The Global Automotive Industry Automotive Series

Originally published in 1991, this book examines the spatial implications of the changes to the automobile industry at world, national and local levels. The volume brings together the work of North American, European and Japanese geographers, economists and sociologists, and includes perspectives from the components industry, the shop floor experience and local economic policy making.

Global Automobile Demand is a two-volume work analysing the impact of the Great Recession and the structural factors which shape automobile demand in developed and emerging countries. The second volume examines the automobile demand in the BRICS and other emerging countries: Brazil, Russia, India, China, Turkey, Mexico, Thailand and Malaysia.

This book is one of the first critical analyses of the automobile industry in India. It studies the sector in general and the passenger car industry in particular, and provides valuable insights into the operation of Foreign Direct Investment (FDI) companies in a technology-intensive industry under changing economic regimes. The volume underlines the influence of the changing nature of foreign investment, the impact of economic reforms, technology regimes and industrial policy on growth, structural changes and development. It offers a detailed account of the trade performance of manufacturers in India's passenger car industry. It also looks at successful cases to draw policy lessons towards encouraging quality FDI and developing India as a base for world production. A useful addition to industry studies in India, this book with its wide coverage and contemporary analyses will interest scholars and researchers of economics, Indian economy and industrial policy, industrial economics, automobile industry and manufacturing sector, development economics and international economics. It will also appeal to policymakers, practitioners and industrial associations.

"This monograph is focused on intercultural issues, particularly in the global auto industry. The foreign direct investments (FDI) reasons are the result of globalization, of the need of growth and of achieving synergies. Most of the professionals consider that FDI is one of the most significant business phenomena in the past decades, but warn about the FDI dangers. The most challenging part of the FDI process is the integration of two entities that present different organizational and national cultures. This monograph emphasizes the relationship between culture and FDI performance in the global auto industry. The main goal of this book is to uncover intercultural issues that managers encounter during the FDI, M&A or global alliances. The expectation of the authors of this monograph is that the conclusions would help forewarn scholars and practitioners of the need to thoroughly understand the cultural issues influencing the global automotive industry. The monograph will be useful for academic researchers, postgraduate students, for MBA/Executive Education and for practitioners"--

The Japanese Automotive Industry

Automotive Fuel Economy

Guide to Automotive Connectivity and Cybersecurity

Automotive 101

The Car Industry Exposed

A Day Inside the Global Automotive Industry

The Road to the 5-Day Car

Over one million Americans are employed in manufacturing motor vehicles, equipment and parts. But the industry has changed dramatically since the U.S. "Big Three" motor vehicle corporations (General Motors, Ford and Chrysler) produced the overwhelming majority of cars and light trucks sold in the United States, and directly employed many people themselves. By 2003, most passenger cars sold in the U.S. market were either imported or manufactured by foreign-based producers at new North American plants (so-called "transplant" facilities). The Big Three now dominate only in light trucks, and are also now being challenged there by the foreign brands. The Big Three have shed about 600,000 U.S. jobs since 1980, while about one-quarter of Americans employed in automotive manufacturing (nearly 300,000) work for the foreign-owned companies. It is clear that the U.S. automotive industry has undergone many drastic changes that have had a net adverse effect on American interests. This book examines the causes of these changes. Congressional acts, increasingly stringent emission laws, the effects of NAFTA, labour unions and globalisation are all within the scope of this book.

This book offers a comprehensive look at an industry that plays a growing role in motor vehicle production in the United States.

This book was born from curiosity. To begin with, it was the curiosity of an economist who studied in the 60's in an environment which has subsequently developed from national into global economics. Who has to recognize that politicians, scholars and large segments of

society oblivious to supranational authorities and e- nomic globalization forces continue to labour under the notion that they are still fully autonomous and sovereign when shaping national economic policy. And pretend as though their own national state were still the "m- ter in its own house" that despite unbridled market economics could c- tinue to dictate to the economy and companies how to live and in which "rooms". All that has become fiction. The laws of globalization diminish the - noeuvring space for shaping national economic policy. Even if many folks today don't want to hear it: The issue is no longer achieving what is soc- politically desirable for the own society but rather the optimal adaptation of society and social benefits to the politically practicable.

The Japanese automotive industry enjoyed spectacular success in the 1980s. This was largely due to the so-called 'Lean Production System' - the combination of an efficient production system, an effective supplier system, and a product development system. In the 1990s the industry fell on hard times because of the Japanese asset price bubble and extreme currency appreciation. In this book, eminent industry specialist Koichi Shimokawa draws on his thirty years of research and fieldwork with Japanese and American firms, to show how the Japanese automotive industry has managed to recover from this difficult period. He shows how firms like Toyota were able to transfer Japanese systems to overseas plants and how they have changed in order to compete in increasingly globalized markets. In addition, the book also addresses the two major challenges to the current industry model: the rise of China and the environmental and energy supply situation.

The Automotive Industry and the Environment

The American and Japanese Auto Industries in Transition

Model and Challenge for the Future?

Innovation, Transformation, Globalization

Build To Order

The Global Quest for the Car of the Future

Who Really Made Your Car?

The automotive industry currently faces huge challenges. The fundamental technological paradigm it relies on, volume production, has become progressively more unprofitable in the face of increasingly segmented niche markets. At the same time it faces increasing regulatory and social pressures to improve both the sustainability of its products and methods of production. Building on a wealth of research, The automotive industry and the environment addresses those challenges and how they can be met in producing a sustainable and profitable industry for the future. The authors first discuss the development of the automotive industry and the problems it currently faces. They then consider the solutions the industry can adopt. The book reviews trends in more environmentally-friendly technologies such as the use of more sustainable fuel sources and new types of modular design with built-in recyclability. However, these technologies can only be fully exploited if methods of manufacture change. The book also describes models of decentralised production, particularly the micro factory retailing (MFR) model, which provide an alternative to volume production and promise to be both more sustainable and more profitable. The automotive industry and the environment provides both a cogent diagnosis of the environmental and other problems facing the industry and a blueprint for a better future. It will be widely welcomed by the industry, policy makers and all those concerned with sustainable transport. Addresses the challenges facing the automotive industry, from the increasing unprofitability of volume production to regulatory and social pressures to improve environmental and product sustainability Examines how the automotive industry can meet the current challenges in producing a sustainable and profitable industry for the future Reviews trends in more environmentally-friendly technologies such as the use of more sustainable fuel sources and new types of modular design with built-in recyclability

At its peak in the 1950s and 1960s, automobile manufacturing was the largest, most profitable industry in the United States and residents of industry hubs like Detroit and Flint, Michigan had some of the highest incomes in the country. Over the last half-century, the industry has declined, and American automakers now struggle to stay profitable. How did the most prosperous industry in the richest country in the world crash and burn? In Wrecked, sociologists Joshua Murray and Michael Schwartz offer an unprecedented historical-sociological analysis of the downfall of the auto industry. Through an in-depth examination of labor relations and the production processes of automakers in the U.S. and Japan both before and after World War II, they demonstrate that the decline of the American manufacturers was the unintended consequence of their attempts to weaken the bargaining power of their unions. Today Japanese and many European automakers produce higher quality cars at lower cost than their American counterparts thanks to a flexible form of production characterized by long-term sole suppliers, assembly and supply plants located near each other, and just-in-time delivery of raw materials. While this style of production was, in fact, pioneered in the U.S. prior to World War II, in the years after the war, American automakers deliberately dismantled this system. As Murray and Schwartz show, flexible production accelerated innovation but also facilitated workers' efforts to unionize plants and carry out work stoppages. To reduce the efficacy of strikes and combat the labor militancy that flourished between the Depression and the postwar period, the industry dispersed production across the nation, began maintaining large stockpiles of inventory, and eliminated single sourcing. While this restructuring of production did ultimately reduce workers' leverage, it also decreased production efficiency and innovation. The U.S. auto industry has struggled ever since to compete with foreign automakers, and formerly thriving motor cities have suffered the consequences of mass deindustrialization. Murray and Schwartz argue that new business models that reinstate flexible production and prioritize innovation rather than cheap labor could stem the outsourcing of jobs and help revive the auto industry. By clarifying the historical relationships between production processes, organized labor, and industrial innovation, Wrecked provides new insights into the inner workings and decline of the U.S. auto industry.

The automotive industry is still one of the world's largest manufacturing sectors, but it suffers from being very technology-focused as well as being relatively short-term focused. There is little emphasis within the industry and its consultancy and analyst supply network on the broader social and economic impacts of automobility and of the sector that provides it. The Global Automotive Industry addresses this need and is a first port of call for any academic, official or consultant wanting an overview of the state of the industry. An international team of specialist researchers, both from academia and business, review and analyse the key issues that make vehicle manufacturing still the world's premier manufacturing sector, closely tied in with the fortunes of both established and newly emerging economies. In doing so, it covers issues related to manufacturing, both established practices as well as new developments; issues relating to distribution, marketing and retail, vehicle technologies and regulatory trends; and, crucially, labour practices and the people who build cars. In all this it explains both how the current situation arose and also likely future trajectories both in terms of social and regulatory trends, as the technological, marketing and labour practice responses to those, leading in many cases to the development of new business models. Key features Provides a global overview of the automotive industry, covering its current state and considering future challenges Contains contributions from international specialists in the automotive sector Presents current research and sets this in an historical and broader industry context Covers threats to the industry, including globalization, economic and environmental sustainability The Global Automotive Industry is a must-have reference for researchers and practitioners in the automotive industry and is an excellent source of information for business schools, governments, and graduate and undergraduate students in automotive engineering.

An examination of the greening of the automotive industry by the path dependence of countries and carmakers' trajectories. Three sources of path dependency can be detected: business models, consumer attitudes, and policy regulations. The automobile is changing and the race towards alternative driving systems has started!

From a Swedish Perspective : Summary

Six Men who Built the Modern Auto Industry

Exploring Geographies, Technology, and Institutional Challenges

Nanotechnology in the Automotive Industry

High Noon in the Automotive Industry

Energy Savings and Energy Management

Policy Overview and Recent History

The Global Automotive IndustryJohn Wiley & Sons

Seminar paper from the year 2005 in the subject Economics - Industrial Economics, grade: 60%, University of Bradford (School of Management), course: Business Economics, 15 entries in the bibliography, language: English, abstract: This assignment aims at comparing and contrasting the driver of costs in the automotive industry, both in the short and the long run. Secondly it critically evaluates the benefits from economies of scale in the global automobile industry. The global automobile manufacturing sector accounts to a sales value of $ 1,172 billion in 2004 with a cumulated annual growth rate of 2.7% over the last 4 years. Whereas currently sales in the US are ranked first with stagnating 37%, followed by Europe with also static 30%, rising sales figures in China and India clearly show the growth regions of the next decade (Datamonitor 2005). This slack in well-established markets combined with hard competition from Asia as well as rising costs of production concludes in serious problems for the western giants (Economist 2005). In the first part of this paper, the cost drivers are analysed and implications for the automobile industry are drawn. Normally a mature stage of a sector's life leads to hard and fast competition and an industry consolidation with only the biggest one's surviving. Interestingly, while clearly being in an mature stage of the industry lifecycle, the biggest companies, excluding Toyota, are the most unprofitable in the automobile sector (SEIDELet al2005). The second part of this assignment therefore evaluates the validity of the theory of economies of scale in the automobile sector.

As one of the largest economic sectors in the world, the automotive industry touches us in a way unlike any other. With 263 million cars n the road, the U.S. leads the world in automotive registrations. Yet for an industry so large, relatively little is known by the consuming public. In 2010, Jonathan Michaels began a journalistic investigation into indiscretions in the automotive industry. This investigation let to 101 published articles that reveal much about the industry that few had previously understood. From the truth about lithium to the irregularities in the nation's recall system. Michaels' investigative work presents a probing, unvarnished view into an industry that impacts so many, yet is understood by so few.

Automotive textiles represent one of the most valuable international markets for technical textiles. Textile advances in the automotive industry provides an in-depth review of the design and development of automotive textiles and the recent advances made in technical textiles for a variety of automotive applications. Part one discusses issues such as automotive textile requirements from a car producer's perspective, mapping the automotive textile supply chain, advances in textile fabrics including nonwoven fabrics, and recycling issues. Part two focuses on automotive interiors with chapters on performance and style of interior textiles, materials and design for car seats, and the reduction of interior noise in vehicles. Part three discusses the important safety applications of automotive textiles, including airbags and tyres. Part four concludes by assessing how textiles can be used in automotive bodywork. With its distinguished editor and a team of contributors from both academia and industry, this book is an essential reference for a broad spectrum of readers, ranging from scientists, designers, product development staff to company strategists. Provides an in-depth review of recent advances in the design and development of automotive textiles Comprehensively examines the automotive textile industry covering key requirements, the supply chain, fabrics and recycling Addresses important safety considerations in automotive textiles including airbags and tyres

Knowledge Transfer in the Automobile Industry

A Profile of the Automobile and Motor Vehicle Industry

The Cascade Effect in Practice

The Greening of the Automotive Industry

Automotive Global Value Chain
Automotive Industry and the Global Environment
Wrecked

Analysing developments in digital technologies and institutional changes, this book provides an overview of the current frenetic state of transformation within the global automobile industry. An ongoing transition brought about by the relocation of marketing, design and production centres to emerging economies, and experimentation with new mobility systems such as electrical, autonomous vehicles, this process poses the question as to how original equipment manufacturers (OEMs) and newcomers can remain competitive and ensure sustainability. With contributions from specialists in the automobile sector, this collection examines the shifts in power and geographical location occurring in the industry, and outlines the key role that public policy has in generating innovation in entrepreneurial states. Offering useful insights into the challenges facing emerging economies in their attempts to grow within the automobile industry, this book will provide valuable reading for those researching internationalization and emerging markets, business strategy and more specifically, the automotive industry.

Throughout World War II, Detroit's automobile manufacturers accounted for one-fifth of the dollar value of the nation's total war production, and this amazing output from "the arsenal of democracy" directly contributed to the allied victory. In fact, automobile makers achieved such production miracles that many of their methods were adopted by other defense industries, particularly the aircraft industry. In Arsenal of Democracy: The American Automobile Industry in World War II, award-winning historian Charles K. Hyde details the industry's transition to a wartime production powerhouse and some of its notable achievements along the way. Hyde examines several innovative cooperative relationships that developed between the executive branch of the federal government, U.S. military services, automobile industry leaders, auto industry suppliers, and the United Automobile Workers (UAW) union, which set up the industry to achieve production miracles. He goes on to examine the struggles and achievements of individual automakers during the war years in producing items like aircraft engines, aircraft components, and complete aircraft; tanks and other armored vehicles; jeeps, trucks, and amphibians; guns, shells, and bullets of all types; and a wide range of other weapons and war goods ranging from search lights to submarine nets and gyroscopes. Hyde also considers the important role played by previously underused workers-namely African Americans and women-in the war effort and their experiences on the line. Arsenal of Democracy includes an analysis of wartime production nationally, on the automotive industry level, by individual automakers, and at the single plant level. For this thorough history, Hyde has consulted previously overlooked records collected by the Automobile Manufacturers Association that are now housed in the National Automotive History Collection of the Detroit Public Library. Automotive historians, World War II scholars, and American history buffs will welcome the compelling look at wartime industry in Arsenal of Democracy.

This volume presents realistic estimates for the level of fuel economy that is achievable in the next decade for cars and light trucks made in the United States and Canada. A source of objective and comprehensive information on the topic, this book takes into account real-world factors such as the financial conditions in the automotive industry, costs and benefits to consumers, and marketability of high-efficiency vehicles. The committee is composed of experts from the fields of science, technology, finance, and regulation and offers practical evaluations of technological improvements that could contribute to increased fuel efficiency. The volume also examines potential barriers to improvement, such as high production costs, regulations on safety and emissions, and consumer preferences. This practical book is of considerable interest to car and light truck manufacturers, policymakers, federal and state agencies, and the public.

Cited by Business Week as one of 1984's ten best books on business and economics, The Future of the Automobile is the most comprehensive assessment ever conducted of the world's largest industry.

Global-Local Production Networks
New Frontiers of the Automobile Industry
Global Automotive Market Survey and World Motor Census
The Rise of Mega Suppliers

The Global Automotive Industry
Japan and the Global Automotive Industry
How Far Can We Go?

The automotive industry ranks among the most significant business phenomena of the 20th century and remains vitally important today, accounting for almost 11% 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 and worse. Yet the industry has found it hard to adjust to recent challenges and is no longer much valued by the capital markets. It is riven with internal contradictions that inhibit reform, and 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.

This is the story of six extraordinary men who each built something from nothing, redefined the automotive industry after World War II, and redirected its course for the future: Henry Ford II (visionary autocrat with an iron will), Shoichiro Honda (most successful automotive entrepreneur since Henry Ford I), Eberhard von Kuenheim (founder of the modern BMW), Lee Iacocca, Ferdinand Piech (builder of Volkswagen Group) and Robert Lutz (who left retirement at 70 and is still highly influential at General Motors). What made them special was the sheer volume of fundamental change they brought to the largest industry in the history of the world. They not only re-shaped the auto business, the six made a sizable dent in the societies they lived in. To a man they were great cognitive thinkers. Their minds worked with animal speed, even instinct speed. But more than anything these were brave and cantankerous souls who rode the waves of history. Each could see the future. They could just make it out-sometimes imperfectly, but could see it nonetheless. They took a business that had begun to mature and decline by the 1930s and found ways to make it fresh and whole again.- The compelling story of the global car business over the past half-century.- A lively and engaging narrative that recounts some times collaborative, sometimes archly antagonistic interactions among the men- Full of business revelations at the highest level, written by a journalist operating at the heart of the industry- Global appeal that shows how automotive groups in the USA, Europe and Asia have influenced each other- A business story interlaced with personal details that explains why the six were determined to be successfulAbout the AuthorFor two decades, Richard Johnson has worked for Crain Communications, publisher of the world's leading automotive business publications. Founding editor of Crain's Automotive News Europe, he has been a reporter and editor for the group in Detroit, Tokyo, Frankfurt and London. He is currently a senior editor with Automotive News in Detroit and regularly talks to the most senior executives in the leading car manufacturing groups.

Today, some suppliers have grown increasingly powerful and in certain cases, earn revenues that rival or even exceed that of their automaker clients. In the pre-globalisation period, automakers wielded absolute power over their significantly smaller suppliers. This book reveals the upending of this relationship, with the gradual shift in the balance of power from automakers to their suppliers in this era of globalisation. The book examines how suppliers in the global tyres, seats, constant velocity joints (hereafter 'CVJs'), braking systems and automotive semiconductor industries have evolved into powerful oligopolies through a mix of acquisition and organic growth strategies. It also highlights how joint ventures could be strategically deployed as springboards to acquisition, as they enable firms to familiarise themselves with their partners' markets and operations. Moreover, the book analyses the disruption stirred by the entry of well-resourced technology titans into this industry and their inevitable clash with the traditional incumbents. This book is an invaluable reference for anyone interested in learning more about the automakers' and now their suppliers' relentless quest to create market-dominating intelligent driving systems.

Over the past 100 years the European Automotive Industry has been repeatedly challenged by best practice. First by the United States, through the development of 'mass production' pioneered by Henry Ford and more recently by 'lean production techniques' as practised by the leading Japanese producers, particularly Toyota. It has consistently risen to these challenges and has shown it can compete and even outperform its competitors with world-class products. However, the European - dustry is now faced with growing competition and growth from new emerging low-cost countries and needs to re-define its competitive advantage to remain at the forefront of the sector. Automotive growth is driven by two factors, new m- kets and new technologies. Global competition is increasing, with technology and product differentiation becoming the most important sales factors, but with c- tinued cost pressure. Within the market the winners will be more profitable and the losers will disappear. The Automotive Industry makes a significant contribution to the socio-economic fabric of the European Union. Manufacturing output represents €700 billion and research and development spending €24 billion. European automotive suppliers number 5000 member companies and represent 5 million employees and generate €500 billion in revenues. These are significant figures that generate wealth and high value employment within the EU. European firms must consistently improve their competitive position to ensure that the industry does not migrate to growing new markets.

Intercultural Issues in the Global Auto Industry
Making and Selling Cars
The Global Automotive Industry 2010
Innovation and Change in the U.S. Automotive Industry

The Great Race
Globalization or Regionalization of the American and Asian Car Industry?

Documents the collapse and comeback of America's largest industry in a saga of greed and stubbornness, spotlighting dedicated managers, engineers, and financiers

The book arose from a multi-disciplinary study which looked at the development of global-local manufacturing clusters in the context of a developing, Asian economy. The study demonstrates the connection amongst theoretical perspectives such as international business, development studies, economic geography, and organisational learning clusters/production networks through an in-depth case study of the

Indonesian automotive cluster. The book gives a detailed account of two automotive clusters (Toyota and Honda) and their contribution to regional economic development in emerging economies in Asian region. The book builds on existing literature to develop a theoretical framework to shed light on the study's empirical findings. The book discusses practical implications for both the business community and policy makers. The discussion on global-local networks in an Asian context supplements existing literature and case studies in the field. This is one of the few books that explicitly links regional clusters to global networks. The book offers a refreshingly international (Asian) perspective to the literature on clusters and economic geography for emerging economies.

The global automotive industry has become one of the most important and strongest drivers of economic stability. Innovation and diverse models, global appeal and fuel efficiency are just some of the major strengths of the global auto industry. Furthermore, the automobile is possibly the most massively manufactured sophisticated product among those produced in mechanical engineering. More than 60 million automobiles are produced each year. A number of countries were discussed in this book and the historic evolution, modular unification and globalization of the integral manufacturing industry were examined. Furthermore, the increasing use of polymeric materials, rubbers and chemical fluids, like mineral oils or brake fluids in the automotive industry, demands analytical techniques for the identification of high molecular weight organic compounds. This book describes application examples of gas chromatography/mass spectrometry and pyrolysis in the failure analysis for the identification of those chemical materials used in automobiles. Finally, the last chapter discusses the use of discrete event simulation as a tool to aid decision making for the integration of RFID [Radio Frequency Identification] in a manufacturing system such as with automobiles.

The automobile has shaped nearly every aspect of modern American life. This text documents the story of the automotive industry, which, despite its power, is constantly struggling to assure its success.

Arsenal of Democracy

Re-engineering the Global Automotive Industry

The Report of MIT's International Automobile Program

Cost drivers and economies of scale in the automobile industry

The Report of the Joint U.S. - Japan Automotive Study

Global Players and the Indian Car Industry

Global Automobile Demand

Today, some suppliers have grown increasingly powerful and in certain cases, earn revenues that rival or even exceed that of their automaker clients. In the pre-globalisation period, auto wielded absolute power over their significantly smaller suppliers. This book reveals the upending of this relationship, with the gradual shift in the balance of power from automakers to the suppliers in this era of globalisation. The book examines how suppliers in the global tyres, seats, constant velocity joints, braking systems and automotive semiconductor industries have into powerful oligopolies through a mix of acquisition and organic growth strategies. It also highlights how joint ventures could be strategically deployed as springboards to acquisition, as enable firms to familiarise themselves with their partners markets and operations. Moreover, the book analyses the disruption stirred by the entry of well-resourced technology titans into t industry and their inevitable clash with the traditional incumbents. This book is an invaluable reference for anyone interested in learning more about the automakers and now their supplie relentless quest to create market dominating intelligent driving systems.

The Great Race recounts the exciting story of a century-long battle among automakers for market share, profit, and technological dominance—and the thrilling race to build the car of the

The world’s great manufacturing juggernaut—the $3 trillion automotive industry—is in the throes of a revolution. Its future will include cars Henry Ford and Karl Benz could scarcely imagi They will drive themselves, won’t consume oil, and will come in radical shapes and sizes. But the path to that future is fraught. The top contenders are two traditional manufacturing giants US and Japan, and a newcomer, China. Team America has a powerful and little-known weapon in its arsenal: a small group of technology buffs and regulators from California. The story and how these men and women could shape the future—how you move, how you work, how you live on Earth—is an unexpected tale filled with unforgettable characters: a scorned chem professor, a South African visionary who went for broke, an ambitious Chinese ex-pat, a quixotic Japanese nuclear engineer, and a string of billion-dollar wagers by governments and corporations. “To explain the scramble for the next-generation auto—and the roles played in that race by governments, auto makers, venture capitalists, environmentalists, and private inventors—comes Levi Tillemann’s The Great Race…Mr. Tillemann seems ideally cast to guide us through the big ideas percolating in the world’s far-flung workshops and labs” (The Wa Journal). His account is incisive and riveting, explaining how America bounced back in this global contest and what it will take to command the industrial future.

Nanotechnology in the Automotive Industry explores how nanotechnology and nanomaterials are used to enhance the performance of materials and devices for automotive application by fabricating nano-alloys, nanocomposites, nano coatings, nanodevices, nanocatalysts and nanosensors. Consisting of 36 chapters in 6 parts, this new volume in the Micro and Nano Tech series is for materials scientists, nanotechnologists and automotive engineers working with nanotechnology and nanomaterials for automotive applications. Nanotechnology is seen as on core technologies for the future automotive industry to sustain competitiveness. The benefits that nanotechnology brings to the automotive sector include stronger and lighter materials fo increased safety and reduced fuel consumption, improved engine performance and fuel consumption for gasoline powered vehicles due to nanocatalysts, fuel additives and lubricants, an Discusses various approaches and techniques such as nanoalloys, nanocomposites, nanocoatings, nanodevices, nanocatalysts and nanosensors used in modern vehicles Presents the and future of automotive materials Explores how nanotechnology and nanomaterials are used to enhance the performance of materials and devices for automotive applications

The motor vehicle industry is one of the world’s largest. More than 1 billion vehicles are in use around the world, and 80 million are produced and sold annually. Motor vehicles—including passenger cars, trucks, and commercial vehicles such as buses and taxis—are the principal means by which people and goods are transported within and among most communities in th

This book details the history of the motor vehicle and of the leading carmakers. Inside, you'll learn just how cars are made and sold; the leading suppliers of parts that go into a car; the increasing role of government in regulating vehicles; and future challenges for the industry. The motor vehicle industry includes corporations that design, develop, and manufacture cars a trucks. These carmakers, such as Ford and Toyota, are among the world's most-familiar corporate brands. The motor vehicle industry also encompasses lesser-known businesses, inclu several thousand parts makers, tens of thousands of retailers, and specialized lending agencies. The importance of the motor vehicle industry transcends even its central role in the globa economy. The industry was responsible for many of the fundamental innovations of 20th century production, such as corporate organization, manufacturing processes, and labor relations as sales innovations including product branding and consumer financing. In the 21st century, the motor vehicle industry has been a leader in adopting new production strategies and expa into new markets.

Trends, Technologies, Innovations and Applications

Time for a Model Change

Comeback

How the American Automobile Industry Destroyed Its Capacity to Compete

The American Automobile Industry in World War II

Textile Advances in the Automotive Industry

Effective Strategies, Technology Systems and Environmental Impact

This report was prepared for the Policy Board by the U.S. and Japanese research staffs of the Joint U.S.-Japan Automotive Study under the general direction of Professors Paul W. McCracken and Keichi Oshima, with research operations organized and coordinated by Robert E. Cole on the U.S. side, in close communication with the Taizo Yakushiji on the Japanese side. [preface]In view of the importance of stable, long-term economic relationships between Japan and the United States, automotive issues have to be dealt with in ways consistent with the joint prosperity of both countries. Furthermore, the current economic friction has the potential to adversely affect future political relationships. Indeed, under conditions of economic stagnation, major economic issues inevitably become political issues.With these considerations in mind, the Joint U.S.-Japan Automotive Study project was started in September 1981 to determine the conditions that will allow for the prosperous coexistence of the respective automobile industries. During this two-year study, we have identified four driving forces that will play a major role in determining the future course of the automotive industry of both countries. These are: (1) consumers' demands and aspirations vis-à-vis automobiles; (2) flexible manufacturing systems (FMS); (3) rapidly evolving technology; and (4) the internationalization of the automotive industry. [exec. summary]

The automobile sector is one of the most archetypal global industries and is seen by many as one of the main drivers behind the homogenisation of world markets due to firms' internationalization strategies and the social practices that firms impose. This book argues that this is not entirely the case due to the heterogeneity of firms and the diversity of strategies pursued. It highlights the diversity and forms of internationalization and the preference for regionalization rather than globalization that has occurred over the past decade. This book looks specifically at the American and Asian car industry.

This comprehensive text/reference presents an in-depth review of the state of the art of automotive connectivity and cybersecurity with regard to trends, technologies, innovations, and applications. The text describes the challenges of the global automotive market, clearly showing where the multitude of innovative activities fit within the overall effort of cutting-edge automotive innovations, and provides an ideal framework for understanding the complexity of automotive connectivity and cybersecurity. Topics and features: discusses the automotive market, automotive research and development, and automotive electrical/electronic and software technology; examines connected cars and autonomous vehicles, and methodological approaches to cybersecurity to avoid cyber-attacks against vehicles; provides an overview on the automotive industry that introduces the trends driving the automotive industry towards smart mobility and autonomous driving; reviews automotive research and development, offering background on the complexity involved in developing new vehicle models; describes the technologies essential for the evolution of connected cars, such as cyber-physical systems and the Internet of Things; presents case studies on Car2Go and car sharing, car hailing and ridesharing, connected parking, and advanced driver assistance systems; includes review questions and exercises at the end of each chapter. The insights offered by this practical guide will be of great value to graduate students, academic researchers and professionals in industry seeking to learn about the advanced methodologies in automotive connectivity and cybersecurity.

The Future of the Automobile

Major Trends in Emerging Economies; Volume 2

Restructuring the Global Automobile Industry

Restructuring and Geographic Change in the Auto Industry

The Fall & Rise of the American Automobile Industry

Mega Suppliers and the Automotive Global Value Chain

Trade, Technology and Structural Change