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News Release

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Toyota and BMW top car maker world rankings for resource-efficient production

Toyota and BMW are leading the global automotive industry in terms of efficient use of resources during production, according to a major new report.

The study is the first in the world to assess the sustainability performance of automobile manufacturers using the Sustainable Value approach which enables efficiency gains to be expressed in a single monetary figure. It was carried out by Professor Frank Figge and Ralf Barkemeyer of the School of Management at Queen's University Belfast, and Dr Tobias Hahn of the Institute for Futures Studies and Technology Assessment in Berlin.

Entitled 'Sustainable Value in Automobile Manufacturing', the study aimed to compare the efficiency with which vehicle manufacturers use their economic, environmental and social resources. It analysed the sustainability performance of 16 of the world's leading automobile manufacturers using financial, environmental and social data reported and published by the companies themselves.

Professor Figge said: "The survey's findings are unambiguous - Toyota and BMW are leading the industry when not only capital use but also the use of environmental and social resources is included in the monetary assessment."

"Automobile manufacturers compete for the reputation of being the most climate-friendly carmaker. So far, the debate has almost exclusively focused on the usage phase of automobiles and related CO₂ fleet emissions, while the substantial environmental burden created during the production phase has – as yet – been largely ignored. Our survey attempts to close this gap."

The survey identifies those carmakers that use their resources in the most efficient way in automobile production. It examined a set of nine environmental, economic, and social resources which included capital use and water use, as well as waste generated and emissions of carbon dioxide, nitrogen oxides,

sulphur oxides, and volatile organic compounds along with employment and work place safety.

The report found that, in 2005, Toyota generated an absolute Sustainable Value of €6.5 billion, followed by BMW with a Sustainable Value of €2.93 billion. This indicated that Toyota generated €6.5 billion more profit than the average automobile producer would have achieved with the same set of resources. In terms of absolute Sustainable Value, Toyota led the industry throughout the seven-year assessment period of 1999 to 2005 and also showed the most positive performance trend.

Toyota and BMW are also leading their peers when differences in company size are taken into account. To assess the sustainability performance of companies of different sizes the researchers looked at how much Sustainable Value was created relative to car sales. In this scenario, the medium-sized manufacturer BMW outperforms its peers. In 2005, BMW generated € 6.3 Sustainable Value per € 100 of car sales. With 5.9% Sustainable Value return on Sales Toyota comes in as a close second. Dr Hahn said: "Once company size is taken into account, BMW ranks top in six of the seven years assessed and therefore also outperforms its competitor Toyota." At the end of the table and therefore well into negative territory are General Motors and FIAT Auto, losing € 8.9 and € 4.8 Sustainable Value per € 100 of car sales, respectively.

One of the survey's key findings is that, on average, Asian manufacturers outperformed their European and North American competitors. Toyota, Hyundai, Nissan, Honda, and – to a certain extent – Suzuki, consistently generated a positive Sustainable Value.

Apart from BMW, results for European manufacturers were mixed. DaimlerChrysler created a positive Sustainable Value in five out of the seven years assessed. Meanwhile, PSA, Renault, and Volkswagen did so only in up to three years during the seven-year review period. FIAT Auto consistently fell behind throughout the entire review period, although its data for 2006 signaled a reversal of this trend.

A number of car manufacturers such as Porsche and KIA, or Indian and Chinese manufacturers, were not included in the survey as their data was not adequate for the assessment. Ralf Barkemeyer said: "The state of sustainability reporting of some automobile manufacturers is patchy at best, rendering a meaningful assessment of these companies' sustainability performance impossible."

The Sustainable Value approach was developed by researchers of Queen's University and IZT. The system has already been used in two comparative studies funded by the European Commission and the German Federal Ministry of Education and Research. BMW Group expressed an interest into how its efficiency gains documented would translate into an evaluation of its

sustainability performance compared to its peers and provided substantial financial support for the present survey.

Professor Figge said: “The study reveals ample differences in sustainability performance in automobile manufacturing. This shows that not only fleet consumption but also the production process itself bears considerable room for improvement in this respect.

“If similar differences were found in economic performance the very survival of companies would be put in question. As the sustainability debate moves on this might also turn out to be the case for the inefficient use of environmental and social resources. In the light of this study automobile manufacturers will have to adapt their production processes to retain their license to operate.”

End

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