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0521837154 - Time for a Model Change: Re-engineering the Global Automotive Industry

Graeme P. Maxton and John Wormald

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## Time for a Model Change

The automotive industry ranks among the most significant business phenomena of the twentieth century and remains vitally important today, accounting for almost 11 per cent of the GDP of North America, Europe and Japan and one in nine jobs. In economic and social terms alike, its products have had a fundamental impact on modern society – for better or for worse. Yet the industry has found it hard to adjust to recent challenges and is no longer much valued by the capital markets. It has become riven with internal contradictions that inhibit reform, and now faces a stark choice between years of strife or radical change. This book is a wake-up call for those who work in the automotive business. It highlights the challenges and opportunities that exist for managers, legislators, financial institutions and potential industry entrants. Most of all, it gives us all cause to reflect on the value of our mobility, today and tomorrow.

**Graeme P. Maxton** is Programme Director, Economist Conferences; Contributing Editor, Economist Intelligence Unit (EIU), and a Director of *autoPOLIS* Strategy Consultants. He contributes regularly to a variety of Economist Newspaper Group publications and is author of the EIU's *World Car Forecasts*, *The Emerging Markets of Asia-Pacific* and *Asia-Pacific: After the Crisis*. He is also co-author (with John Wormald) of the best-selling *Driving Over a Cliff? Business Lessons from the World's Car Industry*, 1994.

**John Wormald** is a Director of *autoPOLIS* Strategy Consultants and works throughout the automotive industry. He regularly contributes to the business and automotive press and is the co-author (with Graeme P. Maxton) of the best-selling *Driving Over a Cliff? Business Lessons from the World's Car Industry*, 1994.

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*Advance praise for Time for a Model Change*

With very few exceptions, the world's leading car manufacturers have become notorious in recent years for destroying shareholder value, and their future prospects look bleak. How they got into this situation, and how they might escape from it, are the themes of this timely and important book.

The authors bring their long experience of the industry to bear on the key challenges that it is now grappling with – market saturation in the advanced countries, uncertain growth prospects in the developing world, unstable relations with suppliers and distributors – and they conclude that nothing short of a radical make-over is necessary. Traditional business models, including the quest for global scale and an ever-widening range of models, have run into the sand. Companies need to look afresh at what they are good at, decide which part of the value chain they should concentrate on, and organise themselves accordingly.

Manufacturers need to unbundle and reconstitute themselves in order to achieve the optimal balance between size and diversity. If they follow this course, the authors persuasively argue, they could lift themselves into a new era of prosperity, providing a better service for customers and higher returns for investors. The stark choice is between 'graceless degradation' and 'planned revolution'.

The authors have produced both a powerful diagnosis and an imaginative blueprint for reform. The industry and everyone who depends on it would do well to take notice.

**Sir Geoffrey Owen**, former editor of the Financial Times and currently Senior Fellow at the Institute of Management at the London School of Economics

This is the book to read if you want to know – in plain English – where global car-making is and where it should be going. Graeme Maxton and John Wormald distil their encyclopaedic knowledge of the industry and the world economy into an authoritative, comprehensive and lucid analysis on which they base their recommendation for a thorough reorganisation of the automobile sector.

The authors demolish mirage solutions to the current chronic oversupply: the boundless China and India markets, the standardised 'world car', the proliferation of different models and over-reliance on brand image. They then document the damage perpetrated by motor vehicles and balance this against the contribution of the motor industry to economic growth and to the quality of life. Governments, they predict, will take a more active role in adopting more road pricing, restrict vehicle use within cities and toughen laws on safety and emissions. And oil reserves are finite.

So how can car-making survive? What is needed, say the authors, is a 'fourth automotive revolution' involving the 'unbundling' of automotive business to enable manufacturers to differentiate roles appropriately. This would allow a radical redesign of engines and bodies, a change in corporate culture, the emergence of new manufacturers and the development of real competition in dealerships and servicing. The result? Cheaper and better cars for consumers and bigger profits for car-makers.

**Ken Davies**, Senior Economist, Investment Division, OECD

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# Time for a Model Change

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## Foreword

The automotive sector is a critically important and complex one. Other than the vehicles themselves, and the roads and fuel needed to run them, the business is intricately tied to the manufacture of a wide range of components and the extraction of precious raw materials. It is linked closely to the policies of governments, the earnings of banks. Indirectly, it brings us road congestion, too many fatalities and a wave of other environmental troubles. In many ways, the automotive sector offers an almost endless stream of social, political and economic inter-connections which affect us all in some way. As you read their exciting book you realise how much the authors know about this world and how compellingly they express their knowledge to build yours. The shock comes when you wake up to the questions they pose.

Readers of their first book, *Driving Over a Cliff* published a decade ago, will see a continuing progression in the ruinous steps which have forced the industry into a socio-politico-economic corner. Whether this slide is related to flat demand or to the industry's creation of an ever-wider range of vehicles that many buyers seem to care little about, there is a problem. As with most ageing systems, problem descriptions are difficult because we like to hear problems defined in terms of potential solutions. Yet none are evident – or at least none that will be easy for the protagonists to apply.

Those working in the industry typically have five- or ten-year strategies. They can no longer survive with these. Business leaders need to generate a font of new visions which

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can be developed into constructive action. Only then can there be solutions. The future lies in the abilities of companies to continuously and creatively tear-down and recreate themselves, to meet customers' demands. Since few companies dominate their value-chains from start to finish, the future of competition will no longer be limited to that between individual companies, but between changing segments of the supply and distribution chains. Companies have to unbundle and reconstruct to survive. Can we believe that such strategies are on their drafting tables in this industry today?

It looks unlikely. Indeed, how can there be any *recreations* in an industry populated, as the authors note, by self-importance, lack of trust in partners, compulsive command-and-control behaviour, reluctance to relinquish territory, contempt for legal authority, squandering of resources and on, and on. Whatever the system of relationships in the industry, the banking fraternity is on the far side of being wary. Other industry watchers must ask if it can really be so bad . . . isn't it just temporary, aren't these monoliths too large and too important to fail? Perhaps not.

Maxton and Wormald develop all we can reasonably know about this great part of our personal and business lives, looking at its history and progression, the excitements and the love affair we've had with the automobile and how deeply this system affects us all. They then set the industry between the devil and the deep blue sea – it either faces a *graceless degradation* or must rejuvenate itself, through a revolution in the way companies are constituted and how they operate. The changes required are unobtrusive and urgent, forcing us to hear a call for radical change, or else. After a large portion of my life spent working in the automotive industry and now engaged in teaching a broad-scale set of graduate courses in management and automotive systems, I'm convinced that a revolution will come, perhaps one affecting several industries and not just automotive. This book is now forcing my guesses as to when this will be as it should force those of our manufacturing giants and banks and unions and governments.

No change in one part of a system leaves any other part untouched. Something profound will happen. This will be influenced by the people who share the analysis presented here.

**Professor G. Fredric Bolling**  
**University of Michigan**

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## Glossary

4WD	Four-wheel drive
ACEA	Association des Constructeurs Européens d'Automobiles
AFTA	Asian Free Trade Area
aftermarket	the downstream service and repair sector of the industry
ASEAN	Association of South-East Asian Nations
bbl	barrel
BEUC	Bureau Européen des Unions de Consommateurs (the European Consumers' Organisation)
BMW	includes Rover from the beginning of 1994 to 2000
CAD	computer-aided design
CAFE	corporate average fuel economy
CAGR	compound annual growth rate
CAM	computer-aided manufacturing
CAR	Center for Automotive Research
CARB	California Air Resources Board
CBU	completely built up
CECRA	Conseil Européen du Commerce et de la Réparation Automobiles
CFC	chlorofluorocarbon
CKD	completely knocked down (a kit of the vehicle)
CNC	computer numerically controlled
CNG	compressed natural gas
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CV	commercial vehicle
DI	direct injection
EBIT	earnings before interest and tax
EC	European Community
EDI	electronic data interchange
EEA	European Economic Area
EFI	electronic fuel injection
EFTA	European Free Trade Association
ERM	Exchange Rate Mechanism, in Europe
EU	European Union

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EV	electric vehicle	NHTSA	National Highway Traffic Safety Administration
FAW	First Auto Works (China)	NIC	newly industrialising country
FIGIEFA	Fédération Internationale des Grossistes, Importateurs et Exportateurs en Fournitures Automobiles (International Federation of Automotive Aftermarket Distributors)	NOx	oxides of nitrogen
		OECD	Organisation for Economic Cooperation and Development
		OEM	original equipment manufacturer
GDP	gross domestic product	OES	original equipment supplier
GM	General Motors	OPEC	Organisation of Petroleum Exporting Countries
GNP	gross national product		
HC	hydrocarbon	parc	the number of cars in use
HEV	hybrid electric vehicle	PM	particulate matter (soot)
IAM	independent aftermarket	PSA	Peugeot SA (Peugeot-Citroën)
IDI	indirect injection	RAC	Royal Automobile Club
IIHS	Insurance Institute for Highway Safety	SAIC	Shanghai Auto Industry Corporation
IMF	International Monetary Fund	SKD	semi-knocked-down (vehicle)
IMVP	International Motor Vehicle Programme	SUV	sports utility vehicle
		Toyota	includes Lexus
JIT	just-in-time	TTI	Texas Transportation Institute
LCV	light commercial vehicle		
LDC	less-developed country	UAW	United Auto Workers Union
LEV	low-emission vehicle	ULEV	ultra-low-emissions vehicle
LPG	liquid petroleum gas	UN	United Nations
M&A	mergers and acquisitions	VAT	value-added tax
MPV	multipurpose vehicle	VM	vehicle manufacturer
n/a	not available	VW	Volkswagen
NAFTA	North American Free Trade Agreement	WD	warehouse distributors
		WTO	World Trade Organisation
		ZEV	zero emissions vehicle