	3,0	Fiat	2,2
10	Nissan	4,1	Alfa Romeo	3,6	BMW	2,1	BMW	2,8	Citroën	2,0
	A	Γ	BE (200	01)	DK (19	999)	NL (2	002)	PT(2001)	
1	VW	16.7	VW	12	Peugeot	11.2	Opel	10.8	VW	12,9
2	Opel	8.9	Opel	6	VW	10.7	Renault	10.42	Opel	12,8
3	Renault	6.8	Ford	6	Ford	8.8	Peugeot	9.55	Renault	12,5
4	Ford	6.7	Renault	6	Toyota	8.6	Ford	9.55	Peugeot	10,1
5	Peugeot	6.7	Peugeot	6	Opel	8.3	VW	9.42	Fiat	7,7
6	Skoda	5.5	Citroën	6	Citroën	6.6	Citroen	5	Citroën	7,0
7	Audi	5.5	Toyota	6	Mazda	5.7	Toyota	4.8	Ford	5,5
8	Toyota	4.9	Mercedes	5	Fiat	5.6	Fiat	4.8	Seat	4,3
9	Mazda	4.8	BMW	5	Skoda	4.4	Suzuki	4.25		
10	Fiat	4.1	Nissan	5	Renault	4.3	Seat	3.29		
	PI		CZ (200	04)		EU (2	004)*			
1	Fiat	18.4	Skoda	48.0	Renault	10,2	Citroen	6,4		
2	Skoda	12.1	Ford	5.5	VW	9,6	Fiat	5,8		
3	Renault	10.4	Peugeot	5.2	Ford	9,0	Toyota	5,2		
4	Toyota	10	VW	5	Opel	9,0				
5	Opel	9.7	Renault	4.4	Peugeot	8,0				

<sup>\*</sup> Western Europe (January-May 2004)

#### 1.3.1.2. The submarket of body-integrated visible ("must match") parts

As regards the market for automotive replacement parts, its total size is estimated to range from 42 to 45 billion €. The market is supplied by parts manufacturers of which there are three groupings: vehicle manufacturers (VMs) which, however, produce not more than 19% of the spare parts requirements themselves, original equipment suppliers (OES) and independent suppliers (non-OES). The majority of spare parts supplied by VMs are purchased from their parts suppliers, added to their own production and traded through. This way VMs have reached a strong position at the distribution level. It is estimated that their share of the spare parts market as a whole amounts to about 50% - 55%, the remaining 45% - 50% being supplied by the so-called "independent" aftermarket (IAM). The latter includes independent wholesalers and independent repairers which purchase their parts requirements from both OE- and non-OE parts manufacturers.

Table 2 summarises - as far as available - the most relevant indicators for the spare parts market in the EU Member States, Japan and the US: The design protection regime, turnover, employment and market shares.

Since enlargement, a majority of Member States grants design protection for spare parts as

well. 8 Member States introduced a so-called repair clause which limits the design protection to the primary market for the complex product. Greece maintains a unique system which restricts the design protection for spare parts to 5 years and requires a "fair compensation" for the use of a protected design thereafter.

The importance of the spare parts sector in terms of turnover and employment varies considerably from 0.1% of turnover and 0.2% of employment of the total motor industry in Finland and Greece to 3.9% and 4.3% respectively in Germany. In Japan and the US the respective figures are 5.5% and 3.3% for the turnover and 5.4% and 4.8% for employment. The US does not grant design protection in the spare parts market.

Grouping the Member States by the design protection regime reveals that the spare parts industry is concentrated more heavily in design protecting Member States by both measures, turnover and by employment. If however, Germany is excluded as the aftermarket was allegedly liberal before June 2004, the picture is less clear: Turnover would be more concentrated in liberal markets while more employment is located in protecting Member States.

Table 2: Spare parts market: EU, Japan and US

Ctry	Design protection for spare parts?	Total turnover (mn €)	Share of spare parts production in total motor industry manufacturing Turnover (in %)	Persons employed (in 1 000)	Share of persons employed in total motor industry employment (in %)
AT	protection	2 653	2.4	11.8	1.9
BE	'Repairs Clause'	1 994	1.1	10.0	1.5
CY	Protection	10.5 *	n.a.	n.a.	n.a.
CZ	Protection	3 663.9*	n.a.	50.15	5.9
DK	Protection	372	0.5	3.1	0.6
EE	Protection	n.a.	n.a.	n.a.	n.a.
FI	Protection	94	0.1	0.722	0.2
FR	Protection	21 961	2.6	95.7	3
DE	Protection	54 919	3.9	307.5	4.3
GR	'Repairs Clause'	25.7	0.1	0.386**	0.2 **
HU	'Repairs Clause'	1 625*	3.1*	24.1*	3.2*
IE	'Repairs Clause'	319	0.3	2.53	1.1
IT	'Repairs Clause'	14 849	1.7	87.1	1.7
LV	'Repairs Clause'	n.a.	n.a.	0.077	n.a.
LT	Protection	n.a.	n.a.	n.a.	n.a.
LU	'Repairs Clause'	n.a.	n.a.	n.a.	n.a.
MT	Protection	2.5*	n.a.	n.a.	n.a.
NL	'Repairs Clause'	902	0.4	5.5	0.6
PL	Protection	2 625	2.2	49.7	2.1
PT	Protection	1 112	1.6	8	0.9
SK	Protection	275.6	1.4	5.7*)	1.4 *
SL	Protection	266.9*	n.a.	3.02*	n.a.
ES	'Repairs Clause'	10 895	2.6	66.1	2.5
SE	Protection	3 599	2.3	24.2	3.2
UK	'Repairs Clause'	16 193	2.2	97.9	2.6
Japan	15-year protection		5.5	460.5	5.4
USA	Competition		3.3	731.1	4.8

<sup>&</sup>lt;sup>+</sup>Greece grants a 5 year protection with a fair remuneration afterwards; \* 2001 data; \*\* 1999 data

Source: Turnover and employment: International Auto Statistics, Edition 2003, 2002 data; Design protection regime: DG Internal Market.

The proposal under consideration does not affect the whole aftermarket. Instead it is confined to those vehicle parts which can be subject to design protection, i.e. to body-integrated visible parts, and for which there is a certain demand for replacement and repair. The analysis can, therefore, be narrowed down to three broad categories: body panels (such as bumpers, wings or bonnets), lighting and automotive glass. The size of this submarket is estimated to account for approximately 25% of the total aftermarket or 9-11 billion  $\in$  annually. This figure is shared between VMs and the independent sector Moreover, there seems even to be basic consensus how this market divides into the three product categories: It is estimated that roughly 77% or about  $\in$  7.5 bn can be attributed to body panels, 12% or about  $\in$  1.2 bn to lighting and 11% or somewhat more than  $\in$  1 bn to automotive glass.

#### The spare parts market in the new Member States

All 10 new Member States but two have not adopted special provisions for spare parts, de jure design protection is possible, in Hungary and Latvia a repairs clause has been introduced in the national legislation.

The turnover of the spare parts market in the new Member States was around 8,500 million € in 2002 which accounts for about 7% of the 'old' Member States turnover in spare parts. However, in terms of employment, the spare parts market in the new Member States accounts to almost one fifth of the 'old' Member States workforce in spare parts, 133,200 compared to 712,400 jobs.

The most important spare parts markets in the new Member States are the Czech Republic, Poland and Hungary. They account for more than 90% of turnover and employment in this sector in the new Member States.

Country	Turnover (in mn €)	Employment
Czech Republic	3 664	50 150
Poland	2 625	49 700
Hungary	1 625	24 742

The majority of spare parts imports used to come from the producers based in the 'old' EU. This trend has been slowly changing and at present more components manufacturers open production facilities in new Member States. This is mainly due to the following reasons:

- the average age of the vehicle fleet is higher than in the "old" EU (e.g. in Hungary and Czech Republic the average age if the cars is over 13 years) and therefore there is a higher demand for spare parts;
- the overall demand for cars is increasing;
- the price has a higher importance in end-user purchasing decisions.

#### 1.3.2. Market structure

The trade in spare parts is mainly dominated by SMEs. In Germany alone there are about 120 producers and 200 trading companies with around 1000 branches and a turnover of  $\in$  8 billion, covering about 80% of the market.

The demand side of the market can be distinguished by accident victims and insured car owners (mainly cars below 4 years of age) on the one hand, and those who have to pay for the repair themselves, on the other hand. While the former group focuses mainly on original equipment, the latter is more willing to accept or is even asking for independent parts of equivalent or explicitly lower quality than the OE, corresponding to replacement value of the

car.

The free market is strongly focused on volume cars and typical damages. Front parts make up most of the traded parts (about 70%). Rear and side parts are relatively scarce to non-existent in the free market. Anecdotal evidence indicates that spare parts from independent suppliers are about 30% cheaper than OE. The quality of these parts is however heavily disputed by the VMs and OE producers. Evidence in this respect is not clear-cut. Independent producers claim that the quality of their parts has been improved considerably over the last decade. One reason for this seems to be the strong pressure to stay on order lists of repair shop chains. Although arguably cheaper than the equipment of VMs, the specific tools of independent producers require a considerable investment as well.

There is some dispute how the three relevant markets are shared between VMs and the independent sector. As regards **lighting** the market share of the car industry is estimated by itself at 40% - 50%, by ECAR at 65%. However, *vehicle makers do not produce any lighting* but purchase both their OEM- and OES-requirement from parts manufacturers. The bulk of lighting unit production in Europe is today accounted for by a few firms – Valeo, Hella and Automotive Lighting (a merger of Bosch and Magneti Marelli). Historically these companies have also supplied the same lights to the aftermarket with very little competition from outside the EU. The machine mould used for OE production of a lighting unit would be used to make lights that would be sold into the aftermarket through independent distribution channels, however the parts carrying only the producer's (not the VM's) logo.

In the **automotive glass** sector the market share of the car industry is estimated by itself at 30%-40%, while ECAR reports a VM market share of 70%. Again *vehicle manufacturers do not produce any automotive glass* but purchase their requirements from parts producers. There has been *de facto* liberalisation in the auto glazing sector although vehicle manufacturers have now begun to register windscreen designs too. *The European auto glazing market is dominated by three manufacturers* – Pilkington, Saint Gobain and Glaverbel. Each of these has a substantial global presence in addition to a major share of the EU market. It is estimated that between them they have a 75% share of the EU.

As regards both lighting and automotive glass there is no clear distinction between "OE"- and independent ("non-OE") parts producers. Even renowned producers do not supply parts for all car makes or for all models of a car make, but nevertheless attempt to offer a full-cover range of spare parts. As to those spare parts where they are not OE-suppliers they are in the same position as the independent panel producers and have to proceed in the same manner. For example Saint Gobain supplies OE windscreens to Ford for the "Mondeo" but Pilkington has reverse engineered the product and now supplies the aftermarket. The opposite is true on the Ford "Focus" where Pilkington supplies OE screens but Saint Gobain produces and sells competing aftermarket screens.

These two markets can therefore been regarded as oligopolies in which OE suppliers often perform a double role as licensed suppliers of VMs and independent suppliers at the same time.

As regards *body panels* vehicle manufacturers assert that their share of the replacement body panel market "can be as low as 55-60% in some markets". By contrast, market data offered by ECAR suggest that about 95% of body panels sold in the EU are original equipment. This leaves a 5% share for independent manufacturers. Figures provided by other interested parties are similar to the ECAR estimates and the *consensus is consistent with the view that OE parts* 

have a dominant share of the overall EU market. In France, for example, where design protection for body panels is available and rigidly enforced the OE share of the replacement market approaches 100%. Even in relatively liberalised trading environments, all indications are that the independents' penetration of the aftermarket has been limited. After more than 10 years of freedom from design protection in Britain, research suggests that only around 5% of the replacement body panels fitted are from independent manufacturers, with some sources suggesting a figure as low as 3%. Thus 5% is a sufficiently plausible figure for the EU market as a whole.

The production of body panels was traditionally a core activity of vehicle manufacturers. Metal body panels are still mostly produced by the vehicle makers themselves whereas plastic panels, such as bumpers, are often sourced from specialist producers which, however, operate on the basis of exclusivity contracts and do not supply the aftermarket in parallel. *The only competition provided in this area comes from independent ("non-OE") parts manufacturers* who produce on the basis of reverse engineering using their own production tools. Practically all of them are SMEs. They sell their products under their trade name or trade mark.

The weighted average for these three markets based on the lowest ACEA figures of 40% for lighting, 30% for glass and 5% for body panels reveals a market share of VMs of 82%. The respective ECAR figures produce an average of 88%. In what follows an average of these two figures of 85% share of VMs in the market which is affected by design protection is assumed.

# 1.3.3. The impact of extending design protection to visible spare parts. Primary and secondary markets.

In order to assess the impact of design protection on the market described and on further aspects to be discussed one must have regard to a unique feature which distinguishes body-integrated visible spare parts from other spare parts or from primary products seeking design protection: its "must match" design. The outside appearance, the "design" of such visible spare parts must exactly match the appearance (design) of the original component to be replaced in the course of a repair. A spare wing or a spare lamp must exactly look like the original wing or lamp of the car; otherwise it cannot be used and cannot be sold. There is no room for alternative designs here.

The difference to protecting designs of primary products is obvious. Protecting the body styling of a car does not interfere with competition in the market for new cars. If, however, design protection is extended to "must match" spare parts in the secondary market, the right holder - here the vehicle manufacturer - can prevent anybody from producing, selling or using spare parts of this kind. Competition in spare parts is completely eliminated (which goes beyond the purpose of design rights and is therefore not justifiable as a means of intellectual property protection). In principle, the car industry as a whole is granted a watertight monopoly in the  $\notin$  9 - 11 bn market of visible spare parts.

However, a caveat must be added. Making design protection available to visible spare parts would not mean that all of them are protectable on the merits; not all of them would fulfil the requirements of protection (novelty / individual character). ACEA asserts that only 5% of all spare parts come within the corridor of protection which would mean that a  $\in$  2.2 bn market is covered (and monopolised). ECAR, on the other hand, referring to the low threshold of protection in the new European design law, an abundant registration practice of vehicle manufacturers and the unique and far-reaching legal position resulting from design registration, asserts that a by far greater segment of the market would be covered and an

additional segment would be jeopardised through the threat of being litigated out of the market.

Although it is impossible to exactly quantify the coverage of design protection, it is fair to say, taking all factors duly into account, that, if visible spare parts are protected, competition will certainly be excluded in a market worth several billion euros.

#### 2. WHAT MAIN OBJECTIVE IS THE PROPOSAL SUPPOSED TO REACH?

As mentioned at the outset (1.1.2) the current situation is unsatisfactory from an internal market point of view. **This proposal intends** therefore **to harmonise the design protection regime in order to complete the internal market**. In doing so it increases legal certainty and allows market operators and consumers to take full advantage of a uniform internal market for spare parts. As a consequence, secondary objectives to be attained are increased competition, sound implementation of SME policy, more choice and reasonable prices for the benefit of the consumer.

As concerns the objective to solve the distortion of competition in the aftermarket in spare parts, the Commission, subsequent to the Design Directive 98/71/EC, has adopted a new **Regulation (EC) no. 1400/2002 on the application of Article 81(3) of the Treaty to categories of vertical agreements and concerted practices in the motor vehicle industry (Block Exemption Regulation)**. One of the basic objectives of this Regulation is to safeguard competition in the automotive aftermarket, including the unhampered production and distribution of spare parts. Since design protection pre-empts this anti-trust based regulatory regime, the issue of extending design protection to spare parts has a direct and far-reaching impact on the regulatory regime introduced by the Block Exemption Regulation.

This new regulatory regime has resolved some practical issues regarding the distribution of spare parts, in particular the objective to protect effective competition in the market for repair and maintenance services, inter alia by allowing users to choose between competing spare parts and by not allowing a vehicle manufacturer to hinder his parts suppliers from directly serving the aftermarket including with spare parts of matching quality from a third party.

The wording of the Regulation is very clear, to extend design protection to the spare parts means therefore pre-empting the respective articles of their application. It would make the Regulation ineffective in this market, would thus counteract its policy objective and competition would remain distorted. If spare parts are protected the parts producer is not allowed to supply the aftermarket on its own, an authorised car dealer cannot bypass "his" vehicle manufacturer and buy spare parts directly from the producer, the independent repairer cannot choose between competing (visible) spare parts and competition in the repair market is not protected (but eliminated).

This proposal is the only means to achieve the overall objective in the framework of the good functioning of the Internal Market and to complete this process of opening up of the aftermarket to competition.

#### 3.1. Basic approach to reach the objective and policy instruments considered

The proposal aims to amend article 14 of Directive 98/71 and achieve full-scale approximation of the laws of the Member States on the use of protected designs for the repair of a complex product so as to restore its original appearance. However since the adoption of the Directive in 1998, other policy instruments have been considered before deciding to undertake a legislative approach.

As an alternative approach to the lack of agreement at the time of adoption of the Directive, an attempt was made to liberalise the aftermarket through a consultation exercise aimed at reaching a voluntary agreement among the parties concerned. To that end, the Commission undertook, in a statement concerning the aftermarket in spare parts, to launch and co-ordinate a consultation exercise on design protection for component parts of complex products in the motor vehicle sector and to inform the European Parliament and the Council of the progress thereof. The purpose of this consultation exercise was to reach a voluntary agreement among the parties concerned (car manufacturers, independent parts producers, and other stakeholders). A "step by step approach" was considered the most useful strategy in order firstly to obtain a clear picture of the economic situation and to identify the possible key elements of such a voluntary agreement and, secondly to submit a draft voluntary agreement for discussion to the different interested parties. As a first step, a series of bilateral meetings with interested parties took place from October to November 2000. DG Internal Market (as lead), DG Enterprise and DG Competition were closely involved in these meetings. The conclusion of the consultations was that the positions of the parties will remain completely opposed and too far apart to reach a voluntary agreement.

#### 3.2. Options considered

Given the impossibility of reaching a voluntary agreement by industry itself, the Commission decided to follow instead a regulatory approach and to propose an amendment to Directive 98/71/EC to liberalise the aftermarket in spare parts. It should be emphasized again that the decision to open up the aftermarket for competition was already taken at the moment of adoption of the Directive, leaving the choice of its implementation.

With this in mind, the Commission launched an impact study of the possible options to liberalise the aftermarket in spare parts in June 2003. The study focused on the automotive sector, given the importance of the economic impact in this sector. However its conclusions and subsequent harmonisation at European level will apply to any sector where replacement and repair of complex products occurs. The Commission received the final report end of November 2003.

The aim of the study was to examine how four alternative sets of legal rights in respect of design protection would translate into future impacts on competition, community industrial sectors and consumers, against a baseline corresponding to the present situation.

• Present situation, "Status quo": In some Member States of the EU spare parts do fully benefit from design protection, whereas in others, the use of a design protected product for the purposes of repair and maintenance is allowed ("repairs clause"). Finally, in only one Member State, design protection for spare parts is term-restricted and combined with a remuneration system for the remaining period of a "normal" protection term. In terms of

market shares (EU-15): 50% of the automotive aftermarket enjoy free competition, 24% are covered by design protection, in another 24% there is supposed to be a free market and in 2% there is the combined solution mentioned.

- "Full liberalisation," i.e. no design protection of spare parts: This option assumes a revision of Directive 98/71/EC that would remove design protection for must-match parts across the European Union.
- A system seeking a *short term of design protection*: Under this alternative, design protection for spare parts shall be effective for only a limited period of time. After this period, the spare parts could no longer be covered by design protection and any third party would be free to produce and/or market them. The rationale for this option would be to allow VM a certain time to recover their costs and appropriate profit from their "intellectual effort".
- A *remuneration* system for the use of protected designs, including the appropriate level for remuneration. In the context of this option, independent producers could produce spare parts in exchange for a reasonable remuneration to be paid to the holder of the design right.
- A *combination* of both the systems previously mentioned: a *short term* of design protection *and* a *remuneration* system.

# 3.3. Trade-offs associated with the proposed action

Harmonisation and especially liberalisation of design protection in the EU is likely to have an influence on production and trade patterns, both in geographical terms and between companies. With the available information it is, however, impossible to determine these impacts precisely. There is no information available on whether VMs or independent producers use more environmental friendly production methods. An assessment of the impact on trade patters would require information about the expected changes in the location of production which are not available either. In any case no significant net impacts on the environment are to be expected.

The social impacts like safety and employment issues are subsumed in the analysis of the economic impacts. Accordingly, there are no direct trade-offs between social, environmental and economic dimensions. Within the economic dimension trade-offs can be expected between regions (location of production) and enterprises (increased competition for OE suppliers, more market opportunities for non-OE suppliers).

It has been submitted that vehicle manufacturers may compensate for their loss of profits drawn from their market power in the spare parts market by increasing their prices for new cars (accordingly). If OE producers used to recover part of their expenses for the design in the aftermarket, they might be forced to raise prices in the primary market to cover for reduced revenues in the aftermarket. It can even be argued that the vehicle manufacturers have used (part of) these profits in the aftermarket to cross-subsidise the product in the primary market. If this were the case and in order to offset any impact, liberalisation of the aftermarket might result in higher prices in the primary market. Yet, as design costs are fixed costs, they should not have any significant impact on pricing decisions. In any case, the possibility of pass on higher costs to the primary market will be limited by competition in that market. This should not be seen an excuse to keep this possible impact out of the current discussions but on the contrary, as an additional argument to eliminate both, distortions in primary and after-

#### markets.

It can, however, be assumed that the net effect on the consumer would still be positive if prices in both markets were determined by competition. Cross-subsidising of this kind implies a discrimination amongst consumers (the owner of a second-hand "VW Golf" who needs a spare wing subsidises the sale of a new "Golf" of even of a luxury new "VW Phaeton"). It is not for design protection to legally sustain cross-subsidising which, of course, vehicle manufacturers remain perfectly free to use as a marketing instrument.

The impact on the price level of new cars would depend to a large extent on the competition in the primary market. Thus, economic reasoning suggests, and available information hints in this direction, that *the impact on new car prices, if any, can be expected to be marginal*. It is, in any event, comparably less impairing for consumers than prices of spare parts above the competitive level.

# 3.4. How are subsidiarity and proportionality taken into account?

In terms of *subsidiarity*, the recitals of Directive 98/71 state clearly that approximation of the national provisions of law which most affect the functioning of the internal market is sufficient but the objectives of such approximation cannot be sufficiently achieved by the Member States acting alone. The completion of the internal market for spare parts will only be achieved at Community level. The experience with the provisions of article 14 of Directive 98/71 has shown no trend towards harmonisation among Member States on a voluntary basis or through self-regulation by the industry.

In terms of *proportionality*, action at Community level does not cause any immediate costs. Aftermarket liberalisation only requires legal acts in those Member States that currently protect spare parts to lift this protection and hence causes the lowest administrative costs of all options considered.

### 3.5. Discarded options

- Voluntary agreements: see section **3.1**, above
- Harmonisation through action by Member States: see previous section **3.4**.

# 4. WHAT ARE THE IMPACTS – POSITIVE AND NEGATIVE – EXPECTED FROM THE DIFFERENT OPTIONS IDENTIFIED?

In order to properly proceed with this assessment two points have to be taken into account. Firstly, since there are currently different design regimes in the Member States, it is difficult, not to say inappropriate, to take the real "status quo" as a benchmark. It is therefore assumed that, as a rule, the status quo is "full protection", i.e. design protection in the entire EU aftermarket. Secondly, there is an obvious hierarchy between the 5 options. The real antipode positions are "full protection" v. "full liberalisation" whereas the other options are variants or combinations of them. Thus, it suggests itself and helps clarifying the issues involved to proceed in two steps: to first analyse the differences in impact between "full protection" and "full liberalisation" and then to add, in a fine tuning, a benchmarking of the remaining variants.

### 4.1. What are the selected options' expected positive and negative impacts?

As there are no significant environmental and social impacts, impacts will be analysed in detail only with respect to certain aspects of the socio-economic dimension, namely, benefit for the consumer, safety, competition and employment, market behaviour, legal certainty and innovation. In addition, administrative costs will be discussed.

# 4.1.1. Environmental impacts

As already mentioned in 3.3, there are no significant environmental impacts to be expected, as the proposal would not have any major effect on the environmental impact of production of spare parts. It is, however, expected that the level of production increases as demand should increase with falling prices. Yet, it is impossible to assess the environmental impact of this or of the possible changes in trade patterns. An argument in favour of more trade would be an increased number of (non-EU) competitors. A counterargument would be a more decentralised production by smaller producers within the EU.

# 4.1.2. Impact on Competition

The different options would have quite different impacts on competition in the aftermarket.

• **Status quo**: In Member States without a "repairs clause", manufacturers would continue to benefit from the lock-in of customers in the aftermarket. In Member States with a "repairs clause", competition could evolve in the aftermarket, but as this market would not comprise the entire internal market, it suffers from certain inefficiencies.

In those countries where design protection exists, competition in the aftermarket is eliminated which results in the following consequences:

- As far as parts producers are OE-suppliers (lighting and glass) they are barred from directly accessing the aftermarket; the distribution of their spare parts production shifts exclusively to the vehicle manufacturer thus their economic dependency from the car industry remains unchanged.
- Independent parts producers of body panels, a typical SME sector, must give up their production. The same is true for OE-producers (lighting / glass) with regard to car makes or models where they have no supply contracts but would nevertheless like (or be forced by market demands) to offer a full range of spare parts
- Parts producers, both OE and independent, are not allowed to produce on EU territory spare parts supposed to be exported to countries (e.g. the United States) where no design protection of spare parts exists
- Independent parts distributors loose a substantial share of their business and are no longer in the position to offer their clientele a full range of spare parts.
- Independent (body) repairers are forced to buy design protected spare parts from their competitors, the authorised car dealers, necessarily at reduced margins. Accordingly, their competitiveness is weakened, competition in the repair market hampered.

Apart from these direct and basically measurable impacts there are additional knock-on

effects resulting from design protection: The elimination of competition in the submarket of visible spare parts necessarily affects the whole  $\in$  44 bn market of automotive spare parts by shifting the balance of power, fragile as it is there anyway, in favour of the vehicle manufacturers; the market entry of new suppliers of visible parts, both EU and non-EU, becomes impossible or is at least severely impeded; and the threat of potential competition with its beneficial effects on OE spare parts prices is not existent or reduced.

- *Full liberalisation*: Because of the slow growth of the European car market (around 5% in the coming 10 years) and overall replacement parts turnover (in terms of units sold in the body integrated spare parts aftermarket), any increase in sales through one channel of the value chain (e.g. independent distribution) is basically won at the expense of throughput in the other. Hence abolition of design protection in the aftermarket would lead to increased competition in *all* parts of and all players in the value chain. *This option would assure maximum potential competition*. The consequences in detail:
- "OE" parts producers in their capacity as OE-suppliers enjoy direct access to the aftermarket, in their capacity as "independents" they can offer a full range spare parts line. By both means they are able to strengthen their competitiveness and to consolidate their market position and their independency;
- Independent parts producers of body panels can stay in business and provide competition;
- Independent distributors can offer a complete line of spare parts and this way sustain their own competitiveness and maintain the competitiveness of their main clientele, the independent repairers;
- Independent repairers retain their chance to compete, with prospect of success, against the networks of authorised car dealers/repairers.

All in all, competition in both the submarket of visible spare parts and in the whole aftermarket will increase; access to the market becomes possible; and the benefits of potential competition continue to have an effect.

Competition will not only take the form of price competition. Players in the market will also compete via other instruments like service (density of networks, availability over time) and product quality (quality of material, warranties). This opening up of the market to market forces will also require that consumers pay more attention to the products they purchase. Yet, claims that this increase in complexity and variety would work to the detriment of consumers underestimate the sovereignty of consumers. There is sufficient evidence from other markets (especially the market for new cars) highlighting this.

Of course, it is possible and even reasonable to expect that a certain amount of turnover will shift from the vehicle manufacturers to the independent sector. This will presumably less happen in the lighting and glass markets where the distribution structures are traditionally more established. It may, above all, occur in the market which anyway is of key interest to the car industry: the body panel sector. However, a closer analysis suggests that any shift will be rather modest and gradual.

There are several factors that impose clear limits on the expansion of independent operators. Vehicle manufacturers' high market share of 95 % is a strong barrier difficult to tackle from a 5% position of residual competition. Vehicle manufacturers can rely on the strength of their

trade marks and their dealer networks; independent body parts, on the other hand, did not always enjoy the best reputation in the past in terms of fit and overall quality. In addition to that panel producers face a severe handicap in amortizing the expensive production tools compared to the vehicle manufacturers and their OEM- and OES-outputs. It is for these reasons that the EPEC Study came to the conclusion: "...there is a strong set of market, cultural and other factors that continue to support OES market share even if design protection is removed". This conclusion is underpinned by *the experience made in the U.S. market* where, although no design protection exists, independent body panels have reached over the years not more than 15% market share.

- Term-limited design protection: Provision of term limited design protection for must-match parts would protect the OE or any other supplier from competition for the duration of that term. It has to be born in mind that the life cycle of a car model is in average 5 years and the life time of a passenger car is in average 13 years. The rationale for determining the duration should be based on the rationale for proposing term-limited protection, i.e. granting vehicle manufacturers the right to temporarily control the aftermarket. However, it is not assured that effective competition would evolve after the limited term of protection. The remaining market in terms of replacements needed might not be sufficient for independent producers to enter the market at all. In this case, the scenario would de facto develop into the "full protection" scenario. "Crash" parts, contrary to wearing parts, are required from day one a new car model is on the roads and the independent supplier in the aftermarket would be forced to refer his customer to the vehicle manufacturer competitor during the protection period and would have great problems to win the customer back later-on.
- Remuneration system: This option has the nominal attraction of providing and guaranteeing independent producers access to the production of spare parts for the aftermarket against payment of a royalty. The changes implied by this option concern primarily the *upstream* end of the value chain and the extent to which different stakeholders will be able to agree on the ownership of design right, the level of remuneration, and the policing system to be put in place. If this option worked well, it might affect competition positively. If not, it might as well, for the same reason as in the limited-term scenario, turn into the "full protection" scenario. At the other end of the spectrum, a non- or malfunctioning remuneration system might lead to the same market situation as full liberalisation, but causing unnecessary administrative costs to all market participants and administrations.
- *Term-limited design protection plus a remuneration* system: This option is a composite of the two previous options. In terms of its impacts, they seem to be primarily determined by the term-protected component. For the remaining part of the aftermarket a royalty system would be set up, which would lead us into the scenario as discussed in the option above.

In other words, vehicle manufacturers will be allowed to control the aftermarket for a certain time, followed by a system which, for the reasons explained in the previous section, is expected to have high barriers to implementation, of which the relative cost will be even higher since the remaining part of the aftermarket will be considerably lower. It is strongly expected that no, or only very few, independent sector actors will in such a case be willing or able to make the investment, turning this option de facto into the term limited design protection one.

# **Impact on competition**

Option: Player:	Status quo	Liberalisation	Short-term protection	Remuneration	Mix
VM	Monopoly in MS with DP; competition in others	Competition in all MS; loss of market power and shares Net effect: <b>negative</b>	Monopoly in all MS first; later weak competition from OES in some parts. Net effect: <b>positive</b>	Competitive advantage due to remuneration  Net effect: (positive)	Most probably monopoly in all MS all the time  Net effect: positive
OES	Dependency from VM in MS with DP, double role in others	Potentially double role in all MS Net effect: <b>positive</b>	Dependency from VM in all MS during the DP, possibly some share in free market Net effect: (positive)	Dependency from VM in all MS; possibility to compete freely but disadvantage of remuneration Net effect: marginal	Dependency from VM in all MS during the DP, possibly some share in free market after but questionable if effective Net effect: (negative)
IS	Kept out of MS with DP; free to compete in others; few profitable parts due to small markets	Free to compete in all markets; more parts and makes profitable Net effect: <b>positive</b>	Out of the market during term of DP, afterwards few parts and makes profitable Net effect: <b>negative</b>	Free to compete but disadvantage of remuneration Net effect: (negative)	Out of the market during term of DP, afterwards even fewer parts and makes profitable Net effect: <b>negative</b>
Competition in production:		More parts; lower prices in all MS Net effect: <b>positive</b>	Very strong position of VM in all MS; little prospect of effective competition after DP term Net effect: negative	Positive effect of IM, level of competition depending on design of remuneration system Net effect: negative	IM most probably not developing its benefits Net effect: <b>negative</b>
Authorised dealers	Bound by VM; in MS with DP but strong position vis-à-vis other dealers; restricted in supply of parts	Free to offer other parts and maybe better negotiation position against VM but fiercer competition by ID: Net effect: marginal	Strong position in all MS during term of DP; weak competition thereafter Net effect: <b>positive, but</b> dependent on VM power	Competitive advantage against ID  Net effect: (positive), but dependent on VM power	Strong position first, then competitive advantage Net effect: positive
ID	Only free to operate in MS w/o DP; otherwise dependent on supply from VM via author. d.	Free in all MS, more supply, probably cheaper due to competition in production Net effect: <b>positive</b>	Dependent on supply from VM via author. dealers Net effect: <b>negative</b>	Free in all MS, more supply, not much cheaper due to weak competition in production Net effect: marginal	Net effect: negative
<u>Competition</u> <u>in sales</u>		Positive	Negative	Marginal	Negative

Remarks: This table provides only an overview in as far as it does not distinguish between the sub-sectors. **DP**: design protection; w/o: without; **MS**: Member State; **IM**: internal market; **ID**: independent dealers; **IS**: independent suppliers; **OES**: original equipment suppliers. A negative/positive impact on a player means that its market power decreases/increases. **Brackets** indicate a rather weak impact. A negative/positive impact on competition production or sales means that the overall level of competition de-/increases. Marginal can be either positive or negative. As the status quo consists of a mix of regimes the evaluation tries to estimate the EU wide net effect which is obviously very difficult.

#### 4.1.3. Impact on the consumer and prices

Owners of cars that need to be repaired look for parts of a sufficient quality and a repair done at a reasonable quality and speed at low prices. As already pointed out above, average consumers are perfectly able to look for such a service-product combination. However, the best instrument to provide the most appropriate mix of these criteria in each individual case is the market working in an environment set by public authorities.

As the quality issue is probably the most difficult to assess for laymen, repairers could be legally obliged to inform the customer or even to ask for her explicit agreement for the (quality of the) parts to be used in the repair. Pressure to prove the quality of their products would be similar for all suppliers. In addition to that private or public quality test and certification organisations could be set up in order to establish a level playing field for all suppliers.

The impact on prices will be discussed for the different options individually:

- Status quo: In case of design protection the consumer is forced to buy visible spare parts for his vehicle exclusively from the vehicle manufacturer; another source of supply does not exist. Since visible spare parts are not interchangeable between car makes competition works only very indirectly through the primary automotive market, mainly through reputation effects and comparisons of lifetime costs of a car. The vehicle owner becomes a captive consumer, subject to a monopolistic pricing system and the inherent risk to be overcharged for spare parts. In the Member states without design protection in the aftermarket choice, quality and prices cannot benefit from the complete Internal Market.
- *Full liberalisation:* If design protection would be abolished in the aftermarket competition, both actual and potential, in spare parts will continue to exist and even increase. The independent distribution sector will be in the position to put a larger spectrum of parts on offer, both parts procured from OE suppliers and, normally cheaper, parts from "independent" producers; the independent sector may possibly also seek a greater market share in the aftermarket. This will lead to a greater variety of makes of parts, giving the repairer and/or insurer, hence the final consumer, a greater choice and basically a lower price for must-match parts. A detailed discussion and some evidence are presented below.
- *Term-limited design protection*: The term-limited design protection will have the same effect as the status quo situation described above, certainly for the period during which parts can be protected, presumably much longer due to the after-effects of economic processes. If indeed prices of protected parts increase as a result of this option, repair costs and hence insurance premiums inevitably will too. As a consequence, cost for the consumer will be higher.
- **Remuneration system:** If this option works and affects competition positively, it could keep prices for the spare parts concerned under control and foster price levels reduction. This may in turn affect repair shops, insurers and, finally, end consumers, who will have to pay lower prices for the parts.

It is difficult to exactly foresee in quantitative terms how a liberalised aftermarket would develop. However it is interesting to compare spare part prices in EU markets. The situation

in the US market is also presented. The regression analysis presented above has demonstrated that spare parts are more expensive in Member States with design protection in the aftermarket than in Member States without protection.

It is considered that these prices differences across countries with and without design protection for spare parts underestimate the price differences in prices between OEM and independent manufacturers for similar parts. As outlined above, the market share of vehicle manufacturers centres around 85%. This means that even in countries without protection, most of the parts sold are OEM-made. Hence, the average price in those countries is heavily influenced by OEM prices.

As shown by the UK and the US experience, even after liberalisation, OE manufacturers will probably keep a sizeable market share. However, price reductions at least similar to those presented above could be expected Member States that currently enforce design protection. Prices are also likely to fall in other Member States, but only insofar as independent manufacturers compete in price and increase their market share in those countries.

The following **table** shows the differences between the prices charged by car makers and the free market for some car brands at random in Germany. Price differences are obviously significant and indicate that with liberalisation competition in this market will help reducing repair bills for consumers.

TABLE 3: PRICE DIFFERENCES IN GERMANY 2003 at retail level (without VAT)

	Price (in	Euro)		rease for umers
	Vehicle Markers	Free Market	€	%
BMW 316 i (E 36)				
Wing front right	130,00	40,20	+ 89,80	+ 223 %
Bonnet	236,00	116,95	+ 119,05	+ 102 %
Headlamp left	268,00	225,90	+ 42,10	+ 19 %
Fiat Punto (176)				
Wing front right	75,00	50,73	+ 4,27	+ 48 %
Bonnet	225,00	124,57	+ 100,43	+ 81 %
Headlamp right	116,09	90,95	+ 25,14	+ 28 %
Ford Mondeo Kombi				
Bumper	215,15	ca. 160,00	+ 55,15	+ 34 %
Mercedes Benz (T 202)				
C-Klasse (T-Modell)				
Wing front right	115,00	0,84	+ 64,16	+ 126 %
Bonnet	287,44	204,73	+ 82,71	+ 39 %
Headlamp left	205,62	194,40	+ 11,22	+6%
Opel				
Rear mirror Vectra	158,75	109,04	+ 49,71	+ 46 %
Front Headlamp Vectra	211,56	173,00	+ 38,56	+ 22 %
VW Golf III (1H1)				
Wing front right	90,70	9,05	+ 61,65	+ 212 %
Bonnet	196,50	108,87	+ 87,63	+ 80 %
Headlamp left	95,70	81,00	+ 14,70	+ 18 %

Source: GVA research / June 2003

An American study provides information on the evolution of the prices of original equipment manufactured (OEM) fenders and non-OEM fenders over an admittedly short time span of three years and a cost comparison for OEM and non-OEM parts for several car models.

TABLE 4: COST COMPARISON OVER TIME (US-\$)

	1994	1995	1996
OEM average	223,49	221,69	210,48
Non-OEM average	153,17	129,33	113,83
Difference	70,32	92,36	96,65
Difference in %	46%	71%	85%
Total average	188,33	175,51	162,16

Source: NAII, own calculations

Although the data do not allow statistically significant results to be drawn, the comparison suggests that after the introduction of competition from non-OEM parts, the average prices for both types of spare parts decreased considerably, leading to a reduction in the average price by 14% within 2 years.

These findings from the "cost history" are supported by a larger data set for bumpers, hoods and fenders. The price differences between OEM and non-OEM parts range from 44% for bumpers to as much as 94% for fenders (wings).

This preliminary evidence from the US has to be seen in the light of the fact that the spare parts market in most states of the US is not unrestricted. According to NAII there are mostly restrictions in the form of a requirement for insurers to inform consumers when a non-OEM part is being used in crash repair. In addition, according to the Center for Auto Safety, 80% of the replacement parts used in December 2000 was still OEM parts, leaving 15% of the market to non-OEM parts and 5% for recycled parts.

TABLE 5: COST COMPARISON - US MARKET

		Bu	ımper		Hood		ender
		OEM	Non-OEM	OEM	Non-OEM	OEM	Non-OEM
95	Buick Century	112,00	93,00	238,00	174,00	136,00	108,00
94	Chevy Corsica	320,00	127,00	192,00	138,00	99,00	65,00
94	Ranger Pickup	261,18	206,00	247,78	176,00	168,37	120,00
95	Ford Taurus	385,00	294,00	400,12	202,60	214,53	89,00
95	Honda Accord	181,13	148,00	305,34	170,00	145,00	66,00
96	Mazda 626	446,35	370,00	286,75	198,00	248,55	122,00
95	Nissan Altima	143,25	80,00	336,89	186,00	180,04	124,00
95	Pont. Grand AM	322,00	238,00	307,00	154,00	216,00	59,00
95	Toyota Corolla	114,84	88,00	250,00	136,00	110,26	55,00
95	Plym. Acclaim	225,00	168,00	250,00	195,00	245,00	65,00
94	Jeep Cherokee	140,00	103,00	310,00	141,00	187,00	72,00
96	Dodge Intrepid	460,00	288,00	315,00	220,00	174,00	146,00
96	Toyota Camry	234,70	180,00	383,51	149,00	143,88	60,00
95	Chevy S10 Blazer	304,00	128,00	337,00	132,00	296,00	141,00
96	Ford Explorer	370,07	278,00	214,58	180,00	110,02	86,00
	average	267,97	185,93	291,60	170,11	178,24	91,87
	difference	82,03	44%	121,49	71%	86,38	94%

Source: NAII, own calculations

The following conclusions can be drawn from these materials:

- In both regions, the EU and the US, vehicle manufacturers dominate the aftermarket with market shares between 80% and 95%.
- On the other hand both analyses suggest that liberalisation and the resulting increase in competition are likely to lead to lower average prices for spare parts and in the long run to "reasonable" prices fixed by the free market.
- Thus both basic principles of economics and robust evidence suggest that liberalisation would deliver benefits to car part buyers in the aftermarket, although EU-wide markets shares for vehicle manufacturers may not be significantly reduced.

It has been submitted that lower spare parts prices by IAM suppliers may be (partly) absorbed by intermediaries such as the insurance companies and the repair shops. Price examples shown in 4.2 do not support this view. Insurers indeed pay a great portion of the cost which accrues from the use of visible parts in crash repairs. However, they do not control the prices. In the third liability sector they cannot do it and in the comprehensive insurance ("casco") sector they could do it only if, as an alternative option, the motorist consumer is offered a special policy which provides for the use of IAM parts (at a reduced premium!). Such option seems currently to exist in the Netherlands only. Moreover, insurers are interested in keeping their claims expenditures under control and the competition which exists in the insurance industry suggests that premiums, to the benefit of the consumer, will inevitably follow. As regards repairers there may have been attempts in the past not to (fully)

pass on price advantages to the end-consumer. However, the EU vehicle repair market, very much as a result of the Block Exemption Regulation, is in a profound state of flux and subject now to fierce competition so that such practices, if any, will diminish soon.

The car industry has repeatedly tried to associate the denial of design protection for spare parts with counterfeiting. Counterfeiting presupposes the infringement of an intellectual property right. The marketing of "must match" spare parts does not infringe existing design rights; nor does it infringe existing trademark rights. The respective spare parts are not sold under the trade mark of the vehicle maker but exclusively under the trade mark or trade name of the parts producer. For example the aftermarket is supplied with a "Valeo" lamp or a "Pilkington" windscreen.

It is useful to mention the Commission position in the Explanatory Memorandum to the recently adopted Directive on the Enforcement of Intellectual Property Rights: "...in sectors in which competition is particularly fierce, such as the market for spare car parts, the fight against counterfeiting and piracy must not be used to try to keep unwelcome competitors out of the market or to hamper legitimate competition. Such action would risk not only causing serious damage to the businesses concerned, but also – and above all – doing a disservice to the objective pursued...".

# Other economic impacts

Option:	Liberalisation	Short-term protection	Remuneration	Mix
Choice	MS: w/o DP: increased number of parts and makes			MS: w/o DP: negative: independent
	due to IM	eliminated during DP term and restricted		parts first illegal then few
	MS with DP: likewise plus already existing		impact from IM	MS with DP: (positive): some more
	independent spare parts not in these markets under			parts after DP term
	status quo	term when (few) independent parts		
		become available	that become available	
Prices	MS: w/o DP: decrease due to IM and more	MS: w/o DP: higher prices due to more	MS: w/o DP: higher due to	MS: w/o DP: combination of 2
	competition	market power of VM during DP term and	remuneration and less	previous impacts
	MS with DP: likewise but stronger	less competition in fewer parts thereafter	competition	MS with DP: hardly any
		MS with DP: slight improvement after	MS with DP: slightly lower due	improvement, late and only few
		DP term possible for some parts	to some competition	parts
Employment	(negative) for VM, undetermined for OES and	MS: w/o DP: positive for VM and	see short-term protection	see short-term protection
	positive for IP as well as dealers: slightly more due	probably OES; negative for IP and ID		
	to more demand for cheaper parts;			
	Overall: Production: positive impact but impact on	MS with DP: no impact on VM and OES,		
	EU employment depending on development of	slightly positive on IP and ID		
	import shares; Sales: positive as more parts on			
	offer and more sales; Primary market: slightly			
	negative impact due to more use of spare parts –			
	later replacement of cars, and possibly some			
	cutbacks in R&D (allegedly)			
Legal certainty	Improved due to IM	Improved due to IM but risk of confusion	Improved due to IM but risk of	Improved due to IM but risk of
		due to different terms of protection	uncertainties about the	confusion due to different terms of
			remuneration system	protection and uncertainties about
				the remuneration system
Administrative	MS: w/o DP: no impact	MS: w/o DP: increased by the	MS: w/o DP: increased by the	MS: w/o DP: increased by the
costs	MS with DP: reduced as less controls necessary	management of the DP system	complicated remuneration	complicated remuneration system
	,	MS with DP: no sign. impact	system	MS with DP: increased by the
			MS with DP: increased by the	complicated remuneration system
			complicated remuneration	
			system	

Remarks: This table provides only an overview in as far as it does not distinguish between the sub-sectors. **DP**: design protection; w/o: without; **MS**: Member State; **IM**: internal market; **ID**: independent dealers; **IS**: independent suppliers; **OES**: original equipment suppliers. A negative/positive impact on a player means that its market power decreases/increases. **Brackets** indicate a rather weak impact. A negative/positive impact on competition production or sales means that the overall level of competition de-/increases. As the status quo consists of a mix of regimes the evaluation tries to estimate the EU wide net effect which is obviously very difficult.

#### 4.1.4. Impact on Innovation

The core aim of any intellectual property right (IPR) is to encourage innovation. The protection of an IPR should enable the right holder to recover the expenses he had to bear for the invention/innovation. In addition to that, it should allow for an adequate reward of his efforts. This argument is of course also valid in the case of design protection.

It is inherently difficult to precisely assess the impact of IPR protection on the innovative activity of an economy. It is equally difficult to assess the additional revenue a right holder can generate from an IPR. IPRs do not guarantee that the right holder can amortize his investment. They only give him a zone of exclusivity, but the "reward" is exclusively fixed by the market as a result of consumer preference. This preference is exercised at the primary market (new cars) when the car is sold but not at the spare parts market, where the consumer has no choice of the spare part, it must match to the original. In the latter case, the vehicle manufacturer as a right holder, instead of getting a design premium (primary market), receives a monopoly premium.

It is even more difficult to estimate the effect of design protection for spare parts on the innovative activities of manufacturers, their costs and their profits. Two factors should be taken into account. First, the true purpose of creating car designs is to sell cars; here design has an impact on consumer behaviour, in the spare parts sector it does not. Thus, vehicle manufacturers will certainly continue to use design as a marketing instrument for their core business irrespective of whether or not there is protection in the aftermarket. Secondly, available evidence suggests that the investment in the design of the outer skin of a car is relatively modest.

According to the figures available for the car industry (internet site of ACEA), the total R&D expenditure of a vehicle manufacturer on average is about 4.2% (bn 19 related to a turnover of bn 452)

For the different areas it is estimated as follows:

Subject of R&D work	Share of total R&D expenditure
R&D efforts devoted to areas such as mechanical engineering (engine, power train, safety, electronic systems), fuel economy, environment, transport and navigation systems	2/3 = 2.8%
R&D efforts devoted to "design" work in general	1/3 = 1.4%
Work not spent for the "outer skin" of a car but for designing other components and materials such as the interior décor (armatures, upholstery), paintwork or alloy wheels (half of 1.4 %=)	0.7%
Cost for designing the outer skin" of a car which could be <u>subject to</u> design protection is on average not more than	0.7%

This means that 0.7% of a vehicle manufacturer's turnover on average is spent for developing the body design of a new car model.

Related to the number of cars sold the cost of the body design on average is at best  $\in 50-60$  per car in the upper segment and significantly less for mass produced cars. These figures show that the impact of this proposal is minimal for the competitiveness of the car industry, but will be quite significant for independent producers that will benefit from a potentially bigger market share.

For all these reasons it is fair to say that the impact of liberalisation on innovation is at any

rate negligible.

The impact of the other options in this regard will depend on the concrete design of the options (length of protection, remuneration rates). In any case, these options would allow right holders to recover part of their expenses in the aftermarket. Compared to the status quo with full protection in almost two thirds of the Member States, an improvement can be expected for the right holders.

# 4.1.5. Impact on Employment

Shifts in the market shares of spare parts producers would necessarily be reflected in employment. However, this is not necessarily a one-to-one matching. The net impact depends rather on the relative labour productivity levels. For EU employment it is, of course, also relevant where the production is located. In addition, to estimate the overall impact on employment dynamic effects have to be taken into account as well as impacts on other markets and especially the distribution level. These impacts have to be isolated from other influences like global competition and outsourcing. Independent of the design protection regime the respective producer, be it a VM, an OE supplier or an independent producer, will allocate its production facilities as efficient as possible.

- Status quo: In terms of employment, without liberalisation, design right holders would gain complete control over this segment of the aftermarket. By their design "rights" vehicle makers are put in a position (1) to monopolise both the importation of spare parts produced abroad as well as their intra-Community distribution and (2) to exact a "monopoly" premium from the EU consumer. The practical consequences are that a great amount of such parts would be produced abroad and imported by vehicle makers. In fact, in the course of globalisation EU-based vehicle manufacturers already make great efforts to buy more and more of their parts requirements (for both vehicle assembly and spare parts supply) from low-cost countries (to the benefit of jobs abroad). According to the information given to the services of the Commission, Audi imports rear lamps from Brazil, Ford imports bumpers and grilles from Taiwan, PSA imports bumpers from Croatia, Renault imports windscreens from Turkey and bonnets from Taiwan, and Volkswagen imports wings from South Africa. This means that a significant part of jobs are not in the EU, but abroad in these countries. EU parts producers, on the other hand, would be barred from supplying this market segment.
- **Full liberalization**: Four beneficial effects on employment in the EU spare parts industry can already be reasonably expected:
  - As explained above, a shift from car manufactures and licensed OE suppliers to independent producers is to be expected, the extent and net effect of which are hard to estimate. The car industry claimed that up to 50,000 jobs might be lost, 32,400 of which are in the EU. This figure, however, has been estimated by extrapolating the possible impact on a manufacturer with a high market share compared to the whole industry. Yet, as the industry admits, copying parts is only profitable for certain parts of volume cars like VW Golf. Therefore, many small producers will hardly be affected and not be required to reduce employment. Against these job losses at the side of car manufactures new jobs at the side of the independent producers have to be added. As mentioned above, the net effect depends very much on the labour productivity of the lost production relative to the one in the new production. An additional factor is the possible loss of jobs at the

manufacturers which do not exist at the independent producer like R&D. New jobs will be created by the growth of the market for spare parts. The increased production will necessarily generate new jobs.

- EU parts manufacturers are allowed to produce in the EU parts for supplying important export markets (USA, South America, Russia, Ukraine), new employment can be created in the EU;
- About 15 % of the cars on Community roads are cars imported from abroad. These imports include *inter alia* Japanese, Korean and U.S. makes, but also cars produced by EU vehicle makers in the U.S. and elsewhere. Parts for these cars are almost exclusively produced in Japan, Korea, Taiwan and the U.S. All the vehicle makers at issue have registered car component designs in the EU and will continue to do so. This way they control the EU market (to the benefit of their domestic jobs). In case of liberalisation EU parts manufacturers can produce spare parts for these cars here and encroach on this spare parts market for non-EU cars, again with a prospect for additional jobs in the EU.
- Finally, there would most likely be a positive net employment impact in distribution due to the increased sales of spare parts: while some jobs might be lost in the authorised dealer networks, new jobs will emerge in the free market. As the market as a whole will grow this impact will overcompensate the adverse impact on the authorised dealers.

Most important, however, is the total order of magnitude which is at stake. The EPEC impact assessment study launched by the Commission came to the conclusion that, due to "a strong set of market, cultural and other factors that continue to support original equipment market share", the liberalised independent aftermarket is unlikely to ever gain more than a 15 % share in body panels. Assuming that the independent aftermarket, in the long run, will indeed reach 15% market share in body panels and assuming further, that half of the independent after market's 10 % gain in this segment is generated by imports, the import quota of the total EU market of "must match" spare parts would just rise from 1.2% to less than 5 %, that is, by about 3% to 4%.

As regards the "hidden imports" there are no precise figures available in terms of added value. However, indications are that about 25 % or more of the parts requirements (tendency upward) are this way imported into the Community, the respective spare parts market thus being under the control of the car industry.

The liberalisation of the aftermarket might benefit SMEs in the EU as a continued lack of harmonised rules in this area is burdensome for companies. In contrast to car manufacturers, most producers of spare parts are SMEs. Liberalisation might hence encourage investment by independent producers in an open aftermarket for spare parts.

The above analysis assumes that the parts produced by independent producers are competitive and above all comply with the respective safety and consumer protection standards. Nevertheless, it would contribute to better governance as market failures would be tackled with the appropriate instruments.

All in all, liberalisation might well have a positive impact on employment in the EU.

• **Short term protection/remuneration/combination:** From the basis of the negative impact of these options on competition a negative impact has also to be expected for employment.

# 4.1.6. Impact on Safety

Prima facie, design and safety are completely unrelated issues.

#### 4.1.6.1. Subject matter

The issues of the safety, quality and structural integrity of spare parts have been raised repeatedly. They are clearly crucial for consumers. However, design protection is meant to reward the intellectual effort of the creator of a design and to protect the appearance of the product, but not its technical functions or quality. These characteristics could be subject respectively to patent or trademark protection, but cannot be the subject of design protection.

Moreover, if the design of e.g. a bumper is not protected because it does not fulfil the requirement of novelty, it does not necessarily mean that it is less safe or of lower quality than a protected bumper. The structure of the product is not taken into account when granting design protection since it is not visible as part of the outward appearance of the product.

The situation already exists at present whereby the same manufacturer produces the same part, for the car manufacturer (as a new part) and for the independent or retail repairer (as a spare part). In such a case there could obviously be no difference in safety or quality, regardless of the status of design protection. It cannot be said even under the current regime that parts (whether new or spare) that would not be covered by design protection because they don't fulfil the requirements of novelty and individual character would be unsafe. To say that a design protected part is "automatically" safe is similarly not possible to justify because no safety test has been carried out before granting the design protection.

The car industry also bases the "unsafety" of spare parts on a report of a comparative study by Allianz in 1999/2000 that would reject repair of accident damage to motor cars using nongenuine parts. The Commission services received copy of a letter from the Head of AZT stating that the Allianz Zentrum only carried out an internal study with the objective to clarify if the development of a special offer with reduced insurance premiums in case of the use of non original spare parts would be advisable (the study related only to comprehensive insurance and not third party liability insurance since the third party can always claim original spare parts). At the time, this question, and only this question was answered in the negative.

#### 4.1.6.2. Safety legal framework

Safety and quality of products, including spare parts, are safeguarded by other EC legislation and national laws, where the necessary standards are set in terms of product safety and access to technical information.

#### • Type approval legislation

The Community has developed the regime of "type-approval", which is effective, well-tried and does not interfere with competition. If a vehicle part is considered to be safety-critical, it is subjected to a type-approval procedure. Whether produced in the EU or imported, such parts can only be marketed after having received an official certificate by the competent

#### authorities.

More specifically in the automobile sector, over 90 Directives are in place which regulate the construction and functioning of motor vehicles. A "framework directive" provides for the general rules applicable to the type-approval of motor vehicles. The information to be given by any manufacturer going through the type-approval procedure for a product is extremely detailed.

At present, EU type-approval is required for *lighting* and *automotive glass*, covering the issue of safety in these areas. For example, for safety glazing the approval includes the windscreen accessories and the position in which they are fitted, together with a brief description of any electrical/electronic components involved. For rear fog lights the description of replaceable elements, etc must be specified.

All this information is required irrespective of whether the product is covered by an industrial design right or not. The objective minimum standards set apply to all spare parts, whether protected by design rights or not, and regardless of whether they are supplied by the car manufacturer or manufactured by others, produced in the EU or imported. In addition to the EC type-approval directives, over 100 Regulations have been developed under the auspices of the UN-ECE Revised 1958 Agreement. In the field of vehicle safety concerning individual parts, a number of initiatives have been adopted in the last few years.

Should it turn out, however, that safety requirements are desirable for a certain part, the correct approach is to include this part in the existing type-approval system. Thus, road safety and pedestrian protection are rather achieved by the area of type approval.

#### • *Competition legislation*

The Block Exemption Commission Regulation 1400/2000 of 31 July 2002 on the application of article 81(3) of the Treaty to categories of vertical agreements and concerted practice in the motor vehicle sector forbids the restriction of a distributor's or authorised repairer's ability to obtain from a third party and sell matching quality spare parts on the grounds of safety. Recital 24 states that "in order to facilitate this choice and the sale of spare parts, which have been manufactured according to the specifications and production and quality standards provided by the vehicle manufacturer for the production of components or spare parts, it is presumed that spare parts constitute original spare parts, if the spare parts producer issues a certificate that the parts are of the same quality as the components used for the assembly of a motor vehicle and have been manufactured according to these specifications and standards. Other spare parts for which the spare part producer can issue a certificate at any moment attesting that they match the quality of the components used for the assembly of a certain motor vehicle, may be sold as spare parts of matching quality."

Indeed safety concerns are adequately dealt with in the areas where it is relevant. The legislation mentioned above is applicable in the Member States and DG Internal Market considers that all the means necessary are in place to monitor and control defective spare parts. Design protection, which covers only the appearance, is an additional feature in describing the characteristics of a product but cannot replace the test of conformity of quality standards and conformity of manufacture.

#### 4.1.6.3. Case-law

The Court has consistently rejected the use of the industrial and commercial property exception of article 30 (ex 36) EC to protect the public against the risks arising from faulty products. This implies that safety control cannot be invoked as a justification to uphold design protection on spare parts.

In short, design protection has a neutral impact with regard to safety and would simply not be capable of providing safety guarantees which are available through the specific mechanisms described above.

# 4.1.6.4. Pedestrian safety directive

According to the car industry the proposal would contradict the objective of the above mentioned Directive. The purpose of this Directive is to limit the impact of vehicles on pedestrians in case of a collision. To this end it obliges car manufacturers to re-design the front end of their cars and put these cars through various new tests that have been designed specifically to check that the new safety requirements are met. However, it is still open whether the Directive will be implemented at all in its present form because vehicle manufacturers are allowed to propose "alternative measures at least equivalent in terms of actual effectiveness". Reportedly they are eager to do so, for example by suggesting that new design requirements for the front end should be replaced by an improvement of brake systems.

Assuming that the Directive will stay as it is the Community, in order to provide for "post-crash" safety of pedestrians, will use the same mechanisms as they currently apply to "pre-crash" (active) and "in-crash" (passive) safety:

The relevant *section* of a vehicle as a complete entity must fulfil certain technical standards which, verified by a crash test, are a requisite for getting the vehicle type-approved. Accordingly, it is not the front bumper as such which is subject to technical standards and tests required in the "Pedestrian Directive" but the complete "front, lower, outer structure of a vehicle" which includes "all structures that are intended to give protection to a vehicle and also any attachments to this structure".

Translated, for example, to the front bumper - as a typical spare part - this may be crucial as follows.

Relevant for the safety of pedestrians are:

- (1) the placement of the bumper on the vehicle;
- (2) the attachment of the bumper including the entire structure "behind", and
- (3) the material of the bumper.

Realistically, a producer of a spare bumper cannot deviate from the placement (his spare bumper must fit) and does not supply nor influence the attachment and the vehicle's structure "behind". The only way to deviate from the original bumper is to use a different (and maybe inferior) material, e.g. instead of a virgin poly-propylene (PP) a recycled PP. However, it is worthy of note that the material used by the vehicle maker is well known to the public. He must explicitly name the type of material in his type approval application form and must affix a code on his bumpers identifying the materials used. Thus, there are perfect conditions for

parts producers to supply technically equivalent bumpers. Experience shows that they, in their own economic interest, are willing to do so. Should it turn out, however, that some do not, and use safety-critical components, the legislator could easily react by making the use of the specified materials mandatory (no additional crash tests etc. being needed in the circumstances).

This underlines again that design rights, which protect the appearance and aesthetics of a product are not the appropriate means to achieve pedestrian protection, as they are neutral in this respect.

In short, design protection is neutral to safety and would not be the adequate instrument to deal with safety issues.

#### 4.1.7. Market structure

In terms of market behaviour each of the options would have the following impacts:

- Status quo: Maintaining the status quo means absence of a European internal market, not only because of difference in national regulation hence the national aftermarket per se, but also because in countries where design protection exists, vehicle manufacturers de facto have control over their imports and the export of design protected parts. This may lead to economically inefficient shifts in production location of suppliers within the European Union, i.e. from a country with to a country without design protection.
- Full liberalisation: The harmonisation of the law in the EU by the denial of design protection for spare parts would complete the internal market and allow full competition. In countries where design protection in the aftermarket is not possible, new entrants may enter the market from both inside and outside Europe. The extent of this effect depends on both, the ability of these new entrants to gain confidence of insurers and, ultimately, the consumer; and on the European suppliers' ability to remain innovative and competitive in order to keep in pace with globalization. However, this is a trend that is unrelated, or only very remotely, to the issue of design protection, and much more to global competition.

Given the market structure, different impacts can be expected according to the different sectors under consideration in this report. Liberalisation of the design protection regime governing body panels would:

- open markets hitherto closed to non-OES to competition (e.g. France, Germany)
- create an internal market of sufficient scale that new entrants might be expected.

However, as in the USA, a fairly liberalized market, non-OES panels have approximately 15% of the replacement market; no dramatic shift away from OES panels is to be expected.

For the EU market to shift to anything like this from the present 5% is likely to take a considerable period of time due to, in particular:

- the tendency of the insurance sector to specify OES panels
- the sometimes questionable reputation of non-OES panels in terms of fit and overall quality.

The lighting market is largely served by specialist firms that supply both OE equipment and the OES and independent aftermarkets. Whilst these specialists have retained patent rights to their technological innovations, the vehicle manufacturers have tended to seek to acquire the design rights to the parts. Abolition of these design rights would increase the parts producers' freedom, and to the extent that new competitors would be able to legally enter the market EU wide, price pressure on OES products would increase.

The automotive *glazing sector* has developed its own market model of OES supply and reengineering of competing products. It is unlikely to be affected by design right liberalization, other than being given the comfort that the threat of a VM trying to seek such protection in the future would have been removed.

Loss of design protection on must-match parts is expected, ultimately, to result in lower market share and/or lower average achieved prices for the vehicle manufacturers compared to the status quo. The car industry warned that after liberalisation SMEs active in the aftermarket might be squeezed out of the market by foreign, mainly South-east Asian competitors. ECAR, the association of independent producers does not see this risk but rather reckons that their market presence would improve. Extension of design protection for spare parts to the EU as a whole on the other side would definitively result in the elimination of most independent small and medium-sized producers.

• *Term-limited design protection*: A term-limited design protection will have a neutral, or maybe a positive, impact for the vehicle manufacturers in Member States with design protection for spare parts which will keep control over the aftermarket during the term of protection with a *serious risk of increased spare part prices during that period*, therefore impacting on actors further down the value chain such as distribution and, especially, repair.

Moreover, if such an arrangement would apply to the whole of the Community, vehicle manufacturers in countries where a repair clause does exist today will start to claim term-limited design protection. That would lead us away from liberalization in these countries and give these vehicle manufacturers increased control over the aftermarket, hampering independent production and distribution in these countries to further develop and establish themselves. In addition, Europe is an interesting playground for vehicle manufacturers from outside the EU who are already protecting their design and import protected parts from outside the EU for their own aftermarket.

During the same term, OE suppliers are put in a *disadvantaged position* since they are expected to have to increasingly sell through vehicle manufacturers' channels. Independent distribution and repair will have *fewer opportunities* than in the liberalisation scenario. Overall, there is a great risk that this option as well as the remuneration system and the combination of these options would not create sufficient incentive for new EU players to enter the market, thus the increase in competition with its beneficial effects would not materialise.

**Remuneration system**: this option represents a real challenge for implementation. Based on consultations with different sectors of the industry, the independent sector included, major barriers are to be expected in the implementation:

- policing the royalty system in order to make sure that all producers of spare parts indeed paid their remuneration to the original designer;

- the interpretation of what is "fair" in the context of a royalty payment is also likely to be a matter of dispute. Consultees among parts producers cited figures in the 1%-2% range, expressed as % of the sales price.

Consultations with all parties including the independent sector, suggest that the *main barrier* to implementation of this model would indeed be *its administration and supervision*. Also a general level of remuneration appears difficult to fix.

## 4.1.8. Competitiveness

- Status quo: In the current situation the European aftermarket is split into different markets under different design protection regime. This put the European car and car parts industry at a disadvantage vis-à-vis its competitors. US and Japanese manufacturers can design protect their parts in the most important markets in the EU and thereby ensure that they can sell their own spare parts even if they are imported at higher prices. EU producers on the other hand do not have this option in the most important US market. In the much smaller and more difficult Japanese market design protection is restricted to 15 years. In the US aftermarket EU producers have to face the "disclosure and/or consent" rule in most States. To be accepted they will in most cases need to be certified by a US institution what raises the market entry barrier.
- **Liberalisation:** The abolition of design protection in the aftermarket would impact on all car producers in the EU market in the same way as design protection can be obtained independent of the origin of the product. That is while imports into Member States with design protection would loose this advantage, exports of EU producers to third countries would not be affected in any way. Therefore, the argument that liberalisation would have a negative impact on the competitiveness of EU car manufactures vis-à-vis producers in third countries cannot be sustained.

As concerns the aftermarket itself, liberalisation would open business opportunities to independent spare parts producers. While the car industry argues that the market would be immediately dominated by large producers from third countries, ECAR is more confident that the specialised European producers will be able to compete in the market. The analysis above has shown that especially the European auto glass sector is very strong and competitive. The discussion on competitiveness should also take the business opportunities into account which the liberalisation will open for European producers in the spare parts markets in third countries without design protection.

As discussed in the section on safety, liberalisation might involve the implementation of some sort of certification system which should avoid that unsafe parts are dumped in the EU market. If on the other hand independent EU or third country suppliers produce high quality at low prices European consumers should not be barred from taking advantage of these products by design law.

## 4.1.9. Legal certainty

All options would improve the situation concerning legal certainty compared to the status quo. However, different periods of protection for spare parts and original designs in the

"term-limited protection" and the combined option could create confusion. A remuneration system could lead to legal uncertainty in the sense that it might result in frequent and lengthy litigation cases.

#### 4.1.10. Administrative costs

The administrative costs that the different options would provoke diverge considerably. In general, administrative costs can be distinguished in one-off costs resulting from the implementation of the directive and running costs following from the requirements and impacts of the directive. In the current case the following cost effects could be expected from the different options:

• Under the "status quo" scenario, no one-off costs would occur as no laws have to be amended and in turn companies do not have to adjust their routines. However, Member States would still be free to liberalise their existing laws, resulting in one-off costs at that point in time.

The existence of different national regimes in parallel results in administrative (search) costs for an independent producer of spare parts to find out about the legal situation in a given Member State where it wants to do business. The same holds for repair shops and consumers who have to find out if a part has been legally produced within the EU and if they are allowed to use it in their home country and eventually in other Member States they want to travel to or through.

• The "full liberalisation" scenario would require the adoption of a (short) directive amending Design Directive 98/71 and the transposition into national laws in the Member States.

This would result in a simplification of daily lives of administrations/courts, companies and consumers. First of all, there would be no more uncertainty about the applicable law across the Member States. Secondly, as there would be no design protection for spare parts there would not be any litigation cases. Consumers and companies would not have to bear the costs mentioned under the status quo scenario.

• The *short-term protection* scenario would require a new EU directive and changes in the national laws of all Member States.

While there would be no uncertainty for companies and consumers with regard to remaining protection in different Member States, short-term protection would cause the usual costs of managing and enforcing IP rights.

• The *remuneration* scenario would cause the same one-off costs as the short-term protection but in addition it would require the development and implementation of the remuneration system. As this instrument would have a decisive impact on the (non-functioning of the market it would probably require considerable resources.

In addition to the usual costs of managing and enforcing IP rights the remuneration scenario would result in considerable costs for the management of the remuneration system. It would have to be decided when designing the instrument who would finally have to bear the costs of such a system: the taxpayer, the holders of IP rights (in the form

of registration costs), or the third party that exploits the right. There would in any case be a considerable risk that the costs of the system might at least offset a large part of the revenues generated by the remuneration. Depending on the design of the system there is also a high risk of numerous cases for mediation or even legal disputes about the adequate fee

The combined *short-term/remuneration* scenario would more or less generate the combined one-off and day-to-day costs of both systems, adjusted to the respective time periods

# 4.2. Are there especially severe impacts on a particular social group, economic sector (including size-class of enterprises) or region?

The modification of the directive will *only affect spare parts in the secondary market which* are protected or protectable by a design right, on the conditions of novelty and individual character, that is, the outside and visible parts ("crash" parts): bonnets, bumpers, doors, fenders, lamps, radiators, rear protection panels, windscreens, wings. Parts that are not visible, like engine parts or mechanics related parts are not concerned.

As pointed out above, the proposal is of considerable relevance only for a certain part of the automotive sector, namely the aftermarket for spare parts of design protected complex products. Main players in this sector are the producers of original equipment (OE), non-OE producers, independent distributors, repair shops, insurers and, to a marginal extent, the do-it-yourself-consumer.

In quantitative terms data differ. As already stated in point 1.3.2., according to the European car industry, it will affect 5% of the spare parts and according to the information received from ECAR, it affects 25% of the EU spare parts market.

5% of spare parts sales for the car industry means 0,4% of their total sales, meaning not a loss of sales but simply 5% open to competition. It is difficult to understand why the car industry has opposed so strongly since 1993 when the Commission first propose to open up the aftermarket to competition if there is so little economic relevance in it. Taking vehicle manufacturers dominant position in the market and the strength of their brands and their distribution networks, if such figures are correct, design protection of spare parts would seem to have a marginal impact on their business.

For OE producers, the effect of this proposal should not be over-estimated. Design protection is only one element in the hands of car producers to fix prices. Other elements like the distribution channels or other intellectual property rights are much more important. France also provides copyright protection; the directive does not exclude cumulative rights. Therefore, there would be only marginal negative impacts. However, for non OE producers, there will be improved chances of participating in the market. For repair shops, more customers might want to have parts replaced if they are cheaper. Insurers will be in a better bargaining position against OE producers. Consumers will benefit directly from lower spare part prices or indirectly from lower insurance premiums.

Given the marginal impact of the proposal on the automotive industry as a whole, no regions or social groups will especially severely affected by the proposal. Nevertheless, harmonisation of design protection might lead to relocation of part of the spare part production from already liberalised markets (within or outside the EU) to formerly protected markets in the EU if these offer better production and market conditions. It is, however, not possible to identify if, where

and when these effects might occur at the micro-level.

## 4.3. Are there impacts outside the Union ("external impacts")?

The bulk of the parts marketed in the independent aftermarket come from EU-based manufacturers, both OE-suppliers and independents. The independent aftermarket imports - to be distinguished from parts imports by vehicle makers - are estimated by ECAR to be at best 10% - 15 % of *their* sales = 2.2 % of the total market.

Several reasons suggest that independent aftermarket imports will not dramatically rise as a result of implementing a Repairs Clause. *Independent* manufacturers in low-cost countries frequently lack the technical know-how to produce parts of the quality standards required by the European market. This holds particularly true for lamps and automotive glass. Freight costs for heavy goods (glass) and bulky goods (panels) are an additional barrier.

## 4.4. What are the impacts over time?

There are no dramatic changes to be expected (as experience has shown for US and UK markets). It would take some time until the expected impacts materialise.

## 4.5. Summary

Consumers would benefit directly and/or indirectly from the increased competition and the completion of the Internal Market resulting from *liberalisation*. Full protection could lead to higher prices at least in some Member States due to new monopolies. It seems unlikely that this would be fully offset by the benefits from the completion of the Internal Market. Concerning the other three options, it seems that the effects of the different aspects (competition, innovation, Internal Market) would neutralise one another to a large extent.

Summing up, the *liberalisation* option promises net benefits in many respects without serious drawbacks. It would improve the functioning of the Internal Market and would allow for more competition in the aftermarket and access and participation of SMEs in this market. The consumer would benefit from more choice and lower reasonable prices. Besides the increase of legal certainty, it would also have as a consequence the simplification of daily lives of administrations, courts, companies, especially SMEs and consumers.

A *limited term of protection* would risk making the spare parts market uninteresting for independent producers as the market share left after the expiry of the protection might not be worth the necessary investment. In this case this option would have *de facto* the same impact on the market as full protection.

The options including a *remuneration* system seem not to be practical. They appear to be too complicated and administratively costly without promising significant benefits in comparison to both the status quo and the other options.

While *liberalisation* and probably also a *limited term of protection* would represent an improvement in comparison to the status quo, the options including a *remuneration* system might even result in a deterioration compared to the current situation.

The worst situation possible might be the continuation of the status quo, the approximation of laws towards either liberalisation or protection is necessary. Legal certainty is key for the smooth functioning of the internal market.

## 5. HOW TO MONITOR AND EVALUATE THE RESULTS AND IMPACTS OF THE PROPOSAL AFTER IMPLEMENTATION?

This proposal will be implemented by its transposition into national laws. A revision clause and analysis of its implementation is already foreseen in article 18 of Directive 98/71.

### 6. STAKEHOLDER CONSULTATION

## 6.1. Which stakeholders were consulted, when in the process, and for what purpose?

As a first step in the consultation exercise, the Commission had bilateral discussions with the five main groups concerned with a view to obtaining a clearer picture of the economic issues revolving around spare parts for cars and motorcycles, in particular body parts. These main groups are: vehicle manufacturers (including car and motorcycle manufacturers, represented by ACEA - European Automobile Manufacturers Association -, ACEM - Association des Constructeurs Européens de Motocycles - , UNICE - Union of Industrial and Employers' Confederations of Europe -), suppliers (CLEPA - European Association of Automotive Suppliers -), independent component producers (ECAR), insurance companies (CEA -Comité européen des assurances -), and consumer organisations (AIT/FIA – The European Bureau of the Alliance Internationale de Tourisme & Federation Internationale de l'Automobile - , BEUC - Bureau européen des unions des consommateurs-, and FEMA -Federation of European Motorcyclists Associations -). In order to prepare for these bilateral discussions, the services of the Commission drafted a questionnaire (Annex I) on the economic situation concerning spare parts for cars and motorcycles, and more specifically body parts. This questionnaire was sent to all the mentioned organisations in November 1999, responses reached the Commission by June 2000.

Then the Commission started bilateral discussions with the mentioned parties, additionally individual companies and organisations, which are represented by each of those groups, have been invited to attend these meetings. Meetings with ACEM, CLEPA, CEA, ACEA, FEMA, ECAR, BEUC, and AIT/FIA took place.

In the framework of the impact study the contractor consulted the following interested parties:

- Vehicle manufacturers:
  - ACEA, the European Automobile Manufacturers Association
  - CCFA, le Comité de Constructeurs Français d'Automobile
  - ANFIA (Italian National Association for Automotive Industry)
  - DaimlerChrysler
  - ANFAC Asociación española de fabricantes de automóviles y camiones
- Independent producers:
  - ASCAR (Italian Association of producers and sellers of independent spare parts for cars)

- SERNAUTO, the Spanish association of component manufacturers for the automotive industry
- Aftermarket Operations Europe, Pilkington AGR (UK) Ltd. Also member of the Groupement Européen des Producteurs de Verre Plat's Aftermarket working group.
- A+Glass
- Automotive Lighting
- Valeo
- Distribution and supply sector:
  - FEDA, Fédération des Syndicats de la Distribution Automobile
  - CLEPA, European Association of Automotive Suppliers
  - ANCERA (Associación Nacional de Comerciantes de Equipos, Recambios, Neumàticos y Accessorios para Automóviles)
  - FIGIEFA, International Federation of Automotive Aftermarket Distributors
  - EV (parts wholesalers)
  - FIEV, the (French) Federation of Automotive Suppliers
  - ECAR
  - Automotive Distribution Federation (UK)
- Public sector:
  - French Ministry of Economy, Finance and Industry
- Insurance:
  - Comité Européen d'Assurances
- Certification bodies:
  - Thatcham (The Motor Insurance Repair Research Centre)
  - the Certified Automotive Parts Association (CAPA), USA
- Consumers:
  - BEUC, Bureau Européen des Unions de Consommateurs

#### 6.2. What were the results of the consultation?

The results of this consultation showed a wide divergence on the position of interested parties, in particular between producers of complex products and independent producers of component parts of such complex products.

Manufacturers of complex products consider that design protection for spare parts is an inevitable consequence of the Intellectual Property Right ("IPR") concerned. The existence of a design right provides compensation for investment in design and also rewards creativity. As such it parallels other IPRs. According to this view, primary and after-markets are not separable, and to make any such distinction would be artificial and should be avoided in the interests of consistency in the application of general IPR principles.

Independent producers of component parts of complex products, however, consider that design protection for spare parts creates unjustified monopoly situations in the aftermarket. The prices of spare parts of equivalent quality are lower where they are not design-protected. They say that a limit to this IPR must be established to avoid a negative impact on competition, and that this is the only way to avoid manufacturers gaining full control over the after-market.

#### 7. COMMISSION DRAFT PROPOSAL AND JUSTIFICATION

## 7.1. What is the final policy choice and why?

After the extended impact assessment of all above options, the Commission is of the opinion that the option not to extend design protection to spare parts in the aftermarket is the only effective one to achieve complete harmonisation in the internal market on the principle of liberalisation, in line with Commission's intention in the original proposal in 1993 and the spirit of the Block Exemption Regulation. Moreover it is in line with the spirit of the transitory agreement on the design regime on spare parts agreed in directive 98/71. The other options will imply no sufficient change to the current unsatisfactory situation and will render it either more unsatisfactory by introducing extended protection in those Member States where the aftermarket in spare parts is liberalised or more complex by introducing a legally uncertain remuneration system.

As outlined above, the extended impact assessment showed that the liberalisation provides the greatest net benefits compared to both the status quo and the other options considered.

### 7.1.1. Competitiveness, including in terms of reward for the investment

As already explained in 4.1.8., full liberalisation will not have a negative impact on the competitiveness of EU car manufactures vis-à-vis producers in third countries. As far as the aftermarket itself is concerned, liberalisation would open business opportunities to independent spare parts producers. The discussion on competitiveness should also take into account the business opportunities which the liberalisation will open for European producers in the spare parts markets in third countries without design protection.

In terms of reward for the investment for design right holders, the actual costs of development of a new design and the protection of ex-ante incentives to innovate can be adequately addressed by the grant of exclusive rights covering only the exploitation of the design for the production and sale of the complex product on the primary market.

The reward concept under industrial design law is, in principle, linked with the appraisal of the final consumer as to the added value the design confers on the functional product. In other words, the reward achieved will be dependent on whether, and to what extent, the consumer is willing to buy, or even pay a higher price for, the product embodying the protected design as compared to similar products that do not embody the design. The choice of all subsequently purchased spare parts is thus limited by their initial choice when purchasing the complex product.

As already explained in 4.1.4, vehicle manufacturers will certainly continue to use design as a marketing instrument for their core business irrespective of whether or not there is protection in the aftermarket

As available evidence shows, investment in the design of the outer skin of a car is relatively modest, thus the impact of liberalisation on innovation would be non-existent, at any rate negligible.

## 7.1.2. Competition and Employment

The liberalisation proposed would *enhance potential competition* and have a beneficial effect on producers of the spare parts and the channels through which they are distributed and sold. New actors may emerge in any link of the value chain or existing actors may change role.

Overall, liberalisation would have a positive impact on competition in the EU aftermarket and would foster a more dynamic market in the long run. The improved competitive environment will especially benefit SMEs active in this sector. The net impact on the level of employment in the whole sector would most probably be only marginal or positive.

## 7.1.3. Market structure

Vehicle manufacturers would presumably suffer losses in their share of the aftermarket due to increased competition. *In the primary market* and according to the estimates cited above *a price increase to offset that loss would not be significant in relation to the average price of a new car.* 

*In the aftermarket*, if one takes body panels only, possible consequences would be these: assuming for example that by 2010 the independent sector would have gained a 10% market share (against 5% today), and helped prompt, due to competition, a 10% average price cut in the market, then, the following changes would occur:

- The independents' sales would increase by around 0.3 billion € per year, from 400 million to 730 million euro;
- The vehicle manufacturers' sales would fall by 1.1 billion €/ year;
- There would be 0.8 billion euro available in savings to be made in the purchase of spare parts by repair shops and vehicle owners, ultimately for the benefit of the final consumer.

However, since it has proven difficult to provide precise forecasts on the possible impact on market structure and prices, future developments need to be closely monitored. If need be, the Commission will reflect on further appropriate intervention.

#### 7.1.4. Consumer

Even if there are intermediaries between automotive supply and the final consumer, *the final consumer will necessarily benefit from the liberalisation*, mainly in terms of choice and lower prices which in the long run will be fixed by the free market. In particular, in those cases where insurance premiums do not intervene or intervene only partially, it is the end consumer who decides how and by whom the spare part is to be replaced.

## 7.2. Compatibility with International Obligations

While the Paris Convention deals with some aspects of industrial design protection, it is the WTO TRIPs Agreement which is particularly relevant as regards the substance and scope of design protection in the present case.

Article 25(1) of the WTO TRIPs Agreement requires Members to provide for the protection of independently created industrial designs that are new or original. Such protection is not required to extend to designs dictated essentially by technical or functional considerations.

The proposed Directive replaces Article 14 of existing Directive 98/71/EC. It does not remove the protection afforded under 98/71/EC to new and original designs, including component parts of complex products.

What the new proposal does is to complete the liberalisation of the spare parts market for those parts used in repair of a complex product so as to restore its original appearance. It was already the case before and subsequent to the adoption of Directive 98/71/EC that some Member States allowed an exception to design protection as far as the use of such spare parts for repair was concerned. The Commission had originally proposed in 1993 a harmonised exception (specifically no exercise of the right against use in repair after three years on the market of the original design). Such a provision was then considered compatible with the draft TRIPs Agreement under negotiation (see the Explanatory Memorandum for the proposed Regulation on a Community Design). However it was not adopted by the Council, which opted for a limited harmonisation with the option for Member States to further liberalise the market in repair parts.

Article 26(2) of the WTO TRIPs Agreement allows limited exceptions to design protection, provided certain conditions are fulfilled. These conditions are similar to those required for exceptions to copyright protection and patent protection under Articles 13 and 30 respectively of the TRIPs Agreement, but of course regard should be had to the specific subject matter of the different rights when considering how these conditions should be applied.

Taking the conditions of Article 26(2) in turn:

- The exception should be limited: in this case it is limited to component parts of complex products which are needed to restore the appearance of the product, and only concerns an exception to the exercise of the right when such parts are used for repair purposes. In practice this exception is only significant for the automotive sector, out of the whole range of industrial sectors which use design protection. This is because, unlike other complex products, cars crash and their owners want to repair them.
- The exception should not unreasonably conflict with the normal exploitation of protected industrial designs: the design protection in a component part of a complex product is

already exploited in the manufacture and sale of the original part to become or as part of an original complex product (i.e. the original car). To allow such protection to extend to a monopoly on the upkeep and repair of the complex product would seem to go beyond the normal exploitation available in respect of the first sale. Moreover such a monopoly as noted above applies only to the automotive sector, and would not be considered normal exploitation in other sectors where design protection applies.

- The exception should not unreasonably prejudice the legitimate interests of the owner of the protected design: the owner of the protected design has the full capacity to exploit his legal protection on first sale of an original part in or for the original car. He can prevent competition at that stage. However it is not clear that the owner can have a legitimate interest in using his design protection to prevent consumers choosing how to source repair parts to restore the appearance of their product. This would appear to go beyond the specific subject matter of design protection.
- The exception should take into account the legitimate interests of third parties: consumers have a legitimate interest in having a choice as to how to source repair parts for the products they own given that there is no realistic alternative to a part which restores the appearance of the original product and the appearance of the whole product is a reason why they bought it the first place. Moreover parts manufactures have a legitimate interest in entering the aftermarket for repair parts, given that this does not impinge on the market for original parts/cars where the owners of design protection already exercise their rights.

Taking account of all these points, it is considered that the proposed Directive is in compliance with relevant international obligations and in particular Articles 25 and 26 of the WTO TRIPs Agreement.

# 7.3. Have any accompanying measures to maximize positive and minimize negative impacts been taken?

No specific measures have been taken to maximize positive and minimize negative impacts. In order to take care of the safety concerns discussed above it might be recommendable to consider accompanying measures in due time (e.g. certification/safety tests for additional kinds of spare parts) to ensure on the one hand a level playing field within the sector and on the other hand that consumers are adequately protected. Such considerations are, however, outside the scope of this extended impact assessment.

#### **ANNEX**

#### ABBREVIATIONS USED

ACEA: Association des Constructeurs Européens d'Automobiles

CEA: Comité Européen des Assurances

ECAR: The European Campaign for the Freedom of the Automotive Parts and repair market

**EPEC**: European Policy Evaluation Consortium

IAM: Independent aftermarket IPR: Intellectual Property Rights

NAII: American National Association of Independent Insurers

OE: original equipment

R & D: Research and Development

VM: Vehicle manufacturer

## PRICE DIFFERENCE DUE TO DESIGN PROTECTION: MULTIVARIATE REGRESSIONS OF THE RELATIVE PRICE OF SPARE PARTS ON A NUMBER OF CONTROL VARIABLES

#### METHODOLOGICAL APPROACH

The sound statistical methodology of multivariate regressions was used to test whether the average price in countries with design protection differs considerably and systematically from prices in countries which incorporated the so-called "repairs clause" in their laws. One important aim is to minimise the possibility of spurious correlation which may occur when variables seem to be influenced by others while in reality the correlation is only due to omitted variables. Including control variables reduces this risk considerably. In addition, running regressions allows to test whether the effect of certain variables (here design protection) is statistically significant, or if the observed variation in prices is so large that apparent differences in averages are only coincidence. Finally, the coefficients determined by the regression permit quantifying the impact of each explanatory variable.

#### **D**ATA

The regression is based on a data set by the EUROPEAN FEDERATION OF NATIONAL INSURANCE ASSOCIATIONS (CEA) for 12 spare parts for 20 car models for 17 countries. Due to insufficient data availability 7 countries had to be dropped from the sample as well as one spare part (flasher lamp). Out of the 10 countries, Belgium, Spain, Italy and the UK incorporated a repairs clause in their legislation. The other countries included in the analysis (Austria, Germany, Denmark, France, Portugal and Norway) apply design protection. Additional information on the car part sector and the economy in the individual countries was matched from Eurostat statistics.

#### MODEL SPECIFICATION

The following variables have been taken into account in the estimations:

- *Price differences* of spare parts between countries were measured by the price of each individual car part in a country in relation to the median price of all countries.
- The variable *protection* indicates the differences between countries with respect to design protection. The variable takes the value "1" if the country under consideration applies design protection for spare parts, and the value "0" if the national legislation includes a so-called "repairs clause". The sign and significance of the respective coefficient will indicate whether prices differ significantly between these two groups of countries. A positive sign means that the price is higher in the regime with design

protection.

- Other variables considered relevant in explaining price differences in the spare parts industries are the *category of the cars*: Cars were classified in 4 categories from A, comprising rather small cars like Fiat Punto, to D, comprising rather large and more expensive cars like BMW 5 series. This should isolate the impact of supposedly more expensive parts for the more expensive cars.
- Value added per employee is one possibility to capture *labour productivity* in the sector in each country. However, often measures for labour productivity are closely correlated to level of qualification in the sector. High productivity could imply lower prices. But on the other hand do comparably highly qualified employees usually imply higher total costs, to be covered by higher prices. The effect of this variable therefore is difficult to predict.
- Differences in the *supply of car parts* between countries can be captured by measuring the total sales of car parts in that country in relation to the number of cars registered in the same year.
- Further, the number of *cars per capita* as well as the *brand market share* is included in the regression. These variables reflect the possibility of larger scales of production, which might allow lower prices. Additionally, they capture national differences in the spare part markets pretty well.

For the estimation of the coefficients a linear context of the following form has been assumed:

```
Price_i = \alpha + \beta_1*protection_i + \beta_2*car \ category(A-D)_i + \beta_3*labour \ productivity_i + \beta_4*supply of \ car \ parts_i + \beta_5*cars \ per \ capita_i + \beta_6*brand \ market \ share_i + \varepsilon_i
```

where the Greek letters  $\alpha$  and  $\beta_j$  denote the coefficients to be estimated, and  $\varepsilon$  the error term. The subscript i indicates the country the observations refer to. To control for heteroscedasticity, the variance was estimated using the heteroscedasticity consistent Huber/White estimator. The robust regression was carried out for each spare part separately.

#### HOW TO READ THE TABLE

Coefficients in the table below represent the percentage change by which the price of the respective part would increase if a country switched from a regime without design protection to one with protection. To take an example: The figure 7.974 in the top left corner of the table indicates that the price of a front bumper would rise by 7.974 per cent in a Member State that switches from a liberal regime to design protection for spare parts.

#### INTERPRETATION OF THE RESULTS

The table below shows that all car parts that are visible externally are significantly more expensive in countries with design protection for spare parts than in countries without such protection. These differences range change from 6.4% for rear doors to 10.3% for rear wings. The supply of car parts and labour productivity are even significant for all parts. While the impact of the latter is positive but fairly small, the supply of parts has a strong negative impact on the prices. This variable can be interpreted as an indicator of the 'market density' or 'market value' in spare parts in the respective country. The coefficients have the expected negative sign and are fairly high, indicating the price reducing impact of the market value.

The results concerning the significance level of the data protection regime did not change if Germany was included in the group of countries without design protection in the aftermarket or if Norway as a non-EU Member State was excluded from the sample.

Table: Regression Results – Effect of Design Protection on Price of Car Parts

Explanatory Variable: Relative price of car parts in relation to median price across countries

	Front Bumper Coefficient Stand. Err. Significance			Bonnet Coefficient Stand. Err. Significance			Front Wing Coefficient   Stand. Err.   Significance		
Design Protection	7,974	1,994	0,000	8,824	1,748		8,989	2,010	0,000
Car Category B	3,557	2,313	0,126	1,459	2,029	0,473	-0,695	2,332	0,766
Car Category C	2,393	2,712	0,379	-1,197	2,378	0,615	2,159	2,733	0,431
Car Category D	10,958	3,915	0,006	4,770	3,434	0,167	5,157	3,947	0,193
Labour Productivity	0.196	0,089	0,029	0,260	0,078	0,001	0.150	0,090	0,096
Supply of Car Parts	-26,045	4,060	0,000	-24,635	3,560	0,000	-15,264	4,092	0,000
Car per capita	-2,625	1,556	0,093	-7,009	1,365	0,000	-1,283	1,569	0,414
Brand Market Share	-0,482	0,226	0,035	-0,376	0,198	0,060	-0,487	0,228	0,034
Constant	115,591	10,239	0,000	140,263	8,979	0,000	106,655	10,321	0,000
	Radiator			Head Lamp			Front Door		
	Coefficient		Significance	Coefficient	1.	Significance	Coefficient		Significance
Design Protection	2,169	2,471	0,381	10,133	2,202		8,147	1,668	0,000
Car Category B	-1,331	2,867	0,643	3,357	2,555		-0,742	1,935	0,702
Car Category C	-0,448	3,361	0,894	-1,376	2,995	0,647	-1,488	2,268	0,513
Car Category D	0,430	4,853	0,929	0,631	4,324	0,884	3,225	3,271	0,326
Labour Productivity	0,183	0,110	0,099	0,248	0,098	0,013	0,348	0,074	0,000
Supply of Car Parts	-11,831	5,032	0,020	-27,719	4,484	0,000	-24,032	3,396	0,000
Car per capita	1,450	1,929	0,453	-1,171	1,719	0,497	-6,564	1,298	0,000
Brand Market Share	0,420	0,280	0,136	-0,353	0,250	0,159	-0,186	0,189	0,327
Constant	84,562	12,691	0,000	107,822	11,308	0,000	131,895	8,545	0,000
	Rear Door			Rear Wing			Rear Lamp		
	Coefficient	Stand. Err.	Significance	Coefficient	Stand. Err.	Significance	Coefficient	Stand. Err.	Significance
Design Protection	6,428	1,951	0,001	10,315	1,959	0,000	8,350	1,838	0,000
Car Category B				-0,827	2,273	0,716	2,154	2,133	0,314
Car Category C	2,254	2,119	0,290	2,871	2,665	0,283	0,411	2,500	0,870
Car Category D	1,778	3,183	0,578	7,848	3,848	0,043	3,789	3,610	0,295
Labour Productivity	0,284	0,086	0,001	0,162	0,088	0,066	0,167	0,082	0,043
Supply of Car Parts	-19,515	3,975	0,000	-22,312	3,990	0,000	-23,829	3,742	0,000
Car per capita	-6,827	1,512	0,000	-4,658	1,529	0,003	-1,733	1,435	0,229
Brand Market Share Constant	-0,394 <b>135,386</b>	0,224 <b>9,961</b>	0,082 <b>0,000</b>	-0,676 128,197	0,222 10,062	0,003 0,000	-0,310 <b>111,469</b>	0,208 <b>9,439</b>	0,138 <b>0,000</b>
Constant	,	9,901	0,000			0,000	111,409	9,439	0,000
	Boot Lid Coefficient Stand. Err. Significance			Rear Bumper Coefficient Stand. Err. Significance					
	Coefficient		,	Coefficient		·			
Design Protection	8,707	1,641	0,000	6,902	1,762	0,000			
Car Category B	0,842	1,904	0,659	1,795	2,044	0,381			
Car Category C	-0,188	2,231	0,933	0,494	2,397	0,837			
Car Category D	2,624	3,222	0,416	6,672	3,460	0,055			
Labour Productivity	0,327	0,073	0,000	0,244	0,079	0,002			
Supply of Car Parts	-23,047	3,341	0,000	-25,890	3,588	0,000			
Car per capita	-7,661	1,281	0,000	-1,427	1,375	0,301			
Brand Market Share	-0,611	0,186		-0,515	0,200	0,011			
Constant	142,517	8,426	0,000	107,727	9,049	0,000			

*Remarks*: Robust Regression with Huber/White heteroscedasticity consistent estimator for variances.

Figures in bold (italics) indicate that the respective coefficient is statistically significant at a 1% level (10% level). *Source*: CEA, Eurostat, calculations by DG Internal Market.